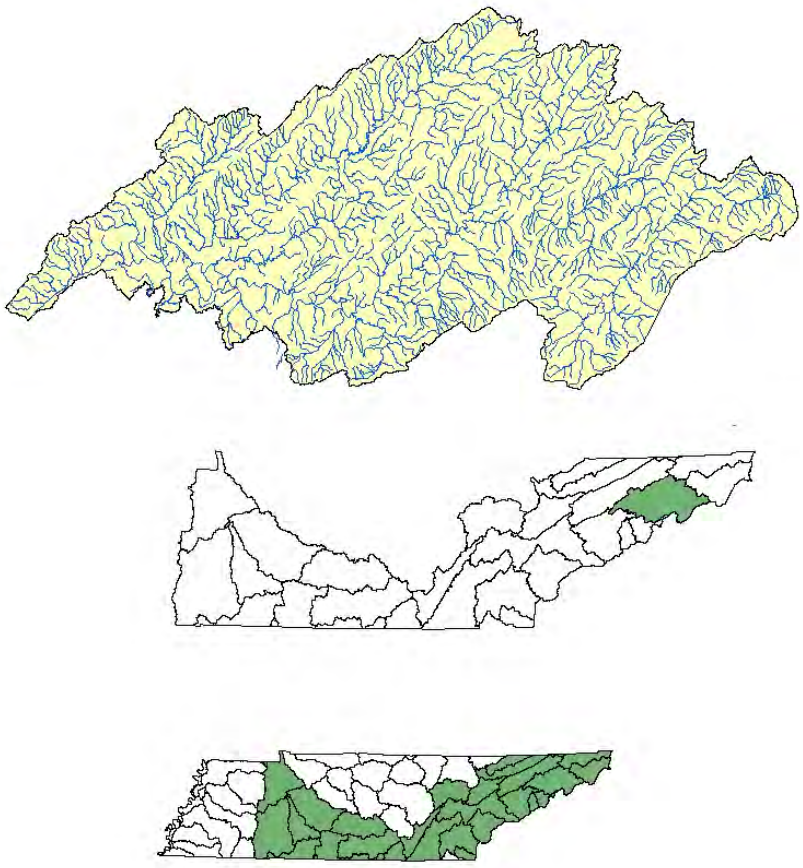
NOLICHUCKY RIVER WATERSHED (06010108) OF THE TENNESSEE RIVER BASIN

WATERSHED WATER QUALITY MANAGEMENT PLAN



TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
WATERSHED MANAGEMENT SECTION

NOLICHUCKY RIVER WATERSHED
WATER QUALITY MANAGEMENT PLAN

TABLE OF CONTENTS

GLOSSARY

1Q20. The lowest average 1 consecutive days flow with average recurrence frequency of once every 20 years.

30Q2. The lowest average 3 consecutive days flow with average recurrence frequency of once every 2 years.

7Q10. The lowest average 7 consecutive days flow with average recurrence frequency of once every 10 years.

303(d). The section of the federal Clean Water Act that requires a listing by states, territories, and authorized tribes of impaired waters, which do not meet the water quality standards that states, territories, and authorized tribes have set for them, even after point sources of pollution have installed the minimum required levels of pollution control technology.

305(b). The section of the federal Clean Water Act that requires EPA to assemble and submit a report to Congress on the condition of all water bodies across the Country as determined by a biennial collection of data and other information by States and Tribes.

AFO. Animal Feeding Operation.

Ambient Sites. Those sites established for long term instream monitoring of water quality.

ARAP. Aquatic Resource Alteration Permit.

Assessment. The result of an analysis of how well streams meet the water quality criteria assigned to them.

Bankfull Discharge. The momentary maximum peak flow before a stream overflows its banks onto a floodplain.

Basin. An area that drains several smaller watersheds to a common point. Most watersheds in Tennessee are part of the Cumberland, Mississippi, or Tennessee Basin (The Conasauga River and Barren River Watersheds are the exceptions).

Benthic. Bottom dwelling.

Biorecon. A qualitative multihabitat assessment of benthic macroinvertebrates that allows rapid screening of a large number of sites. A Biorecon is one tool used to recognize stream impairment as judged by species richness measures, emphasizing the presence or absence of indicator organisms without regard to relative abundance.

BMP. An engineered structure or management activity, or combination of these, that eliminates or reduces an adverse environmental effect of a pollutant.

BOD. Biochemical Oxygen Demand. A measure of the amount of oxygen consumed in the biological processes that break down organic and inorganic matter.

CAFO. Concentrated Animal Feeding Operation.

Designated Uses. The part of Water Quality Standards that describes the uses of surface waters assigned by the Water Quality Control Board. All streams in Tennessee are designated for Recreation, Fish and Aquatic Life, Irrigation, and Livestock Watering and Wildlife. Additional designated uses for some, but not all, waters are Drinking Water Supply, Industrial Water Supply, and Navigation.

DMR. Discharge Monitoring Report. A report that must be submitted periodically to the Division of Water Pollution Control by NPDES permitees.

DO. Dissolved oxygen.

EPA. Environmental Protection Agency. The EPA Region 4 web site is http://www.epa.gov/region4/

Field Parameter. Determinations of water quality measurements and values made in the field using a kit or probe. Common field parameters include pH, DO, temperature, conductivity, and flow.

Fluvial Geomorphology. The physical characteristics of moving water and adjoining landforms, and the processes by which each affects the other.

HUC-8. The 8-digit Hydrologic Unit Code corresponding to one of 54 watersheds in Tennessee.

HUC-10. The 10-digit NRCS Hydrologic Unit Code. HUC-10 corresponds to a smaller land area than HUC-8.

HUC-12. The 12-digit NRCS Hydrologic Unit Code. HUC-12 corresponds to a smaller land area than HUC-10.

MRLC. Multi-Resolution Land Classification.

MS4. Municipal Separate Storm Sewer System.

Nonpoint Source (NPS). Sources of water pollution without a single point of origin. Nonpoint sources of pollution are generally associated with surface runoff, which may carry sediment, chemicals, nutrients, pathogens, and toxic materials into receiving waterbodies. Section 319 of the Clean Water Act of 1987 requires all states to assess the impact of nonpoint source pollution on the waters of the state and to develop a program to abate this impact.

NPDES. National Pollutant Discharge Elimination System. Section 402 of the Clean Water Act of 1987 requires dischargers to waters of the U.S. to obtain NPDES permits.

NRCS. Natural Resources Conservation Service. NRCS is part of the federal Department of Agriculture. The NRCS home page is http://www.nrcs.usda.gov

Point Source. Any discernable, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural storm water discharges and return flows from irrigated agriculture (Clean Water Act Section 502(14)).

Q Design. The average daily flow that a treatment plant or other facility is designed to accommodate.

Reference Stream (Reference Site). A stream (site) judged to be least impacted. Data from reference streams are used for comparisons with similar streams.

SBR. Sequential Batch Reactor.

Stakeholder. Any person or organization affected by the water quality or by any watershed management activity within a watershed.

STATSGO. State Soil Geographic Database. STATSGO is compiled and maintained by the Natural Resources Conservation Service.

STORET. The EPA repository for water quality data that is used by state environmental agencies, EPA and other federal agencies, universities, and private citizens. STORET (Storage and Retrieval of National Water Quality Data System) data can be accessed at http://www.epa.gov/storet/

TDA. Tennessee Department of Agriculture. The TDA web address is http://www.state.tn.us/agriculture

TDEC. Tennessee Department of Environment and Conservation. The TDEC web address is http://www.tdec.net

TMDL. Total Maximum Daily Load. A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of the amount to the pollutant's sources. A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and nonpoint sources. The calculation includes a margin of safety to ensure that the waterbody can be used for the purposes the State has designated. The calculation must also account for seasonal variation in water quality. A TMDL is required for each pollutant in an impaired stream as described in Section 303 of the Federal Clean Water Act of 1987. Updates and information on Tennessee's TMDLs can be found at http://www.tdec.net/wpc/tmdl/

TMSP. Tennessee Multi-Sector Permit.

USGS. United States Geological Survey. USGS is part of the federal Department of the Interior. The USGS home page is http://www.usgs.gov/.

WAS. Waste Activated Sludge.

Water Quality Standards. A triad of designated uses, water quality criteria, and antidegradation statement. Water Quality Standards are established by Tennessee and approved by EPA.

Watershed. A geographic area which drains to a common outlet, such as a point on a larger stream, lake, underlying aquifer, estuary, wetland, or ocean.

WET. Whole Effluent Toxicity.

WWTP. Waste Water Treatment Plant

Summary – Nolichucky River Watershed (06010108)

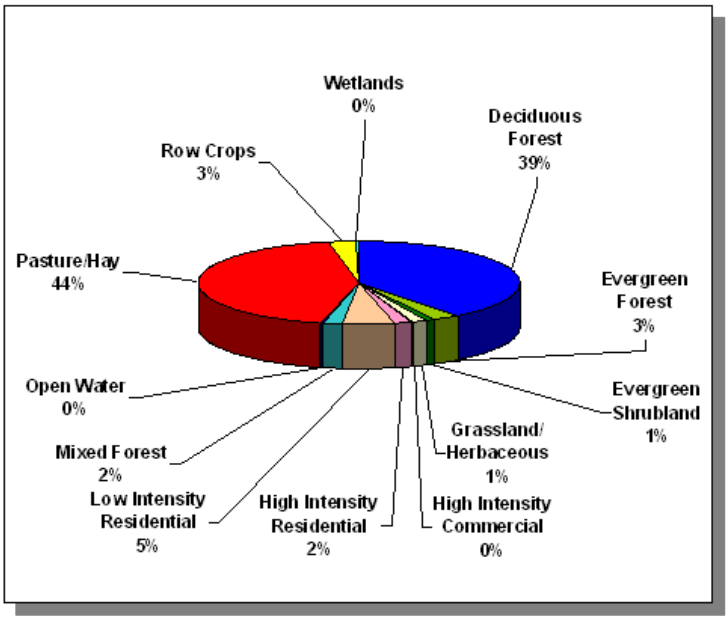
In 1996, the Tennessee Department of Environment and Conservation Division of Water Pollution Control adopted a watershed approach to water quality. This approach is based on the idea that many water quality problems, like the accumulation of point and nonpoint pollutants, are best addressed at the watershed level. Focusing on the whole watershed helps reach the best balance among efforts to control point sources of pollution and polluted runoff as well as protect drinking water sources and sensitive natural resources such as wetlands. Tennessee has chosen to use the USGS 8-digit Hydrologic Unit Code (HUC-8) as the organizing unit.

The Watershed Approach recognizes awareness that restoring and maintaining our waters requires crossing traditional barriers (point *vs.* nonpoint sources of pollution) when designing solutions. These solutions increasingly rely on participation by both public and private sectors, where citizens, elected officials, and technical personnel all have opportunities to participate. The Watershed Approach provides the framework for a watershed-based and community-based approach to address water quality problems.

Chapter 1 of the Nolichucky River Watershed Water Quality Management Plan discusses the Watershed Approach and emphasizes that the Watershed Approach is not a regulatory program or an EPA mandate; rather it is a decision-making process that reflects a common strategy for information collection and analysis as well as a common understanding of the roles, priorities, and responsibilities of all stakeholders within a watershed. Traditional activities like permitting, planning and monitoring are also coordinated in the Watershed Approach.

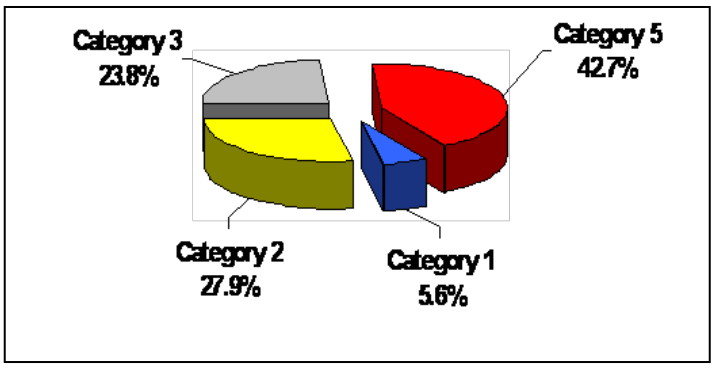
A detailed description of the watershed can be found in Chapter 2. The Nolichucky River Watershed is approximately 1,128 square miles and includes parts of seven Tennessee counties. A part of the Tennessee River drainage basin, the watershed has 2,854 stream miles and 383 lake acres (The entire watershed has 2,854 stream miles).

Five wildlife management areas, one national forest, and one stream listed in the National Rivers Inventory are located in the watershed. One hundred twenty-eight rare plant and animal species have been documented in the watershed, including seven rare fish species and ten rare mussel species.



Land Use Distribution in the Tennessee Portion of the Nolichucky River Watershed.

A review of water quality sampling and assessment is presented in Chapter 3. Using the Watershed Approach to Water Quality, 1,999 sampling events occurred in the Nolichucky River Watershed in 2000-2005. These were conducted at ambient, ecoregion or watershed monitoring sites. Monitoring results support the conclusion that 44.0% of stream miles assessed fully support one or more designated uses.



Water Quality Assessment of Streams and Rivers in the Tennessee Portion of the Nolichucky River Watershed. Assessment data are based on the 2006 Water Quality Assessment of 1,915.4 stream miles in the Tennessee portion of the watershed.

Also in Chapter 3, a series of maps illustrates overall use support in the watershed, as well as use support for the individual uses of Fish and Aquatic Life Support, Recreation, Irrigation, and Livestock Watering and Wildlife. Additional maps illustrate streams that are listed for impairment by specific causes (siltation, nutrients, E. coli).

Point and Nonpoint Sources are addressed in Chapter 4 which is organized by HUC-12 subwatersheds. Maps illustrating the locations of STORET monitoring sites and stream gauging stations are also presented in each subwatershed.

HUC-8	HUC-10	HUC-12
06010108	0601010802	060101080201 (Nolichucky River)
		060101080202 (North Indian Creek)
		060101080203 (Nolichucky River)
		060101080204 (Cherokee Creek)
		060101080205 (Nolichucky River)
		060101080206 (Little Limestone)
	0601010803	060101080301 (South Indian Creek, Upper)
		060101080302 (South Indian Creek, Middle)
		060101080303 (South Indian Creek, Lower)
	0601010804	060101080401 (Big Limestone Creek, Upper)
		060101080402 (Big Limestone Creek, Lower)
	0601010805	060101080501 (Sink Creek)
		060101080502 (Horse Creek)
		060101080503 (Camp Creek)
		060101080504 (Richland Creek)
		060101080505 (Pigeon River)
		060101080506 (Cove Creek)
	0601010806	060101080601 (Nolichucky River)
		060101080602 (Little Chucky Creek)
		060101080603 (Bent Creek)
		060101080604 (Flat Creek)
		060101080605 (Long Creek)
	0601010807	060101080701 (Lick Creek, Upper)
		060101080702 (Lick Creek, Middle)
		060101080703 (Roaring Fork Creek)
		060101080704 (Gap Creek)
		060101080705 (Lick Creek, Lower)

The Tennessee Portion of the Nolichucky River Watershed is Composed of Twenty-seven USGS-Delineated Subwatersheds (12-Digit Subwatersheds).

Point source contributions to the Nolichucky River Watershed consist of 34 individual NPDES-permitted facilities. Other permits in the watershed (as of October 20, 2008) are Mining Permits (10), Aquatic Resource Alteration Permits (107), Tennessee Multi-Sector Permits (117), Construction General Permits (164), Water Treatment Plant Permits (1), CAFO Permits (20), and Ready Mix Concrete Plant Permits (3). Agricultural operations include cattle, chicken, hog, and sheep farming. Maps illustrating the locations of permit sites and tables summarizing livestock practices are presented in each subwatershed.

Chapter 5 is entitled *Water Quality Partnerships in the Nolichucky River Watershed* and highlights partnerships between agencies and between agencies and landowners that are essential to success. Programs of federal agencies (Natural Resources Conservation Service, U.S. Fish and Wildlife Service, U.S. Geological Survey, Tennessee Valley Authority, U.S. Forest Service, and National Park Service) and state agencies (TDEC/State Revolving Fund, TDEC Division of Water Supply, Tennessee Department of Agriculture, Tennessee Wildlife Resources Agency, and North Carolina Division of Water Quality). Local initiatives of organizations active in the watershed (Greene County Soil Conservation District, Upper Nolichucky Watershed Alliance, Middle Nolichucky Watershed Alliance, Smoky Mountain RC&D Council, Appalachian RC&D Council) are also described.

Point and Nonpoint source approaches to water quality problems in the Nolichucky River Watershed are addressed in Chapter 6. Chapter 6 also includes comments received during public meetings, links to EPA-approved TMDLs in the watershed, and an assessment of needs for the watershed.

The full Nolichucky River Watershed Water Quality Management Plan can be found at: http://www.state.tn.us/environment/wpc/watershed/wsmplans/

CHAPTER 1

WATERSHED APPROACH TO WATER QUALITY

1.1 BACKGROUND. The Division of Water Pollution Control is responsible for administration of the Tennessee Water Quality Control Act of 1977 (TCA 69–3–101). Information about the Division of Water Pollution Control, updates and announcements, may be found at http://www.state.tn.us/environment/wpc/index.html, and a summary of the organization of the Division of Water Pollution Control may be found in Appendix I.

The mission of the Division of Water Pollution Control is to abate existing pollution of the waters of Tennessee, to reclaim polluted waters, to prevent the future pollution of the waters, and to plan for the future use of the waters so that the water resources of Tennessee might be used and enjoyed to the fullest extent consistent with the maintenance of unpolluted waters.

The Division monitors, analyzes, and reports on the quality of Tennessee's water. In order to perform these tasks more effectively, the Division adopted a Watershed Approach to Water Quality in 1996.

This Chapter summarizes TDEC's Watershed Approach to Water Quality.

1.2 WATERSHED APPROACH TO WATER QUALITY. The Watershed Approach to Water Quality is a coordinating framework designed to protect and restore aquatic systems and protect human health more effectively (EPA841-R-95-003). The Approach is based on the concept that many water quality problems, like the accumulation of pollutants or nonpoint source pollution, are best addressed at the watershed level. In addition, a watershed focus helps identify the most cost-effective pollution control strategies to meet clean water goals. Tennessee's Watershed Approach, updates and public participation opportunities, may be found on the web at http://www.state.tn.us/environment/wpc/wshed1.htm.

Watersheds are appropriate as organizational units because they are readily identifiable landscape units with readily identifiable boundaries that integrate terrestrial, aquatic, and geologic processes. Focusing on the whole watershed helps reach the best balance among efforts to control point source pollution and polluted runoff as well as protect drinking water sources and sensitive natural resources such as wetlands (EPA-840-R-98-001).

Four main features are typical of the Watershed Approach: 1) Identifying and prioritizing water quality problems in the watershed, 2) Developing increased public involvement, 3) Coordinating activities with other agencies, and 4) Measuring success through increased and more efficient monitoring and other data gathering.

Typically, the Watershed Approach meets the following description (EPA841-R-95-003):

- Features watersheds or basins as the basic management units
- Targets priority subwatersheds for management action
- Addresses all significant point and nonpoint sources of pollution
- Addresses all significant pollutants
- Sets clear and achievable goals
- Involves the local citizenry in all stages of the program
- Uses the resources and expertise of multiple agencies
- Is not limited by any single agency's responsibilities
- Considers public health issues

An additional characteristic of the Watershed Approach is that it complements other environmental activities. This allows for close cooperation with other state agencies and local governments as well as with federal agencies such as the Tennessee Valley Authority and the U.S. Army Corps of Engineers, U.S. Department of Agriculture (*e.g.*, Natural Resources Conservation Service, United States Forest Service), U.S. Department of the Interior (*e.g.* United States Geological Survey, U.S. Fish and Wildlife Service, National Park Service). When all permitted dischargers are considered together, agencies are better able to focus on those controls necessary to produce measurable improvements in water quality. This also results in a more efficient process: It encourages agencies to focus staff and financial resources on prioritized geographic locations and makes it easier to coordinate between agencies and individuals with an interest in solving water quality problems (EPA841-R-003).

The Watershed Approach is not a regulatory program or a new EPA mandate; rather it is a decision making process that reflects a common strategy for information collection and analysis as well as a common understanding of the roles, priorities, and responsibilities of all stakeholders within a watershed. The Watershed Approach utilizes features already in state and federal law, including:

- Water Quality Standards
- National Pollutant Discharge Elimination System (NPDES)
- Total Maximum Daily Loads (TMDLs)
- Clean Lakes Program
- Nonpoint Source Program
- Groundwater Protection

Traditional activities like permitting, planning, and monitoring are also coordinated in the Watershed Approach. A significant change from the past, however, is that the Watershed Approach encourages integration of traditional regulatory (point source pollution) and nonregulatory (nonpoint sources of pollution) programs. There are additional changes from the past as well:

THE PAST	WATERSHED APPROACH
Focus on fixed-station ambient monitoring	Focus on comprehensive watershed monitoring
Focus on pollutant discharge sites	Focus on watershed-wide effects
Focus on WPC programs	Focus on coordination and cooperation
Focus on point sources of pollution	Focus on all sources of pollution
Focus on dischargers as the problem	Focus on dischargers as an integral part of the solution
Focus on short-term problems	Focus on long-term solutions

Table 1-1. Contrast Between the Watershed Approach and the Past.

This approach places greater emphasis on all aspects of water quality, including chemical water quality (conventional pollutants, toxic pollutants), physical water quality (temperature, flow), habitat quality (channel morphology, composition and health of benthic communities), and biodiversity (species abundance, species richness).

1.2.A. Components of the Watershed Approach. Tennessee is composed of fifty-five watersheds corresponding to the 8-digit USGS Hydrologic Unit Codes (HUC-8). These watersheds, which serve as geographic management units, are combined in five groups according to year of implementation.

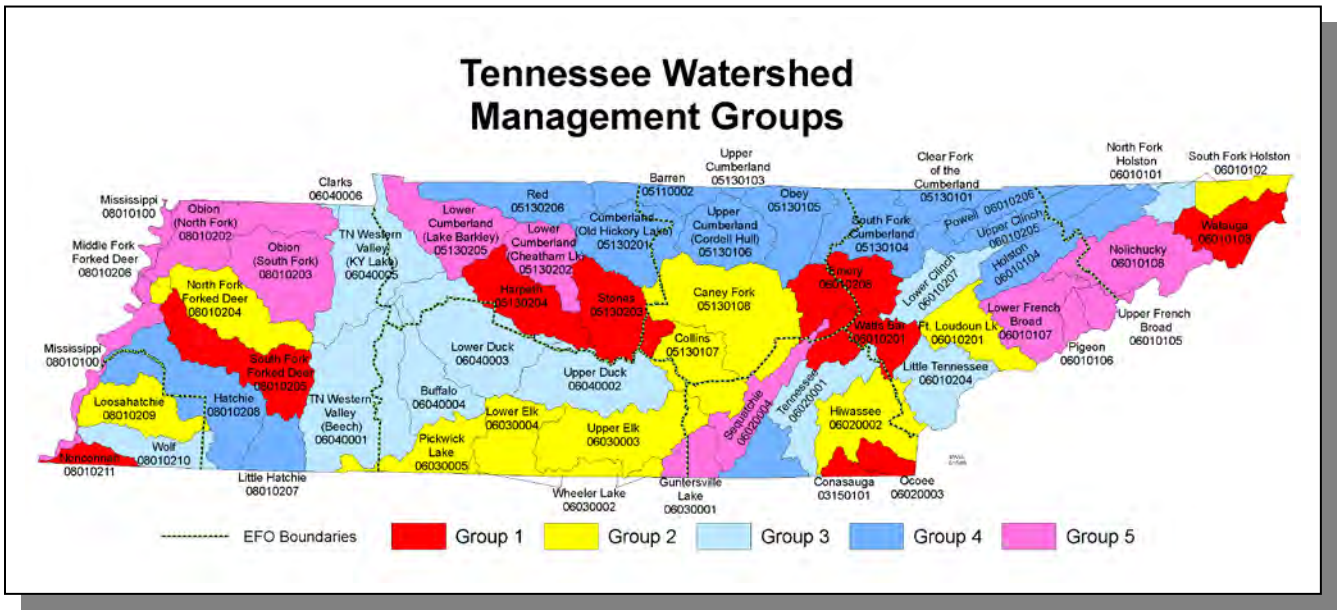


Figure 1-1. Watershed Groups in Tennessee's Watershed Approach to Water Quality.

Each year, TDEC conducts monitoring in one-fifth of Tennessee's watersheds; assessment, priority setting and follow-up monitoring are conducted in another one fifth of watersheds; modeling and TMDL studies in another one fifth; developing management plans in another one fifth; and implementing management plans in another one fifth of watersheds.

GROUP	WEST TENNESSEE	MIDDLE TENNESSEE	EAST TENNESSEE
1	Nonconnah South Fork Forked Deer	Harpeth Stones	Conasauga Emory Ocoee Watauga Watts Bar
2	Loosahatchie Middle Fork Forked Deer North Fork Forked Deer	Caney Fork Collins Lower Elk Pickwick Lake Upper Elk Wheeler Lake	Fort Loudoun Hiwassee South Fork Holston (Upper) Wheeler Lake
3	Tennessee Western Valley (Beech River) Tennessee Western Valley (KY Lake) Wolf River	Buffalo Lower Duck Upper Duck	Little Tennessee Lower Clinch North Fork Holston South Fork Holston (Lower) Tennessee (Upper)
4	Lower Hatchie Upper Hatchie	Barren Obey Red Upper Cumberland (Cordell Hull Lake) Upper Cumberland (Old Hickory Lake) Upper Cumberland (Cumberland Lake)	Holston Powell South Fork Cumberland Tennessee (Lower) Upper Clinch Upper Cumberland (Clear Fork)
5	Mississippi North Fork Obion South Fork Obion	Guntersville Lake Lower Cumberland (Cheatham Lake) Lower Cumberland (Lake Barkley)	Lower French Broad Nolichucky Pigeon Upper French Broad

Table 1-2. Watershed Groups in Tennessee's Watershed Approach.

In succeeding years of the cycle, efforts rotate among the watershed groups. The activities in the five year cycle provide a reference for all stakeholders.

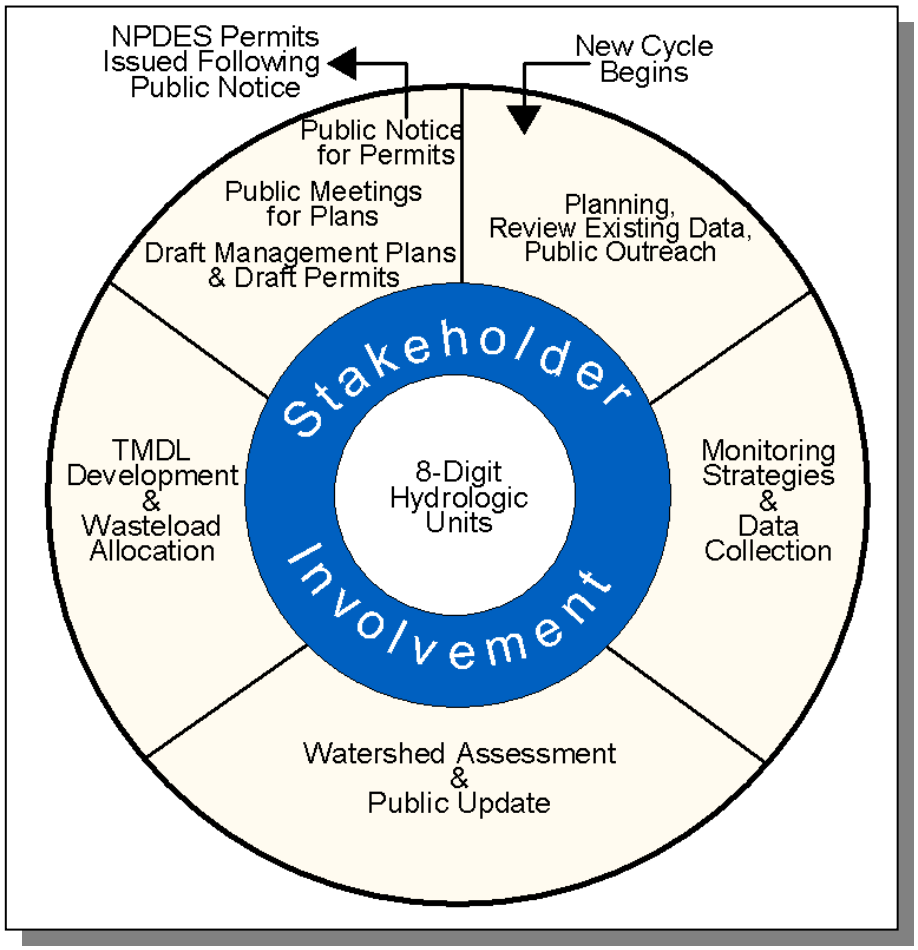


Figure 1-2. The Watershed Approach Cycle.

The six key activities that take place during the cycle are:

1. Planning and Existing Data Review. Existing data and reports from appropriate agencies and organizations are compiled and used to describe the current conditions and status of rivers and streams. Reviewing all existing data and comparing agencies' work plans guide the development of an effective monitoring strategy.

2. Monitoring. Field data is collected for streams in the watershed. These data supplement existing data and are used for the water quality assessment.

3. Assessment. Monitoring data are used to determine the status of the stream's designated use supports.

4. Wasteload Allocation/TMDL Development. Monitoring data are used to determine nonpoint source contributions and pollutant loads for permitted dischargers releasing wastewater to the watershed. Limits are set to assure that water quality is protected.

5. Permits. Issuance and expiration of all discharge permits are synchronized based on watersheds. Currently, 1700 permits have been issued in Tennessee under the federally delegated National Pollutant Discharge Elimination System (NPDES).

6. Watershed Management Plans. These plans include information for each watershed including general watershed description, water quality goals, major water quality concerns and issues, and management strategies.

Public participation opportunities occur throughout the entire five year cycle. Participation in Years 1, 3 and 5 is emphasized, although additional meetings are held at stakeholder's request. People tend to participate more readily and actively in protecting the quality of waters in areas where they live and work, and have some roles and responsibilities:

- Data sharing
- Identification of water quality stressors
- Participation in public meetings
- Commenting on management plans
- Shared commitment for plan implementation

1.2.B. Benefits of the Watershed Approach. The Watershed Approach fosters a better understanding of the physical, chemical and biological effects on a watershed, thereby allowing agencies and citizens to focus on those solutions most likely to be effective. The Approach recognizes the need for a comprehensive, ecosystem-based approach that depends on local governments and local citizens for success (EPA841-R-95-004). On a larger scale, many lessons integrating public participation with aquatic ecosystem-based programs have been learned in the successful Chesapeake Bay, Great Lakes, Clean Lakes, and National Estuary Programs.

Benefits of the Watershed Approach include (EPA841-R-95-004):

- Focus on water quality goals and ecological integrity rather than on program activities such as number of permits issued.

- Improve basis for management decisions through consideration of both point and nonpoint source stressors. A watershed strategy improves the scientific basis for decision making and focuses management efforts on basins and watersheds where they are most needed. Both point and nonpoint control strategies are more effective under a watershed approach because the Approach promotes timely and focused development of TMDLs.

- Enhance program efficiency, as the focus becomes watershed. A watershed focus can improve the efficiency of water management programs by facilitating consolidation of programs within each watershed. For example, handling all point source dischargers in a watershed at the same time reduces administrative costs due to the potential to combine hearings and notices as well as allowing staff to focus on more limited areas in a sequential fashion.

- Improve coordination between federal, state and local agencies including data sharing and pooling of resources. As the focus shifts to watersheds, agencies are better able to participate in data sharing and coordinated assessment and control strategies.

- Increase public involvement. The Watershed Approach provides opportunities for stakeholders to increase their awareness of water-related issues and inform staff about their knowledge of the watershed. Participation is via three public meetings over the five-year watershed management cycle as well as meetings at stakeholder's request. Additional opportunities are provided through the Department of Environment and Conservation homepage and direct contact with local Environmental Assistance Centers.

- Greater consistency and responsiveness. Developing goals and management plans for a basin or watershed with stakeholder involvement results in increased responsiveness to the public and consistency in determining management actions. In return, stakeholders can expect improved consistency and continuity in decisions when management actions follow a watershed plan.

Additional benefits of working at the watershed level are described in the Clean Water Action Plan (EPA-840-R-98-001), and can be viewed at http://www.cleanwater.gov/action/toc.html.

The Watershed Approach represents awareness that restoring and maintaining our waters requires crossing traditional barriers (point *vs.* nonpoint sources of pollution) when designing solutions. These solutions increasingly rely on participation by both public and private sectors, where citizens, elected officials and technical personnel all have opportunity to participate. This integrated approach mirrors the complicated relationships in which people live, work and recreate in the watershed, and suggests a comprehensive, watershed-based and community-based approach is needed to address these (EPA841-R-97-005).

CHAPTER 2

DESCRIPTION OF THE NOLICHUCKY RIVER WATERSHED

2.1. BACKGROUND. The Nolichucky River is a major stream draining the Blue Ridge Mountains of Western North Carolina and East Tennessee. The stream was impounded in 1912 when Nolichucky Dam was built near Greenville, Tennessee. The Tennessee Valley Authority (TVA) operated it for electrical power purposes until the 1970s until the degree of siltation of the reservoir, called Davy Crockett Lake, had made continued efforts to operate the facility for hydroelectric purposes impractical. The agency retired the dam as a power source but continues to maintain it and to use it for flood control and recreational purposes. The Nolichucky is considered to be a historic stream in Tennessee, and the state's first governor, John Sevier, was known by the nickname "Nolichucky Jack", a reference to this stream.

This Chapter describes the location and characteristics of the Tennessee portion of the Nolichucky River Watershed.

2.2. DESCRIPTION OF THE WATERSHED.

2.2.A. General Location. The Tennessee portion of the Nolichucky River Watershed is located in East Tennessee and includes parts of Cocke, Greene, Hamblen, Hawkins, Jefferson, Unicoi, and Washington Counties.

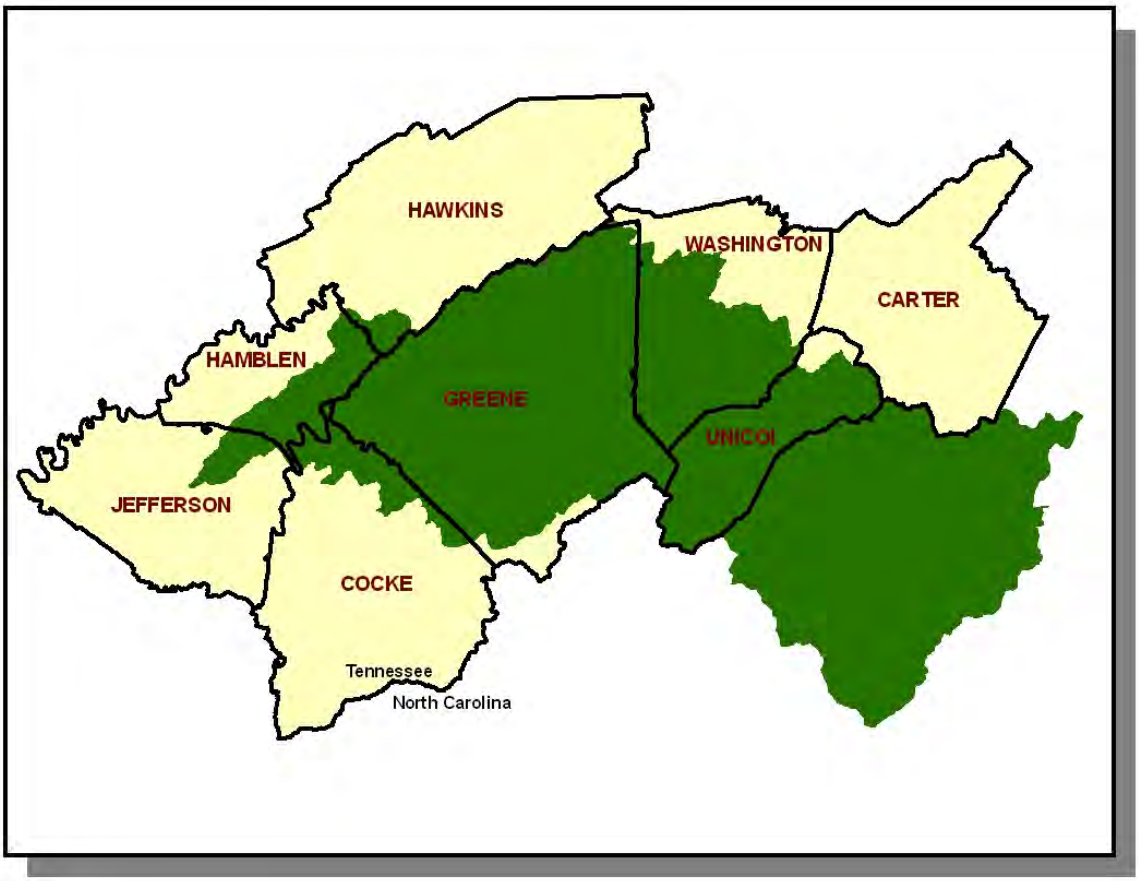


Figure 2-1. General Location of the Nolichucky River Watershed.

COUNTY	% OF WATERSHED IN EACH COUNTY
Greene	52.91
Washington	17.07
Unicoi	15.17
Hamblen	5.99
Cocke	5.08
Jefferson	2.11
Hawkins	1.42

Table 2-1. The Nolichucky River Watershed Includes Parts of Seven East Tennessee Counties.

2.2.B. Population Density Centers. Two Interstates and twenty-eight highways serve the major communities in the Tennessee portion of the Nolichucky River Watershed.

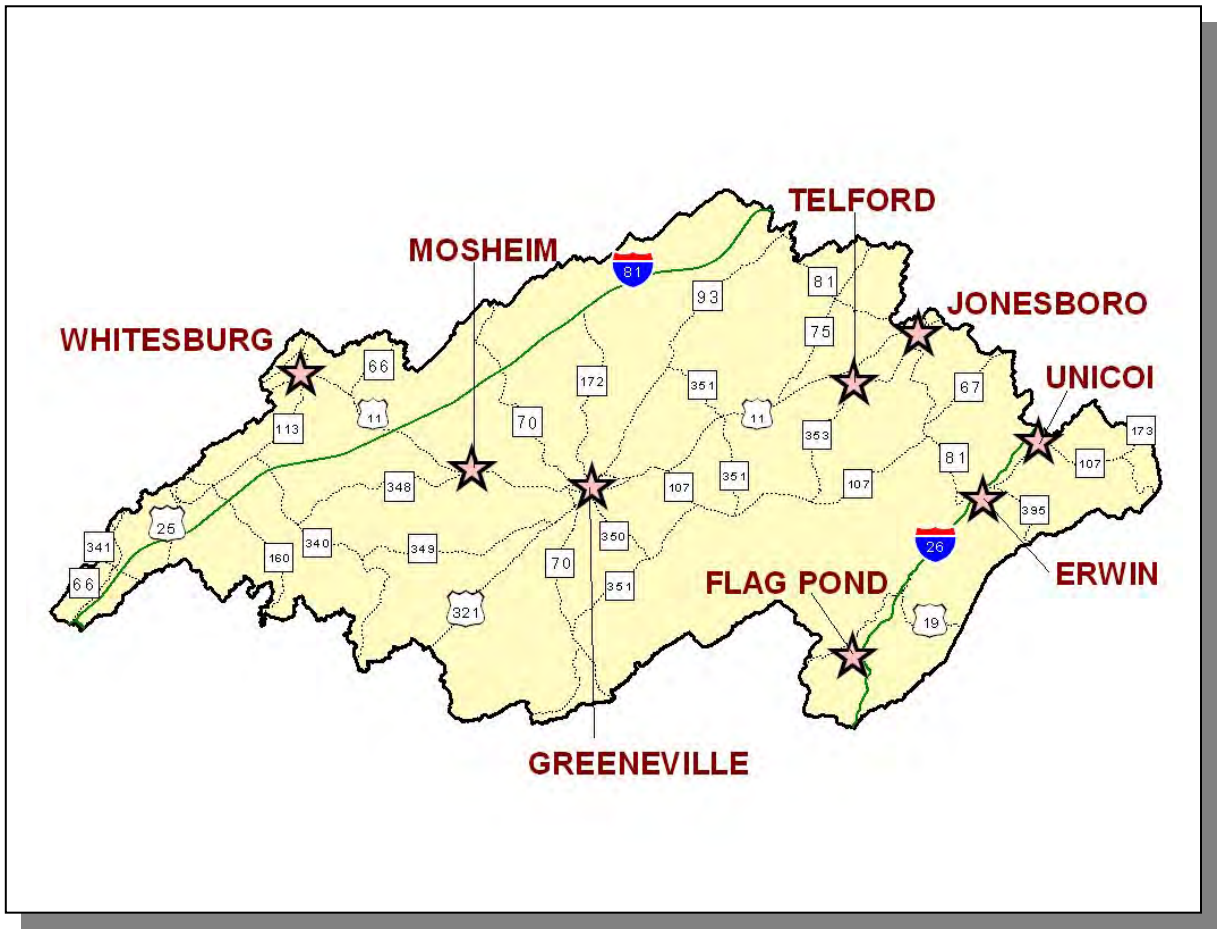


Figure 2-2. Communities and Roads in the Tennessee Portion of the Nolichucky River Watershed.

MUNICIPALITY	POPULATION	COUNTY
Greeneville *	15,274	Greene
Erwin*	5,610	Unicoi
Jonesboro*	4,168	Washington
Unicoi	3,519	Unicoi
Whitesburg	3,211	Hamblen
Telford	3,017	Washington
Mosheim	1,749	Greene
Flag Pond	867	Unicoi

Table 2-2. Municipalities in the Tennessee Portion of the Nolichucky River Watershed. *Population based on 2000 census (Tennessee Blue Book) or http://www.hometownlocator.com. Asterisk (*) indicates county seat.*

2.3. GENERAL HYDROLOGIC DESCRIPTION.

2.3.A. Hydrology. The Nolichucky River Watershed, designated 06010108 by the USGS, is approximately 1,128 square miles and drains to the Nolichucky River.

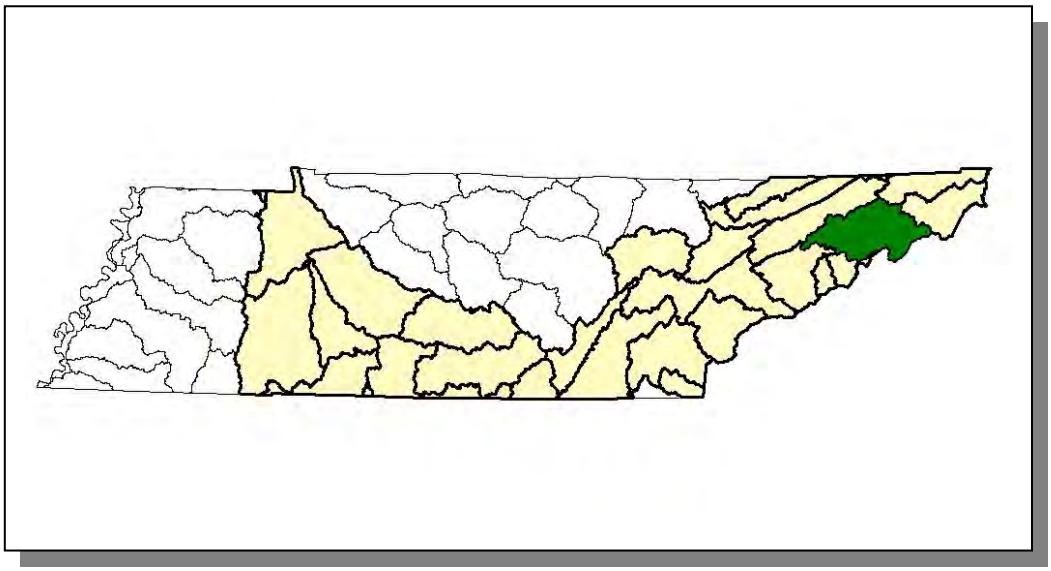


Figure 2-3. The Nolichucky River Watershed is Part of the Tennessee River Basin.

Figure 2-4. Hydrology in the Nolichucky River Watershed. *There are 1,916 stream miles and 383 lake acres recorded in River Reach File 3 in the Tennessee portion of the Nolichucky River Watershed (There are 2,854 stream miles in the entire watershed). Location of the Nolichucky River and the cities of Erwin, Greeneville, Jonesboro, and Whitesburg are shown for reference.*

2.3.B. Dams. There are 10 dams inventoried by TDEC Division of Water Supply in the Tennessee portion of the Nolichucky River Watershed. These dams either retain 30 acre-feet of water or have structures at least 20 feet high.

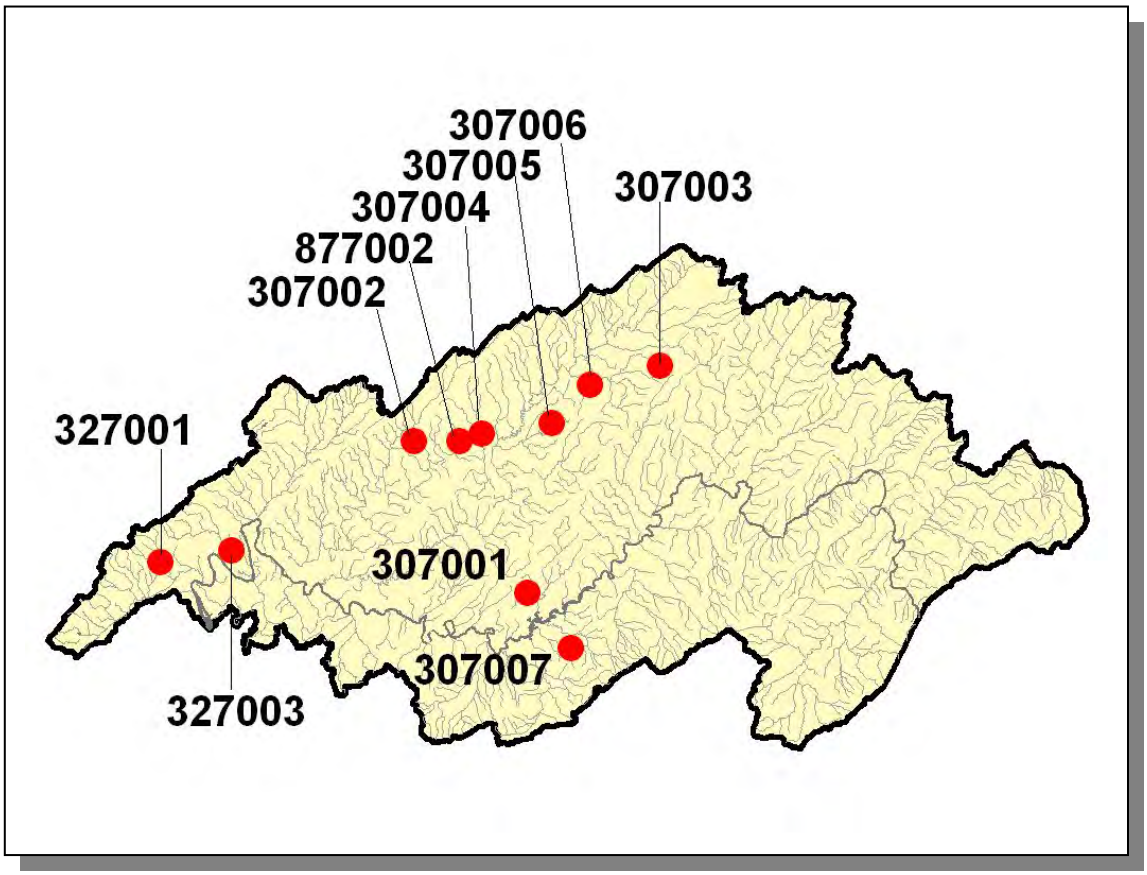


Figure 2-5. Location of Inventoried Dams in the Tennessee Portion of the Nolichucky River Watershed. *More information, including identification of inventoried dams labeled, is provided in Appendix II and at http://gwidc.memphis.edu/website/dams/viewer.htm.*

2.4. LAND USE. Land Use/Land Cover information was provided by EPA Region 4 and was interpreted from 2001 Multi-Resolution Land Cover (MRLC) satellite imagery.

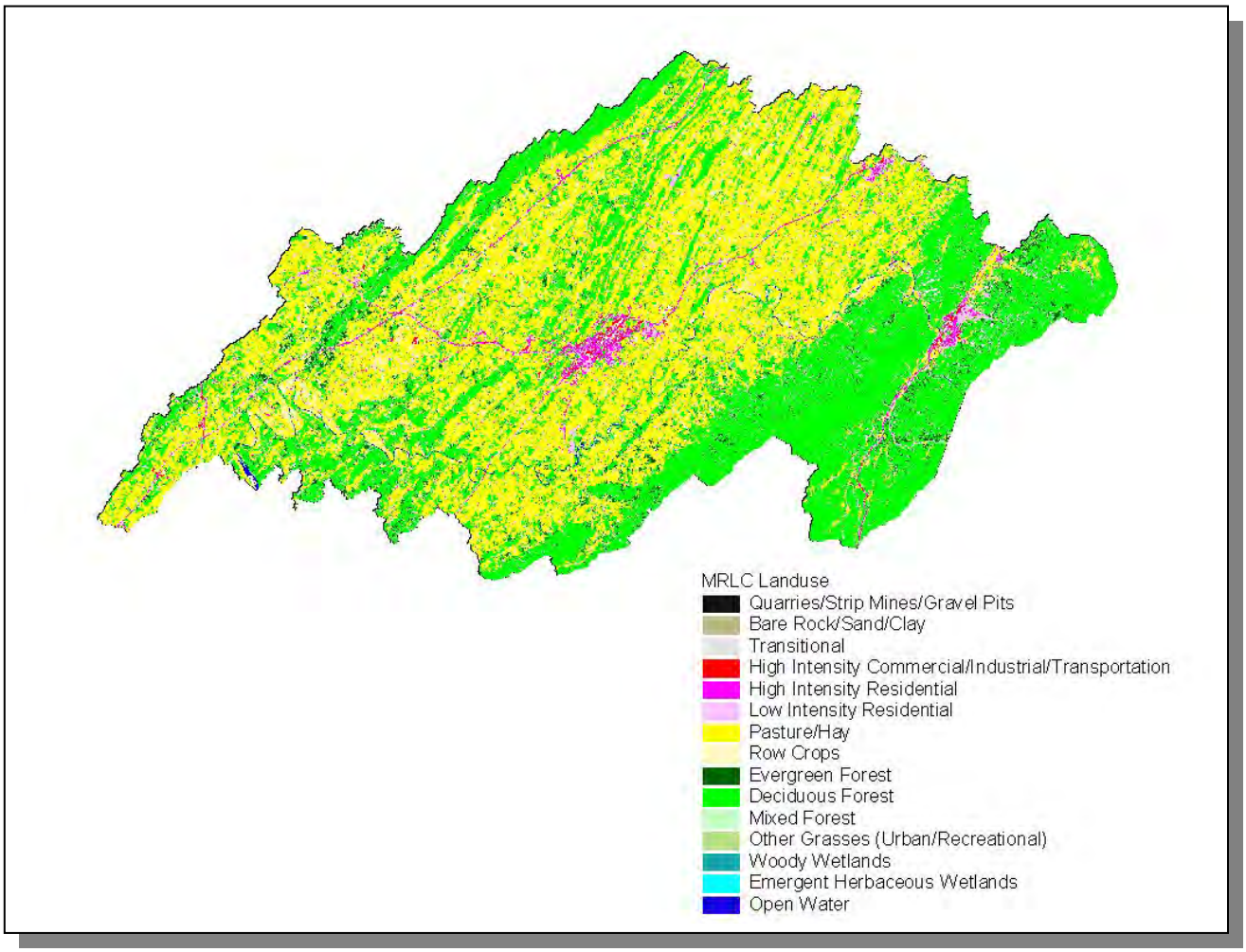


Figure 2-6. Illustration of Select Land Cover/Land Use Data from MRLC Satellite Imagery.

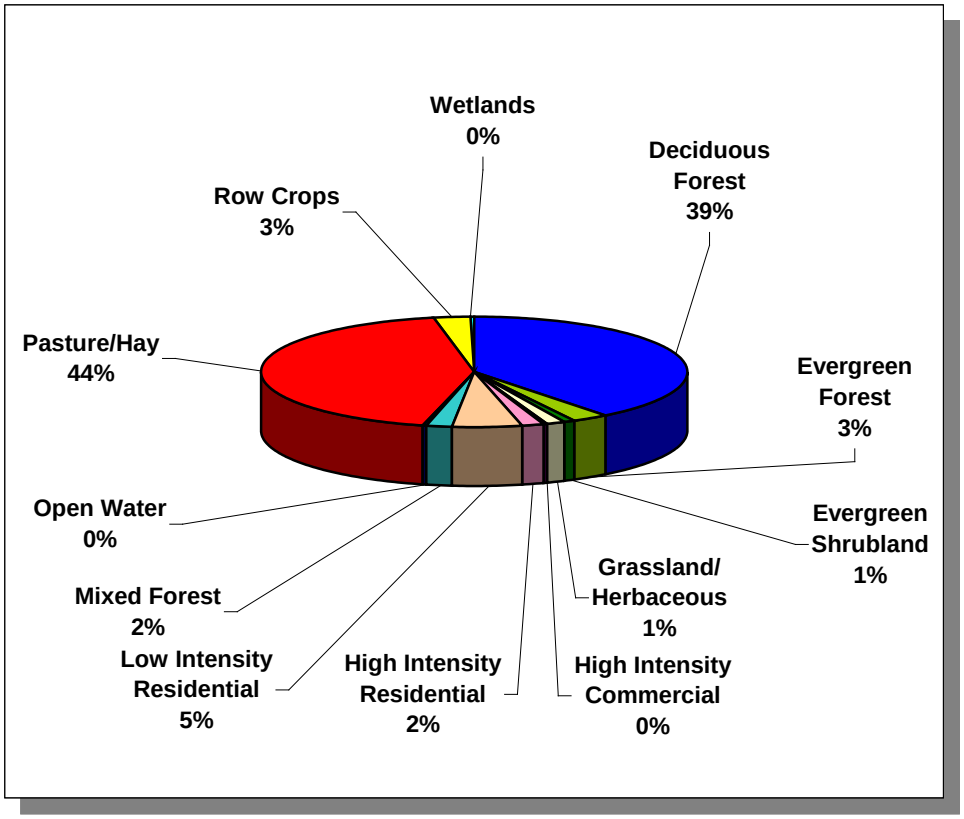


Figure 2-7. Land Use Distribution in the Tennessee Portion of the Nolichucky River Watershed. *More information is provided in Appendix II.*

Sinkholes, springs, disappearing streams and caves characterize karst topography. The term "karst" describes a distinctive landform that indicates dissolution of underlying soluble rocks by surface water or ground water. Although commonly associated with limestone and dolomite (carbonate rocks), other highly soluble rocks such as gypsum and rock salt can be sculpted into karst terrain. In karst areas, the ground water flows through solution-enlarged channels, bedding planes and microfractures within the rock. The characteristic landforms of karst regions are: closed depressions of various size and arrangement; disrupted surface drainage; and caves and underground drainage systems. The term "karst" is named after a famous region in the former country of Yugoslavia.

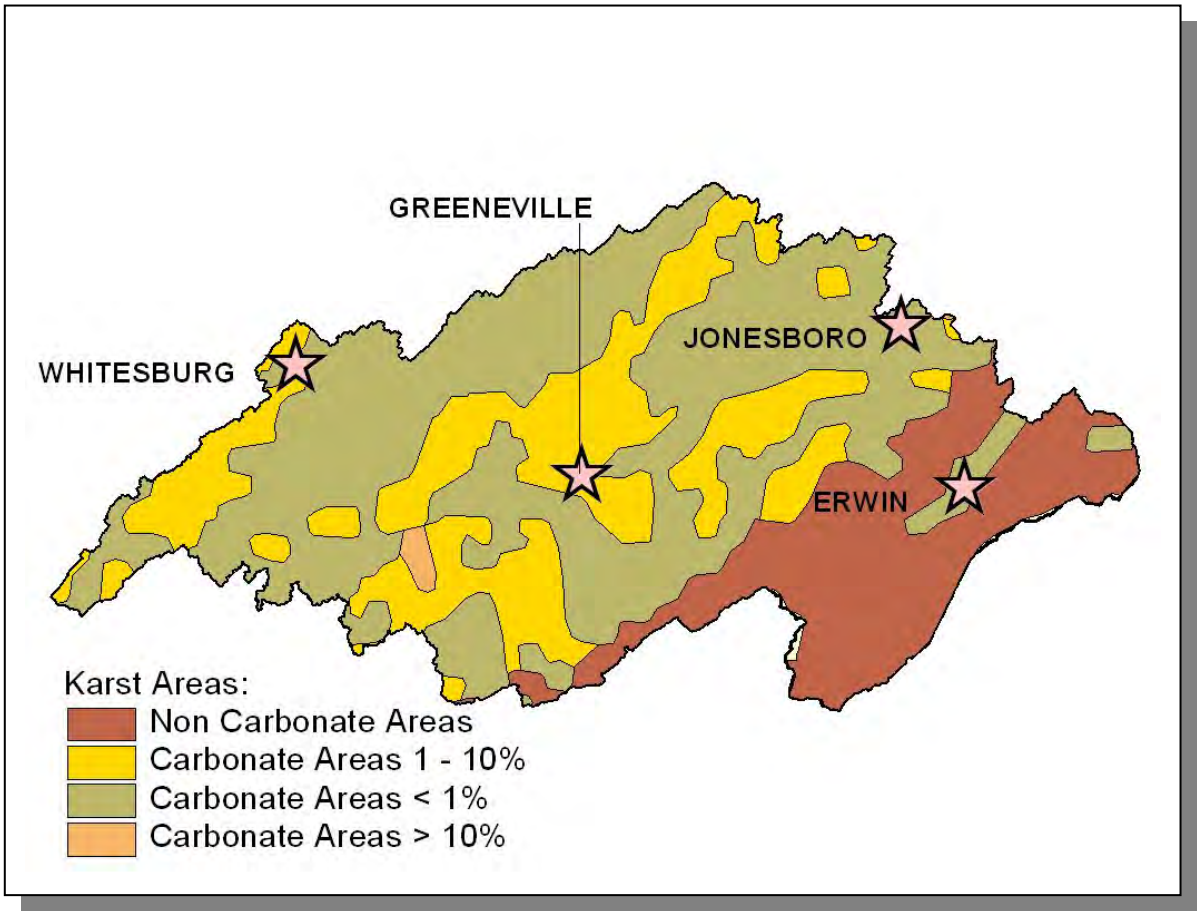


Figure 2-8. Illustration of Karst Areas in the Tennessee Portion of the Nolichucky River Watershed. *Locations of communities in the watershed are shown for reference.*

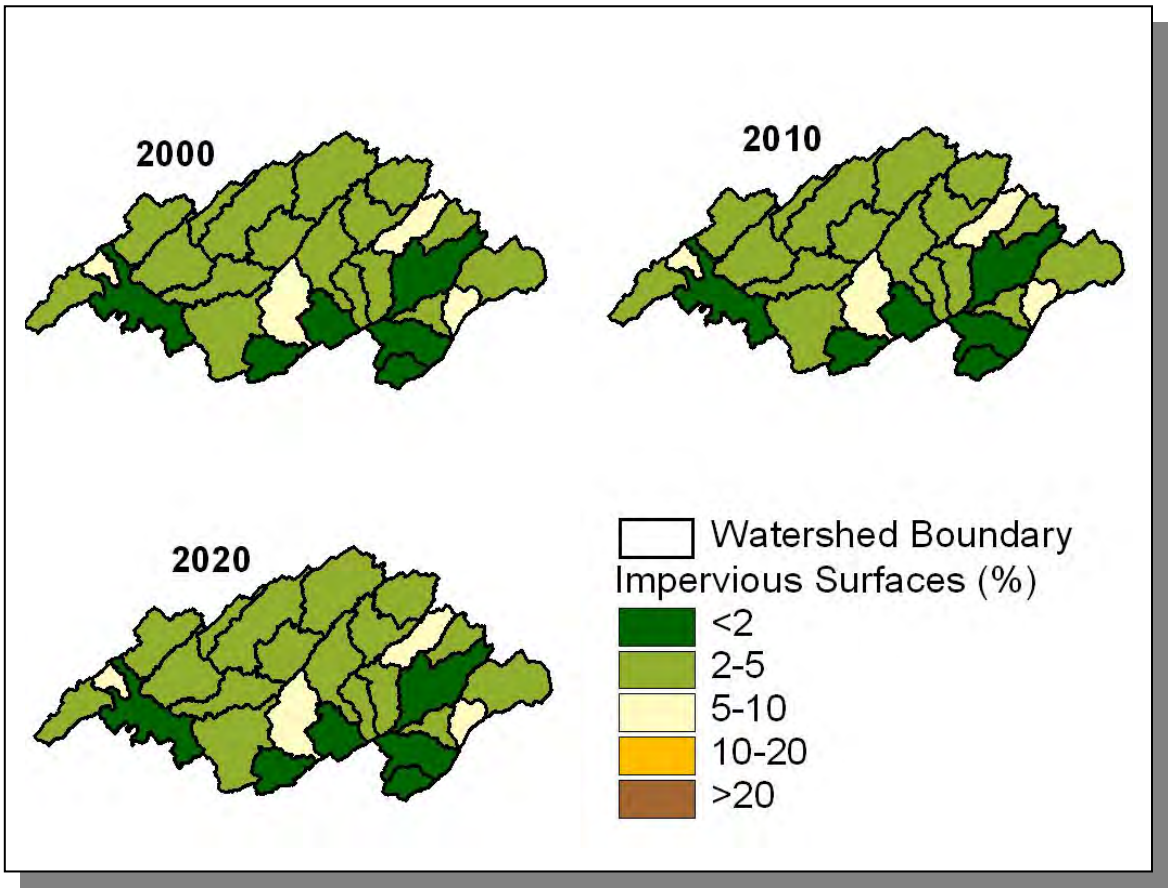


Figure 2-9. Illustration of Total Impervious Area in the Tennessee Portion of the Nolichucky River Watershed. *All HUC-12 subwatersheds are shown. Current estimates and projected total impervious cover calculated by HUC-12 are provided by EPA Region 4. More information can be found at:*
http://www.epa.gov/ATHENS/research/impervious/.

2.5. ECOREGIONS AND REFERENCE STREAMS. Ecoregions are relatively homogeneous areas of similar geography, topography, climate and soils that support similar plant and animal life. Ecoregions serve as a spatial framework for the assessment, management, and monitoring of ecosystems and ecosystem components. Ecoregion studies can aid the selection of regional stream reference sites, identifying high quality waters, and developing ecoregion-specific chemical and biological water quality criteria.

There are eight Level III Ecoregions and twenty-five Level IV subecoregions in Tennessee. The Tennessee portion of the Nolichucky River Watershed lies within 2 Level III ecoregions (Blue Ridge Mountains and Ridge and Valley) and contains 8 Level IV subecoregions:

- **Southern Igneous Ridges and Mountains (66d)** occur in Tennessee's northeastern Blue Ridge near the North Carolina border, primarily on Precambrian-age igneous and high-grade metamorphic rocks. The typical crystalline rock types include granite, gneiss, schist, and metavolcanics, covered by well-drained, acidic brown loamy soils. Elevations of this rough, dissected region range from 2000-6200 feet, with Roan Mountain reaching 6286 feet. Although there are a few small areas of pasture and apple orchards, the region is mostly forested; Appalachian oak and northern hardwood forests predominate.

- **Southern Sedimentary Ridges (66e)** include some of the westernmost foothill areas of the Blue Ridge Mountains ecoregion, such as the Bean, Starr, Chilhowee, English, Stone, Bald, and Iron Mountain areas. Slopes are steep, and elevations are generally 1000-4500 feet. The rocks are primarily Cambrian-age sedimentary (shale, sandstone, siltstone, quartzite, conglomerate), although some lower stream reaches occur on limestone. Soils are predominantly friable loams and fine sandy loams with variable amounts of sandstone rock fragments, and support mostly mixed oak and oak-pine forests.

- **Limestone Valleys and Coves (66f)** are small but distinct lowland areas of the Blue Ridge, with elevations mostly between 1500 and 2500 feet. About 450 million years ago, older Blue Ridge rocks to the east were forced up and over younger rocks to the west. In places, the Precambrian rocks have eroded through to Cambrian or Ordovician-age limestones, as seen especially in isolated, deep cove areas that are surrounded by steep mountains. The main areas of limestone include the Mountain City lowland area and Shady Valley in the north; and Wear Cove, Tuckaleechee Cove, and Cades Cove of the Great Smoky Mountains in the south. Hay and pasture, with some tobacco patches on small farms, are typical land uses.

- **Southern Metasedimentary Mountains (66g)** are steep, dissected, biologically-diverse mountains that include Clingmans Dome (6643 feet), the highest point in Tennessee. The Precambrian-age metamorphic and sedimentary geologic materials are generally older and more metamorphosed than the Southern Sedimentary Ridges (66e) to the west and north. The

Appalachian oak forests and, at higher elevation, the northern hardwoods include a variety of oaks and pines, as well as silverbell, hemlock, yellow poplar, basswood, buckeye, yellow birch, and beech. The native spruce-fir forest, found generally above 5500 feet, has been affected greatly over the past twenty-five years by the great woolly aphid. The Copper Basin, in the southeast corner of Tennessee, was the site of copper mining and smelting from the 1850's to 1987, and once left more than fifty square miles of eroded bare earth.

- **Southern Limestone/Dolomite Valleys and Low Rolling Hills (67f)** form a heterogeneous region composed predominantly of limestone and cherty dolomite. Landforms are mostly low rolling ridges and valleys, and the soils vary in their productivity. Landcover includes intensive agriculture, urban and industrial, or areas of thick forest. White oak forests, bottomland oak forest, and sycamore-ash-elm riparian forest are the common forest types, and grassland barrens intermixed with cedar-pine glades also occur here.

- **Southern Shale Valleys (67g)** consist of lowlands, rolling valleys, and slopes and hilly areas that are dominated by shale materials. The northern areas are associated with Ordovician-age calcareous shale, and the well-drained soils are often slightly acid to neutral. In the south, the shale valleys are associated with Cambrian-age shales that contain some narrow bands of limestone, but the soils tend to be strongly acid. Small farms and rural residences subdivide the land. The steeper slopes are used for pasture or have reverted to brush and forested land, while small fields of hay, corn, tobacco, and garden crops are grown on the foot slopes and bottom land.

- **Southern Sandstone Ridges (67h)** encompass the major sandstone ridges with areas of shale and siltstone. The steep, forested ridges have narrow crests with soils that are typically stony, sandy, and of low fertility. The chemistry of streams flowing down the ridges can vary greatly depending on the geological material. The higher elevation ridges are in the north, including Wallen Ridge and Powell, Clinch and Bays Mountains. White Oak Mountain in the south has some sandstone on the west side, with abundant shale and limestone. Grindstone Mountain, capped by the Gizzard Group sandstone, is the only remnant of Pennsylvanian-age strata in the Ridge and Valley of Tennessee.

- The **Southern Dissected Ridges and Knobs (67i)** contain more crenulated, broken, or hummocky ridges, compared to the smoother, more sharply pointed sandstone ridges of Ecoregion 67h. Although shale is common, there is a mixture and interbedding of geologic materials. The ridges on the east side of Tennessee's Ridge and Valley tend to be associated with the Ordovician-age Sevier shale, Athens shale, and Holston and Lenoir limestones. These can include calcareous shale, limestone, siltstone, sandstone, and conglomerate. In the central and western part of Ecoregion 67, the shale ridges are associated with the Cambrian-age Rome Formation: shale and siltstone with beds of sandstone. Chestnut oak forests and pine forests are typical for the higher elevations of the ridges, with areas of white

oak, mixed mesophytic forest, and tulip poplar on the lower slopes, knobs, and draws.

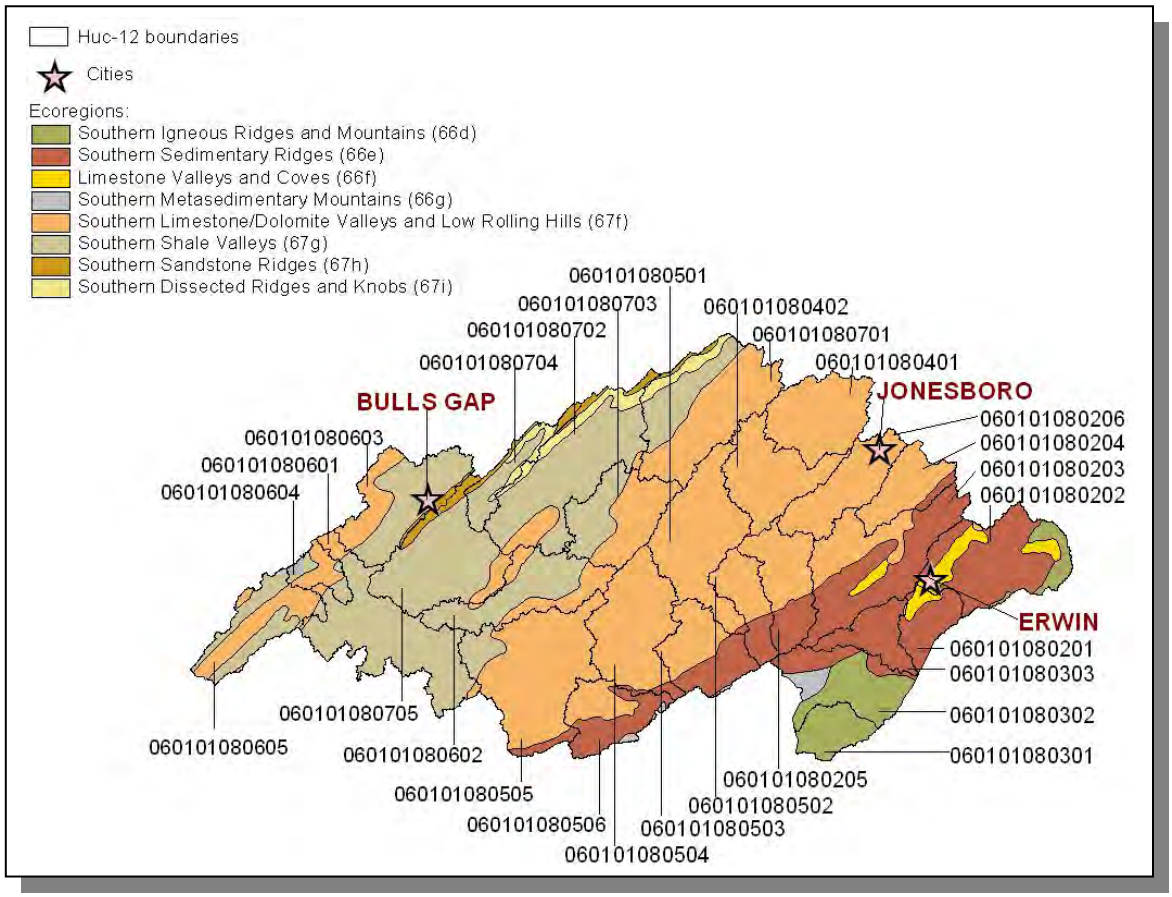


Figure 2-10. Level IV Ecoregions in the Tennessee Portion of the Nolichucky River Watershed. *HUC-12 subwatershed boundaries and locations of Bulls Gap, Erwin, and Jonesboro are shown for reference.*

Each Level IV Ecoregion has at least one reference stream associated with it. A reference stream represents a least impacted condition within that ecoregion and may not be representative of a pristine condition.

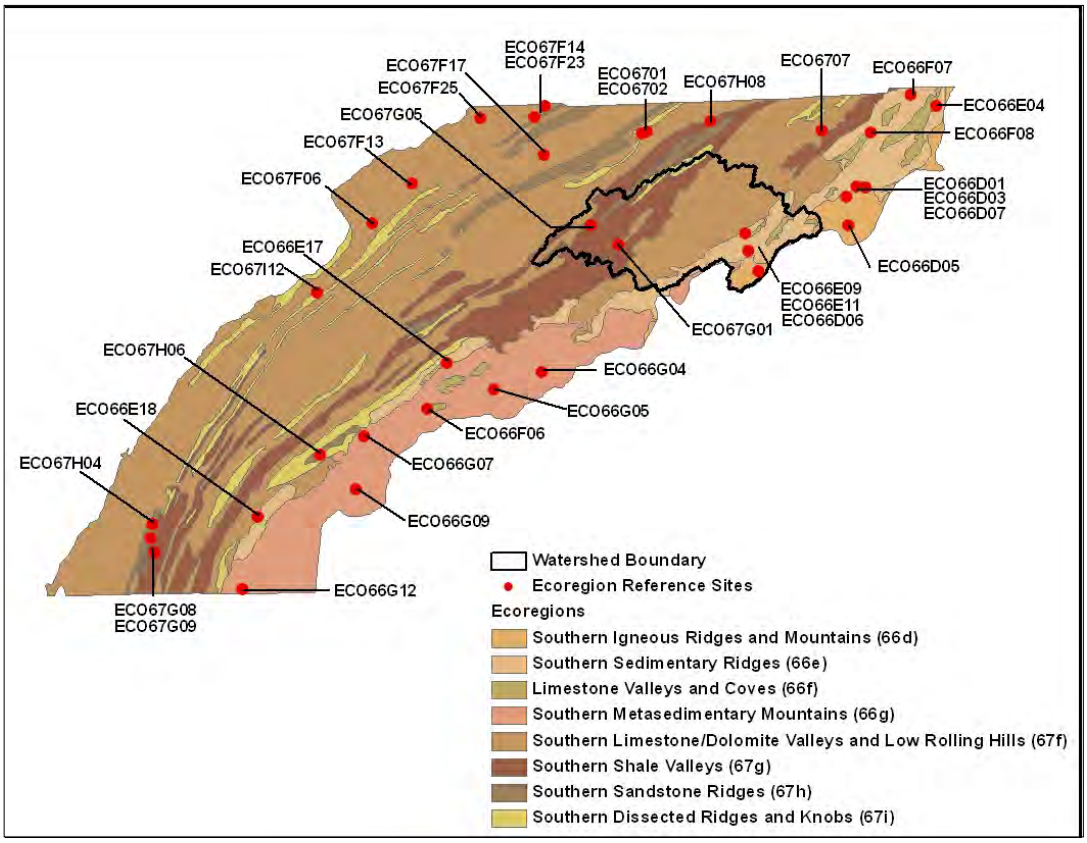


Figure 2-11. Ecoregion Monitoring Sites in Level IV Ecoregions 66d, 66e, 66f, 66g, 67f, 67g, 67h, and 67i. *The Tennessee portion of the Nolichucky River Watershed is shown for reference. More information, including which ecoregion reference sites were inactive or dropped prior to 06/01/2006, is provided in Appendix II.*

2.6. NATURAL RESOURCES.

2.6.A. Rare Plants and Animals. The Heritage Program in the TDEC Division of Natural Areas maintains a database of rare species that is shared by partners at The Nature Conservancy, Tennessee Wildlife Resources Agency, the US Fish and Wildlife Service, and the Tennessee Valley Authority. The information is used to: 1) track the occurrence of rare species in order to accomplish the goals of site conservation planning and protection of biological diversity, 2) identify the need for, and status of, recovery plans, and 3) conduct environmental reviews in compliance with the federal Endangered Species Act.

GROUPING	NUMBER OF RARE SPECIES
Insects	3
Mussels	10
Snails	7
Other	1
Amphibians	3
Birds	6
Fish	7
Mammals	13
Plants	78
Total	**128**

Table 2-3. There are 128 Known Rare Plant and Animal Species in the Tennessee Portion of the Nolichucky River Watershed.

In the Tennessee portion of the Nolichucky River Watershed, there are seven known rare fish species, ten known rare mussel species, six known rare snail species and three known rare amphibian species.

SCIENTIFIC NAME	COMMON NAME	FEDERAL STATUS	STATE STATUS
Carpiodes velifer	Highfin Carpsucker		D
Noturus sp. 4	Chucky Madtom	C	E
Cycleptus elongates	Blue sucker		T
Etheostoma acuticeps	Sharphead Darter		T
Percina aurantiaca	Tangerine Darter		D
Percina tanasi	Snail Darter	LT	T
Phoxinus tennesseensis	Tennessee Dace		D
Alasmidonta raveneliana	Appalachian Elktoe	LE	E
Cumberlandia monodonta	Spectacle case	C	
Discus bryanti	Saw-toothed Disc		
pioblasma capsaeformis	Oyster Mussel	LE	E
Epioblasma triquetra	Snuffbox		
Fusconaia cuneolus	Fine-rayed Pigtoe	LE	E
Lampsilis abrupta	Pink Mucket	LE	E
Lexingtonia dolabelloides	Slabside Pearlymussel		C
Quadrula cylindrica strigillata	Rough Rabbitsfoot Pearly Mussel	LE	E
Villosa fabalis	Rayed Bean	C	
Villosa trabalis	Cumberland Bean	C	
Discus bryanti	Saw-toothed Disc		
Io fluvialis	Spiny Riversnail		
Mesodon subpalliatus	Velvet Covert		
Paravitrea lamellidens	Lamellate Supercoil		
Paravitrea tridens	White-foot Supercoil		
Pilsbryna aurea	Ornate Bud		
Cryptobranchus alleganiensis	Hellbender	No Status	D
Desmognathus wrighti	Pigmy Salamander		D
Plethodon welleri	Weller's Salamander		D

Table 2-4. Rare Aquatic Species in the Tennessee Portion of the Nolichucky River Watershed. *Federal Status: LE, Listed Endangered by the U.S. Fish and Wildlife Service; LT, Listed Threatened by the U.S. Fish and Wildlife Service; C, Listed as a Candidate for federal listing, information indicates that listing is justified by the U.S. Fish and Wildlife Service. State Status: T, Listed Threatened by the Tennessee Wildlife Resources Agency; E, Listed Endangered by the Tennessee Wildlife Resources Agency; D, Deemed in Need of Management by the Tennessee Wildlife Resources Agency; C, Listed as a candidate for state listing by the Tennessee Wildlife Resources Agency. More information may be found at http://www.state.tn.us/environment/na/.*

2.6.B. Wetlands. The Division of Natural Areas maintains a database of wetland records in Tennessee. These records are a compilation of field data from wetland sites inventoried by various state and federal agencies. Maintaining this database is part of Tennessee's Wetland Strategy, which is described at:

http://www.state.tn.us/environment/na/wetlands/

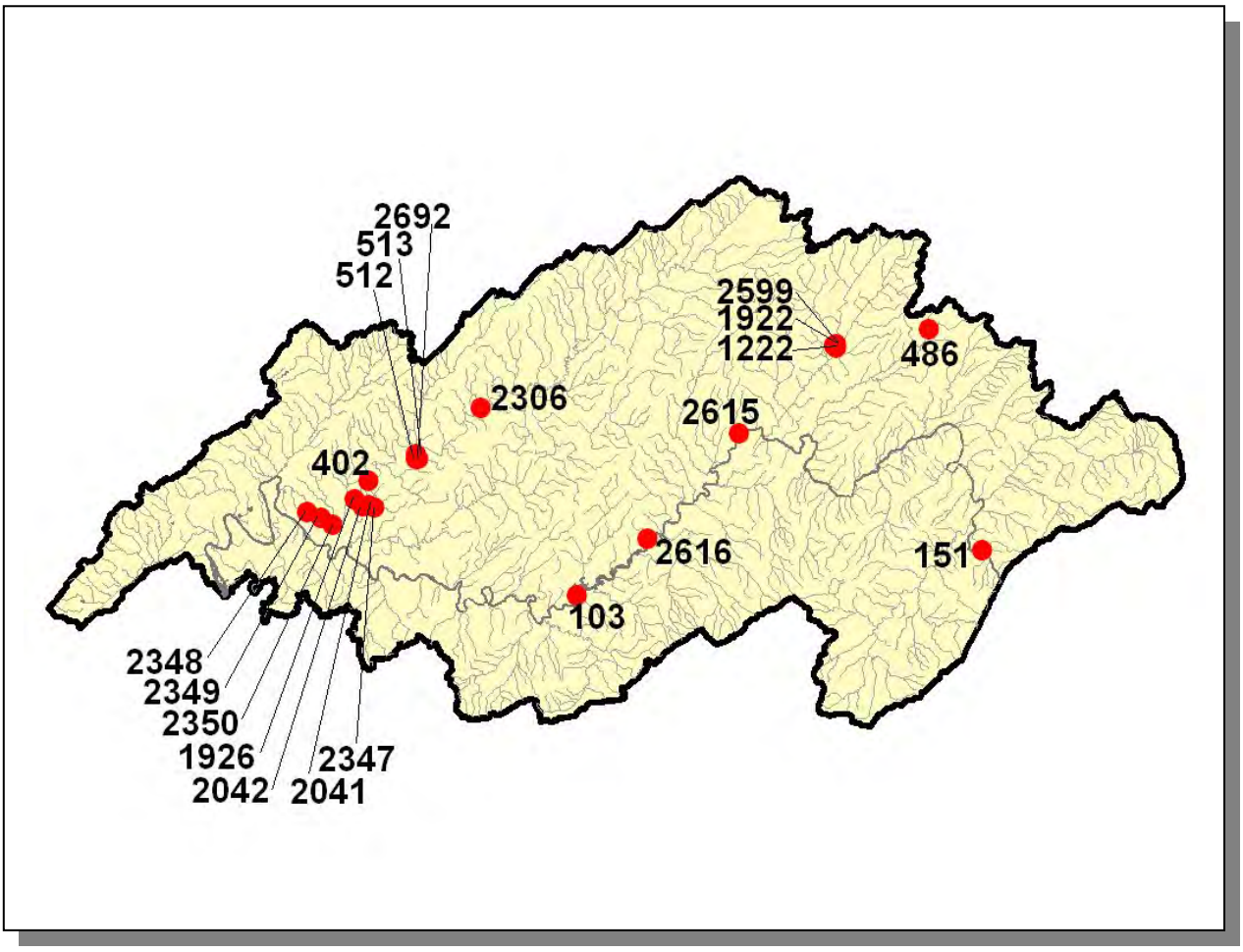


Figure 2-12. Location of Wetland Sites in TDEC Division of Natural Areas Database in the Tennessee Portion of the Nolichucky River Watershed. This map represents an incomplete inventory and should not be considered a dependable indicator of the presence of wetlands. *There may be additional wetland sites in the watershed. More information, including identification of wetland sites labeled, is provided in Appendix II.*

2.7. CULTURAL RESOURCES.

2.7.A. Nationwide Rivers Inventory. The Nationwide Rivers Inventory, required under the Federal Wild and Scenic Rivers Act of 1968, is a listing of free-flowing rivers that are believed to possess one or more outstanding natural or cultural values. Exceptional scenery, fishing or boating, unusual geologic formations, rare plant and animal life, cultural or historic artifacts that are judged to be of more than local or regional significance are the values that qualify a river segment for listing. The Tennessee Department of Environment and Conservation and the Rivers and Trails Conservation Assistance branch of the National Park Service jointly compile the Nationwide Rivers Inventory from time to time (most recently in 1997). Under a 1980 directive from the President's Council on Environmental Quality, all Federal agencies must seek to avoid or mitigate actions that would have an adverse effect on Nationwide Rivers Inventory segments.

The most recent version of the Nationwide Rivers Inventory lists portions of one river in the Tennessee portion of the Nolichucky River Watershed:

> Nolichucky River (the main stem from Poplar, NC downstream to the railroad bridge at Unaka Springs, TN) provides spectacular scenery with steep slopes rising more than 2,000 feet adjacent to the river.

RIVER	SCENIC	RECREATION	GEOLOGIC
Nolichucky River	X	X	X

Table 2-5. Attributes of Streams Listed in the Nationwide Rivers Inventory.

Additional information may be found online at http://www.ncrc.nps.gov/rtca/nri/

2.7.B. Public Lands. Some sites representative of the cultural heritage in the Tennessee portion of the Nolichucky River Watershed are under state or federal protection:

- Cherokee National Forest is a 664,000-acre forest managed by the U.S. Department of Agriculture, Forest Service. More information may be found at: http://www.fs.fed.us/r8/cherokee/
- Henderson Swamp WMA is a 24-acre tract of land managed by TWRA.
- Joachim Bible Refuge WMA is managed by TWRA. More information may be found at: http://www.state.tn.us/twra/gis/wmapdf/Joachim%20Bible%20Refuge.pdf
- Lick Creek Bottoms WMA is managed by TWRA. More information may be found at: http://www.state.tn.us/twra/lcbotwma.html
- Mullins Island WMA is a 31-acre plot of land that is managed by the Tennessee Wildlife Resources Agency.

- Nolichucky Waterfowl Sanctuary and Study Area is a 1,333-acre tract of land that is managed by TVA and TWRA. More information may be found at: http://www.tva.gov/environment/reports/nolichucky/chapter_1.pdf

- Rankin Bottom WMA is a 73-acre tract of land that is manged by TWRA. More information may be found at: http://www.state.tn.us/twra/gis/region4maps.html

- Unaka Mountain Scenic Area is a 211-acre area that is part of the Cherokee National Forest and is managed by the U.S. Forest Service. More information may be found at: http://www.fs.fed.us/r8/cherokee/recreation/roz_nunaka.shtml

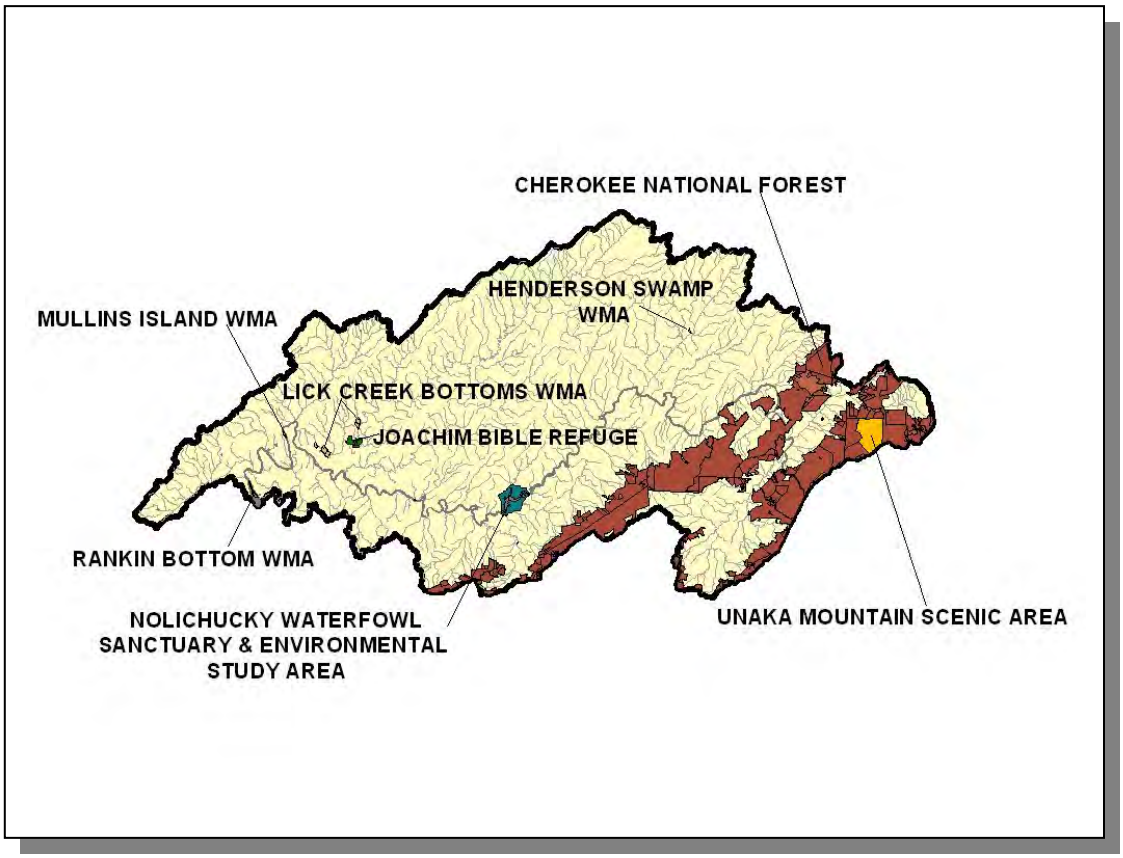


Figure 2-13. Public Lands in the Tennessee Portion of the Nolichucky River Watershed. *Data are from Tennessee Wildlife Resources Agency. WMA, Wildlife Management Area.*

2.8. TENNESSEE RIVERS ASSESSMENT PROJECT. The Tennessee Rivers Assessment is part of a national program operating under the guidance of the National Park Service's Rivers and Trails Conservation Assistance Program. The Assessment is an inventory of river resources, and should not be confused with "Assessment" as defined by the Environmental Protection Agency. A more complete description can be found in the Tennessee Rivers Assessment Summary Report, which is available from the Department of Environment and Conservation and on the web at:

http://www.state.tn.us/environment/wpc/publications/riv/

STREAM	NSQ	RB	RF	STREAM	NSQ	RB	RF
Bent Creek	3		2,3	Meadow Creek	2		
Big Limestone Creek	3		1	Middle Creek	3		
Camp Creek	2,3		1	Middle Fork Creek	4		
Carson Creek	3			Mink Creek	3		
Cherokee Creek	4			Moon Creek	3		
Clark Creek	1		1	Mud Creek	4		
Clear Creek	3			Muddy Fork Creek	3		
Cove Creek	3		2	Nolichucky River	1,2,3	1,2	1,2
Devil Fork South Indian Creek			3	North Indian Creek	2		1
Devils Back Kitchen Branch Cove Creek	1			Painter Creek	3		
Dry Creek	2			Pigeon Creek	4		
East Fork Flat Creek	3			Possum Creek	3		
Flat Creek			2	Potter Creek	3		
Gap Creek	3			Richland Creek	4		
Higgins Creek	1			Roaring Fork Creek	3		
Horse Creek	2		1	Rock Creek	1		
Jennings Creek	1			Round Knob Fork Creek	3		
Jockey Creek	3			Saylor Creek	3,4		
Lick Creek	3	2,3	2	Sinking Creek	3		2
Little Cherokee Creek	4			South Indian Creek	4		1
Little Chucky Creek	3			Spivey Creek	1		1
Little Limestone Creek	2			Water Fork Creek	3		
Long Creek	3,4		2	Whitehorn Creek	3		
Long Fork Lick Creek							

Table 2-6. Tennessee Rivers Assessment Project Stream Scoring in the Nolichucky River Watershed.

Categories: NSQ, Natural and Scenic Qualities
RB, Recreational Boating
RF, Recreational Fishing

Scores: 1. Statewide or greater Significance; Excellent Fishery
2. Regional Significance; Good Fishery
3. Local Significance; Fair Fishery
4. Not a significant Resource; Not Assessed

CHAPTER 3

WATER QUALITY ASSESSMENT OF THE NOLICHUCKY RIVER WATERSHED.

3.1. BACKGROUND. Section 305(b) of The Clean Water Act requires states to report the status of water quality every two years. Historically, Tennessee's methodologies, protocols, frequencies and locations of monitoring varied depending upon whether sites were ambient, ecoregion, or intensive survey. Alternatively, in areas where no direct sampling data existed, water quality may have been assessed by evaluation or by the knowledge and experience of the area by professional staff.

In 1996, Tennessee began the watershed approach to water quality protection. In the Watershed Approach, resources—both human and fiscal—are better used by assessing water quality more intensively on a watershed-by-watershed basis. In this approach, water quality is assessed in year three of the watershed cycle, following one to two years of data collection. More information about the Watershed Approach may be found in Chapter 1 and at http://www.state.tn.us/environment/wpc/watershed/

The assessment information is used in the 305(b) Report (The Status of Water Quality in Tennessee) and the 303(d) list as required by the Clean Water Act.

The 305(b) Report documents the condition of the State's waters. Its function is to provide information used for water quality based decisions, evaluate progress, and measure success.

Tennessee uses the 305(b) Report to meet four goals (from 2008 305(b) Report):

1. Describe the water quality assessment process.

2. Categorize waters in the State by placing them in the assessment categories suggested by federal guidance.

3. Identify waterbodies that pose eminent human-health risks due to elevated bacteria levels or contamination of fish.

4. Provide detailed information on each watershed.

EPA aggregates the state use support information into a national assessment of the nation's water quality. This aggregated use support information can be viewed at EPA's "Surf Your Watershed" site at http://cfpub.epa.gov/surf/locate/index.cfm.

The 303(d) list is a compilation of the waters of Tennessee that fail to support some or all of their classified uses. The 303(d) list does not include streams determined to be fully supporting designated uses nor streams the Division of Water Pollution Control cannot assess due to lack of water quality information. Also absent are streams where a control strategy is already in the process of being implemented.

Once a stream is placed on the 303(d) list, it is considered a priority for water quality improvement efforts. These efforts not only include traditional regulatory approaches such as permit issuance, but also include efforts to control pollution sources that have historically been exempted from regulations, such as certain agricultural and forestry activities. If a stream is on the 303(d) list, the Division of Water Pollution Control cannot use its regulatory authority to allow additional sources of the same pollutant(s) for which it is listed.

States are required to develop Total Maximum Daily Loads (TMDLs) for 303(d)-listed waterbodies. The TMDL process establishes the maximum amount of a pollutant that a waterbody can assimilate without exceeding water quality standards and allocates this load among all contributing pollutant sources. The purpose of the TMDL is to establish water quality objectives required to reduce pollution from both point and nonpoint sources and to restore and maintain the quality of water resources.

The current 303(d) List is available on the TDEC homepage at:
http://tennessee.gov/environment/wpc/publications/303d2008.pdf

and information about Tennessee's TMDL program may be found at:
http://www.state.tn.us/environment/wpc/tmdl/.

This chapter provides a summary of water quality in the Tennessee portion of the Nolichucky River Watershed, summarizes data collection and assessment results, and describes impaired waters.

3.2. DATA COLLECTION. The following figures and table represent data collected in the last 5-year cycle (July 1, 2000 through June 30, 2005). Water quality data are from one of four site types: (1) Ambient sites, (2) Ecoregion sites, (3) Watershed Screening sites, or (4) Tier Evaluation sites.

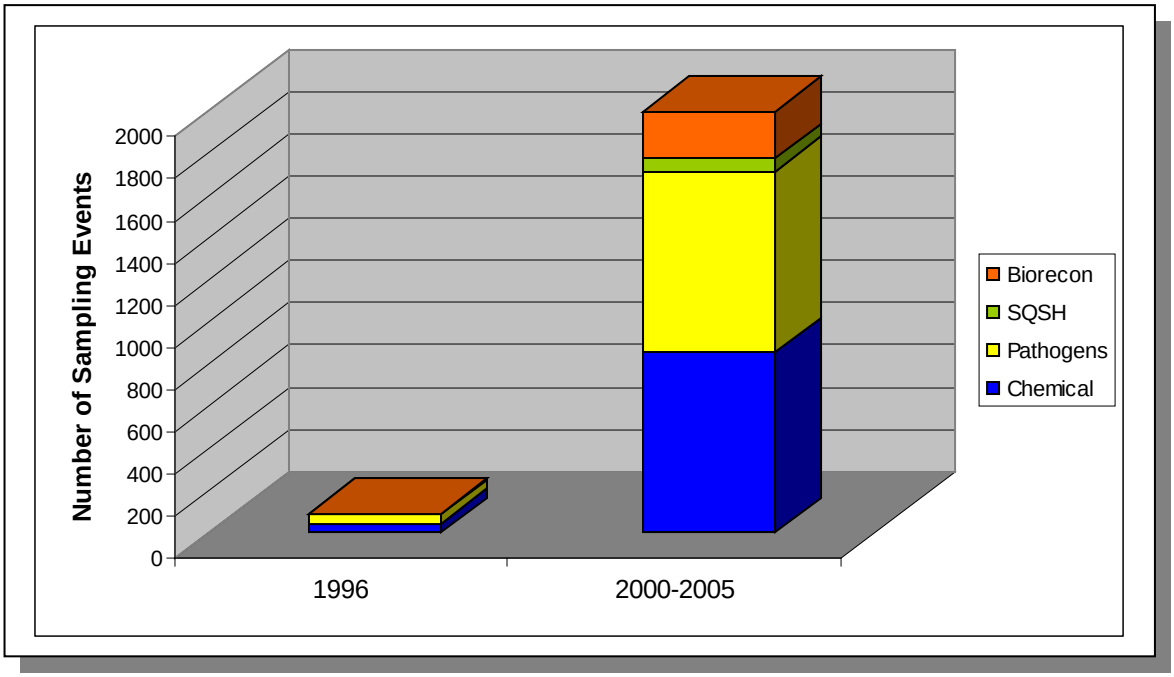


Figure 3-1. Number of Sampling Events Using the Traditional Approach (1996) and Watershed Approach (July 1, 2000 through June 30, 2005) in the Tennessee Portion of the Nolichucky River Watershed.

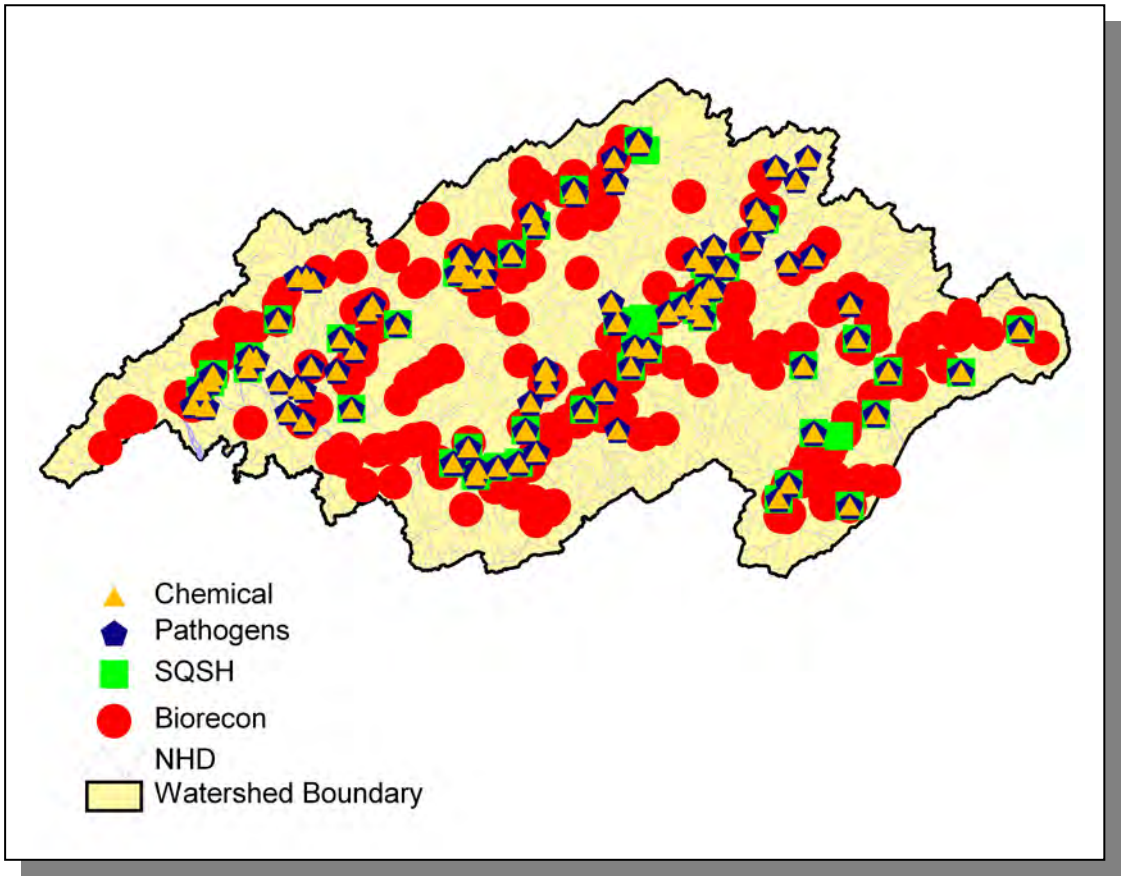


Figure 3-2. Location of Monitoring Sites in the Tennessee Portion of the Nolichucky River Watershed (July 1, 2000 through June 30, 2005). *Pathogens include E. coli and fecal coliform; NHD, National Hydrography Dataset of Streams; SQSH, Semi-Quantitative Single Habitat Assessment.*

	1996	2000-2005
Chemical	40	856
Pathogens	40	856
SQSH	8	60
Biorecon	0	227
Total	**88**	**1,999**

Table 3-1. Number of Sampling Events in the Tennessee Portion of the Nolichucky River Watershed in 1996 and in the last 5-Year Cycle (July 1, 2000 through June 30, 2005).

3.2.A. Ambient Monitoring Sites. These fixed-station chemical monitoring sites are sampled quarterly or monthly by the Environmental Field Office-Knoxville and Environmental Field Office-Johnson City staff (this is in addition to samples collected by water and wastewater treatment plant operators and MS4 permittees). Samples are analyzed by the Tennessee Department of Health, Division of Environmental Laboratory Services. Ambient monitoring data are used to assess water quality in major bodies of water where there are NPDES facilities and to identify trends in water quality. Water quality parameters traditionally measured at ambient sites in the Tennessee portion of the Nolichucky River Watershed are provided in Appendix IV.

Data from ambient monitoring stations are entered into the STORET (Storage and Retrieval) system administered by EPA.

3.2.B. Ecoregion Sites. Ecoregions are relatively homogeneous areas of similar geography, topography, climate and soils that support similar plants and animals. The delineation phase of the Tennessee Ecoregion Project was completed in 1997 when the ecoregions and subecoregions were mapped and summarized (EPA/600/R-97/022). There are eight Level III Ecoregions and twenty-five Level IV subecoregions in Tennessee (see Chapter 2 for more details). The Tennessee portion of the Nolichucky River Watershed lies within 2 Level III ecoregions (Blue Ridge Mountains and Ridge and Valley) and contains 8 subecoregions (Level IV):

- Southern Igneous Ridges and Mountains (66d)
- Southern Sedimentary Ridges (66e**)**
- Limestone Valleys and Coves (66f)
- Southern Metasedimentary Mountains (66g)
- Southern Limestone/Dolomite Valleys and Low Rolling Hills (67f)
- Southern Shale Valleys (67g)
- Southern Sandstone Ridges (67h)
- Southern Dissected Ridges and Knobs (67i)

Ecoregion reference sites are chemically monitored using methodology outlined in the Division's Chemical Standard Operating Procedure (Standard Operating Procedure for Modified Clean Technique Sampling Protocol). Macroinvertebrate samples are collected in spring and fall. These biological sample collections follow methodology outlined in the Tennessee Biological Standard Operating Procedures Manual. Volume 1: Macroinvertebrates and EPA's Revision to Rapid Bioassessment Protocols for use in Streams and Rivers.

Ecoregion stations are scheduled to be monitored during the watershed sampling time period.

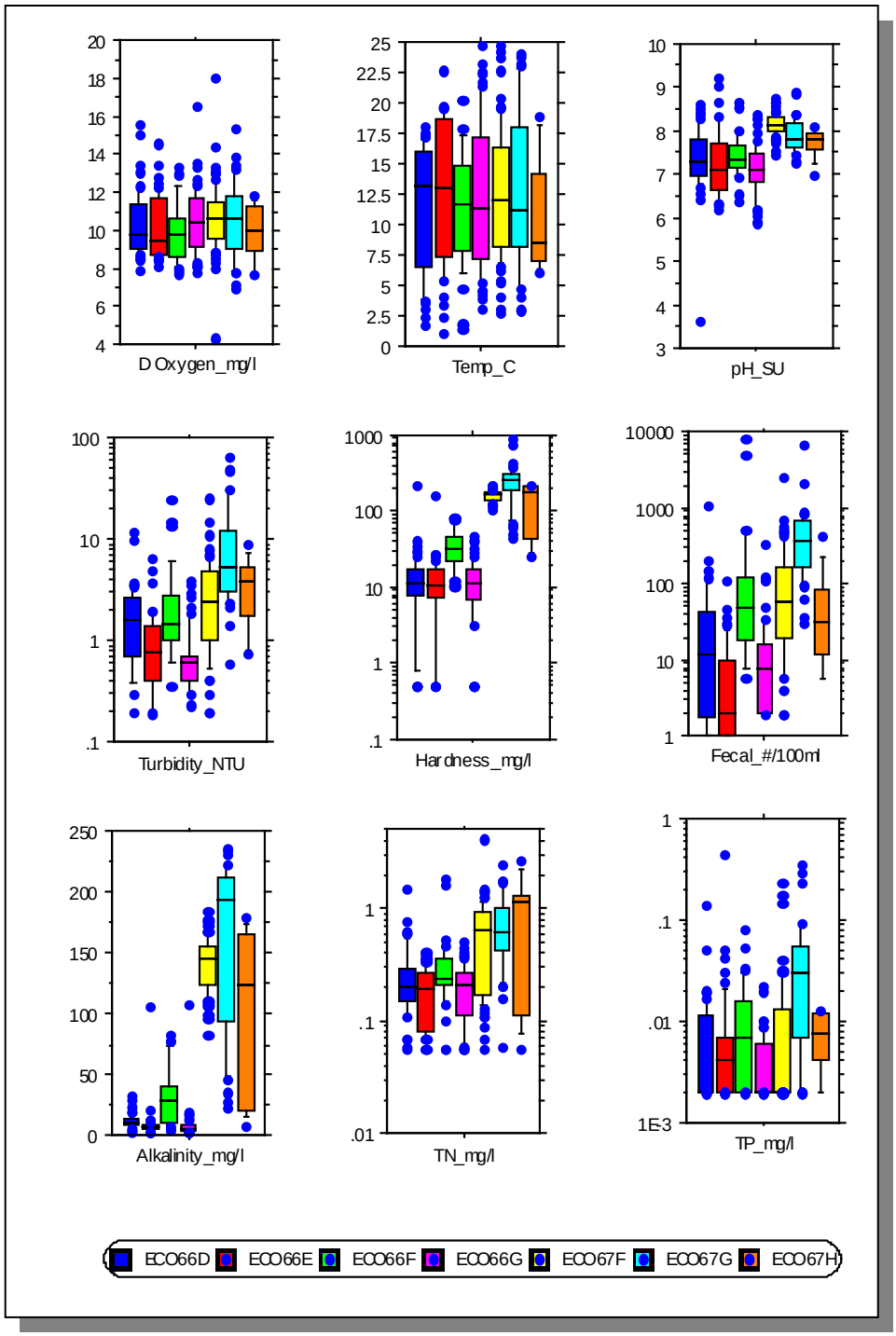


Figure 3-3. Select Chemical Data Collected in the Nolichucky River Watershed Ecoregion Sites. *Boxes and bars illustrate 10th, 25th, median, 75th, and 90th percentiles. Extreme values are also shown as dots. Fecal, fecal coliform bacteria; TN, Total Nitrogen; TP, Total Phosphorus.*

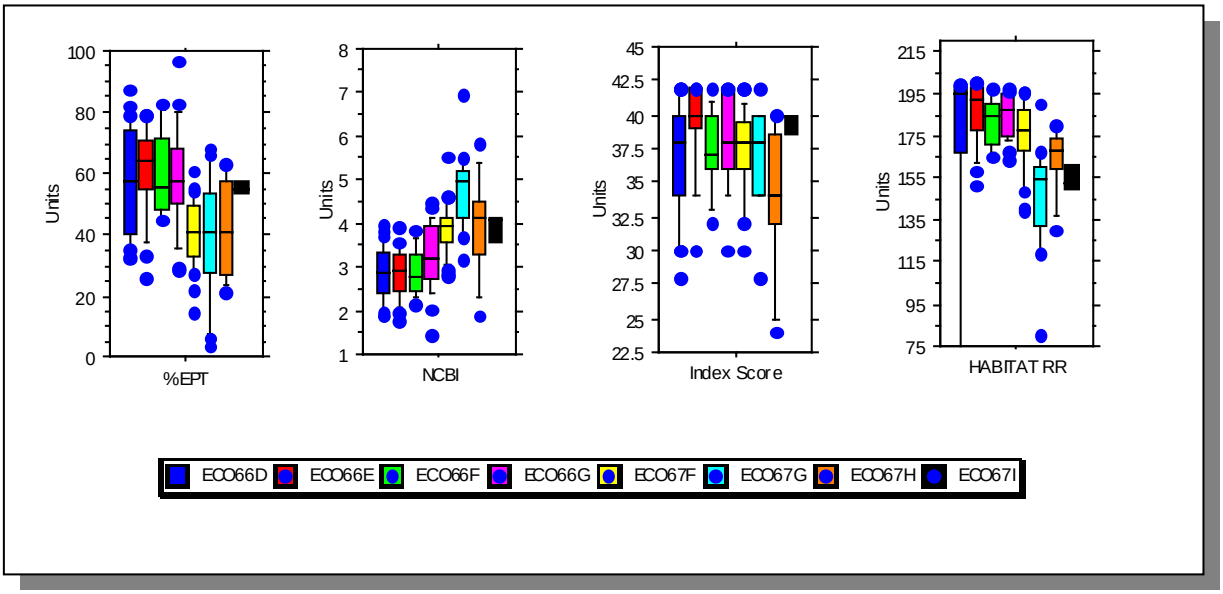


Figure 3-4. Benthic Macroinvertebrate and Habitat Scores for the Nolichucky River Watershed Ecoregion Sites. *Boxes and bars illustrate 10th, 25th, median, 75th, and 90th percentiles. Extreme values are also shown as dots. NCBI, North Carolina Biotic Index. Index Score and Habitat Riffle/Run scoring system are described in TDEC's Quality System Standard Operating Procedure for Macroinvertebrate Surveys (2002).*

3.2.C. Watershed Screening Sites. Activities that take place at watershed sites are benthic macroinvertebrate stream surveys, physical habitat determinations and/or chemical monitoring. Following review of existing data, watershed sites are selected in Year 1 of the watershed approach when preliminary monitoring strategies are developed. Additional sites may be added in Year 2 when additional monitoring strategies are implemented.

A Biological Reconnaissance (BioRecon) is used as a screening tool to describe the condition of water quality, in general, by determining the absence or presence of clean water indicator organisms, such as EPT (Ephemeroptera [mayfly], Plecoptera [stonefly], Trichoptera [caddisfly]). Factors and resources used for selecting BioRecon sites are:

- The current 303(d) list,
- HUC-12 maps (every HUC-12 is considered for a BioRecon)
- Land Use/Land Cover maps
- Topographic maps
- Locations of NPDES facilities
- Sites of recent ARAP activities.

An intensive multiple or single habitat assessment involves the regular monitoring of a station over a fixed period of time. Intensive surveys (Rapid Bioassessment Protocols) are performed when BioRecon results warrant it.

3.2.D. Special Surveys. These investigations are performed when needed and include:

- ARAP in-stream investigation
- Time-of-travel dye study
- Sediment oxygen demand study
- Lake eutrophication study

3.3. STATUS OF WATER QUALITY. Use support determinations, which can be classified as monitored or evaluated, are based on:

- Data less than 5 years old (monitored)
- Data more than 5 years old (evaluated)
- Knowledge and experience of the area by technical staff (evaluated)
- Complaint investigation (monitored, if samples are collected)
- Other readily available Agencies' data (monitored)
- Readily available Volunteer Monitoring data (monitored, if certain quality assurance standards are met)

All readily available data are considered, including data from TDEC Environmental Field Offices, Tennessee Department of Health (Aquatic Biology Section of Laboratory Services), Tennessee Wildlife Resources Agency, National Park Service, Tennessee Valley Authority, U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Geological Survey, U.S. Forest Service, universities and colleges, the regulated community, and the private sector.

Waterbodies are assessed by comparing monitored water conditions to water quality standards for the stream, river, or reservoir's designated uses. Data that meet quality control standards and collection techniques are used to generate assessments. After use support is determined, waterbodies are placed in one of the following five categories recommended by EPA.

Category Assessment	Stream Miles	Reservoir Acres
Total	1,920.0	383
Assessed	1,462.3	383
Category 1	107.0	0
Category 2	535.1	0
Category 3	457.7	0
Category 4	0.0	0
Category 5	820.2	383

Table 3.2. Use Support Categories (Stream Miles and/or Reservoir Acres) in the Tennessee Portion of the Nolichucky River Watershed.

Use Support Categories: (from 2008 305(b) Report)

Category 1 waters are **fully supporting** of all designated uses. These streams, rivers, and reservoirs have been monitored and meet the most stringent water quality criteria for all designated uses for which they are classified. The biological integrity of Category 1 waters is comparable with reference streams in the same subecoregion and pathogen concentrations are at acceptable levels.

Category 2 waters are **fully supporting** of some designated uses, but have not been assessed for all uses. In many cases, these waterbodies have been monitored and are fully supporting of fish and aquatic life, but have not been assessed for recreational use.

Category 3 waters are **not assessed** due to insufficient or outdated data.

Category 4 waters are **impaired**, but a TMDL is not required. Category 4 has been further subdivided into three subcategories.

- **Category 4a** impaired waters that have already had all necessary TMDLs approved by EPA.

- **Category 4b** impaired waters do not require TMDL development since "other pollution control requirements required by local, State or Federal authority are expected to address all water-quality pollutants" (EPA, 2003). An example of a 4b stream might be where a discharge point will be moved in the near future to another waterbody with more assimilative capacity.

- **Category 4c** impaired waters in which the impacts are not caused by a pollutant (e.g., certain habitat or flow alterations).

Category 5 waters have been monitored and found to not meet one or more water quality standards. These waters have been identified as **not supporting** their designated uses. Category 5 waterbodies are moderately to highly impaired by pollution and need to have TMDLs developed for the known impairments. These waters are included in the 303(d) List of impaired waters in Tennessee.

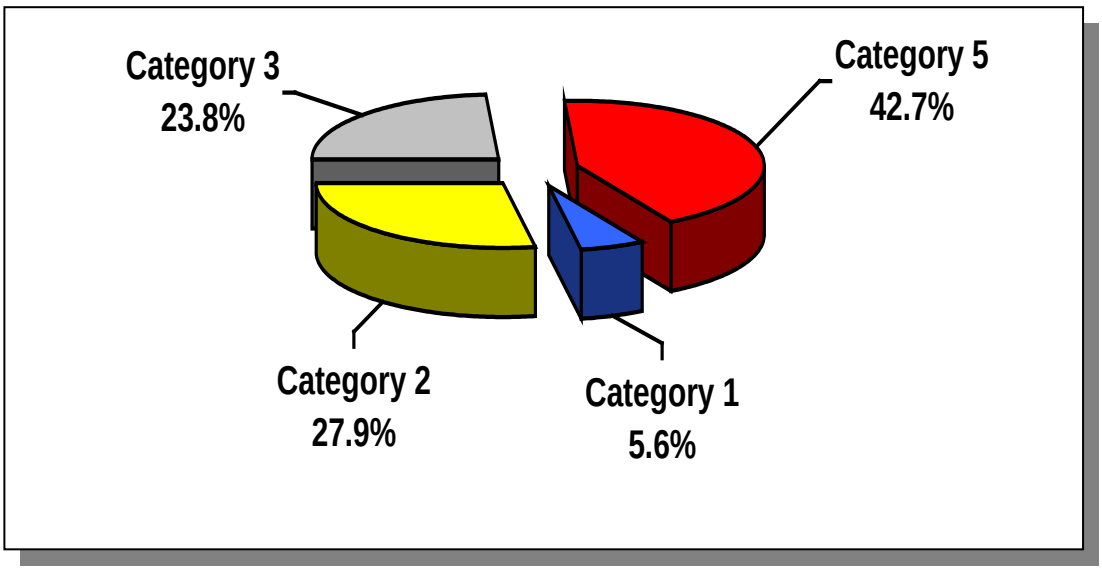


Figure 3-5. Water Quality Assessment of Streams in the Tennessee Portion of the Nolichucky River Watershed. *Assessment data are based on the 2006 Water Quality Assessment of 1,920.0 stream miles in the watershed.*

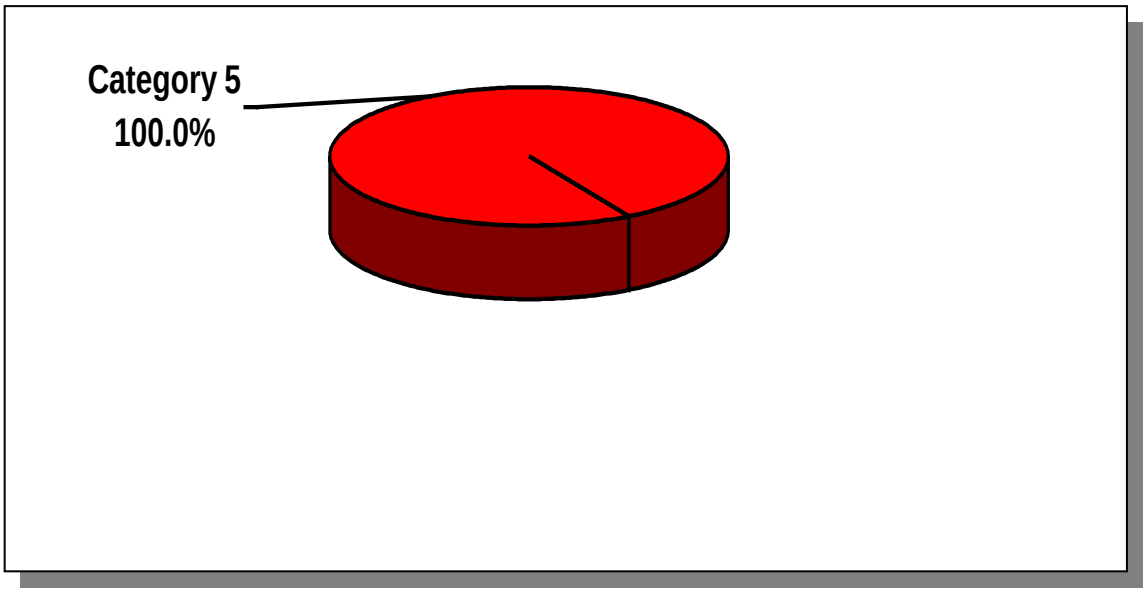


Figure 3-6. Water Quality Assessment of Lakes in the Tennessee Portion of the Nolichucky River Watershed. *Assessment data are based on the 2006 Water Quality Assessment of 383 lake acres in the watershed.*

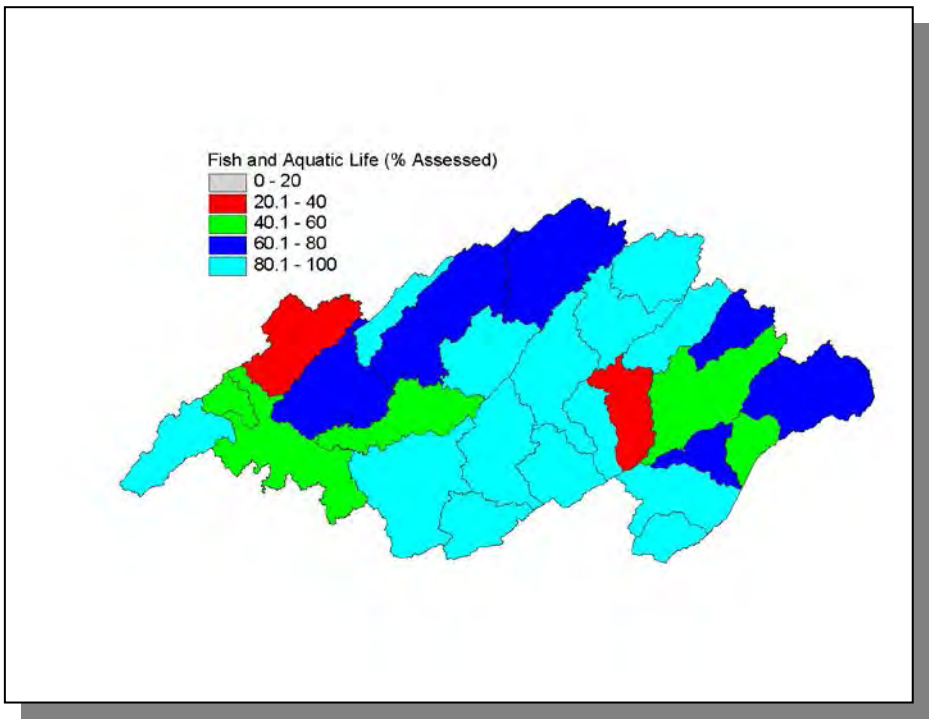


Figure 3-7. Percentage of Stream Miles Assessed for Support of Fish and Aquatic Life Designated Use in HUC-12 Subwatersheds.

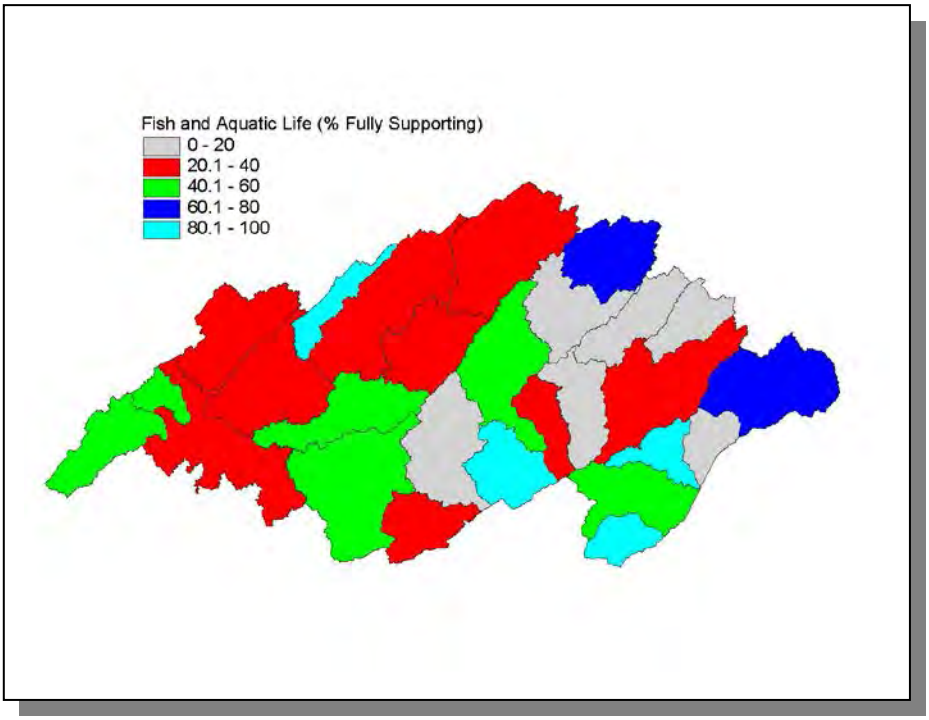


Figure 3-8. Percentage of Stream Miles Fully Supporting for Fish and Aquatic Life Designated Use in HUC-12 Subwatersheds.

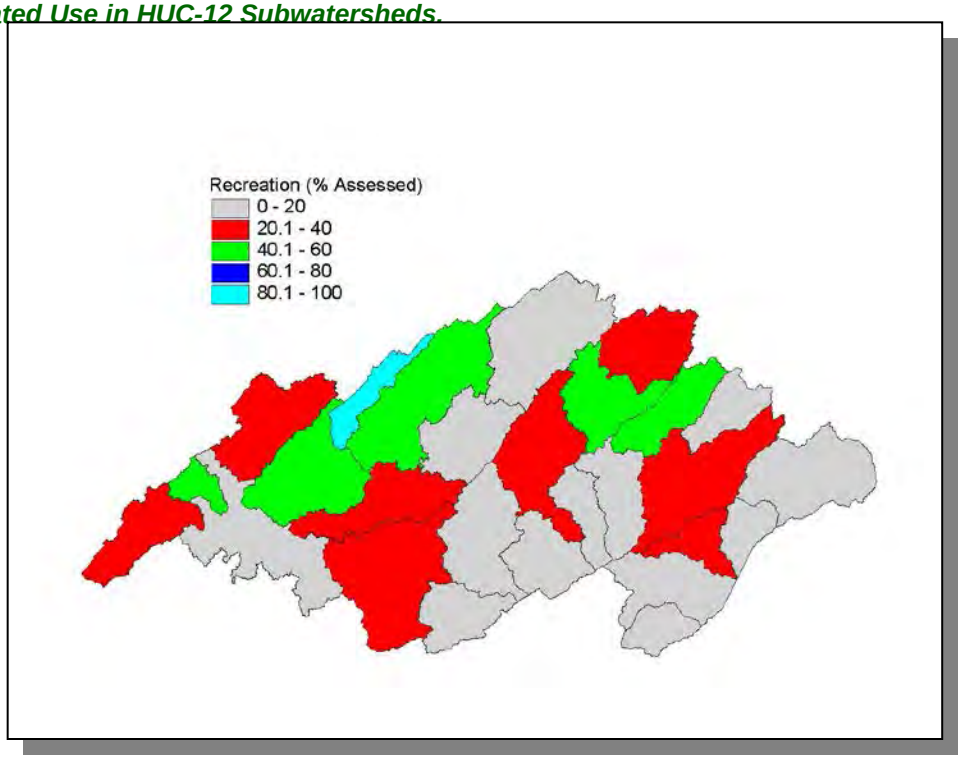


Figure 3-9. Percentage of Stream Miles Assessed for Support of Recreation Designated Use in HUC-12 Subwatersheds.

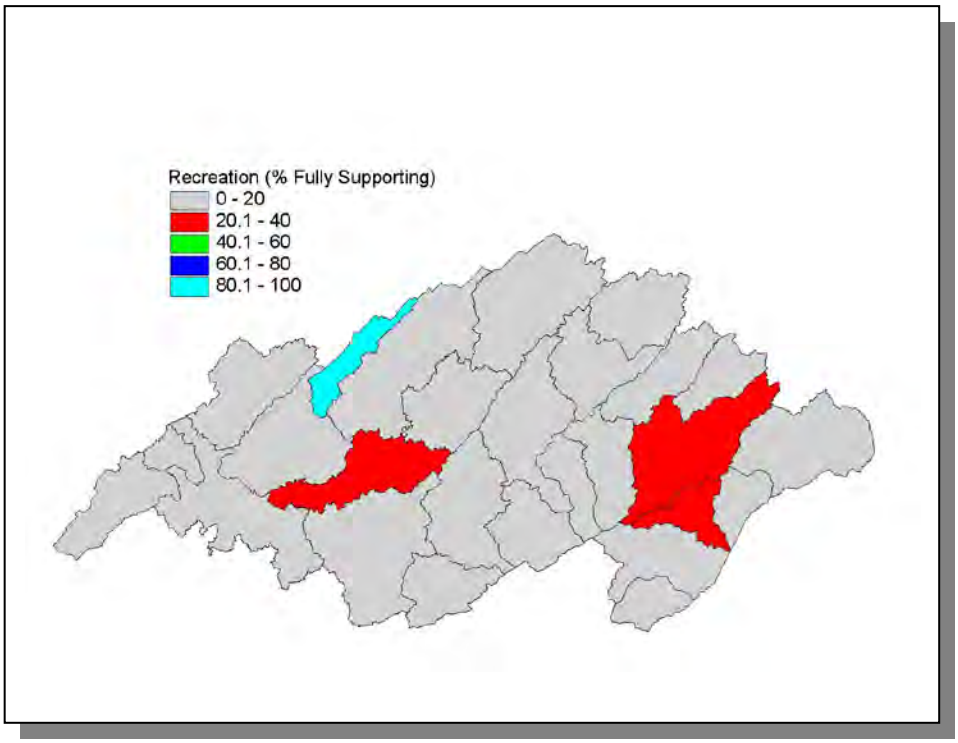


Figure 3-10. Percentage of Stream Miles Fully Supporting for Recreation Designated Use in HUC-12 Subwatersheds.

3.3.A. Assessment Summary.

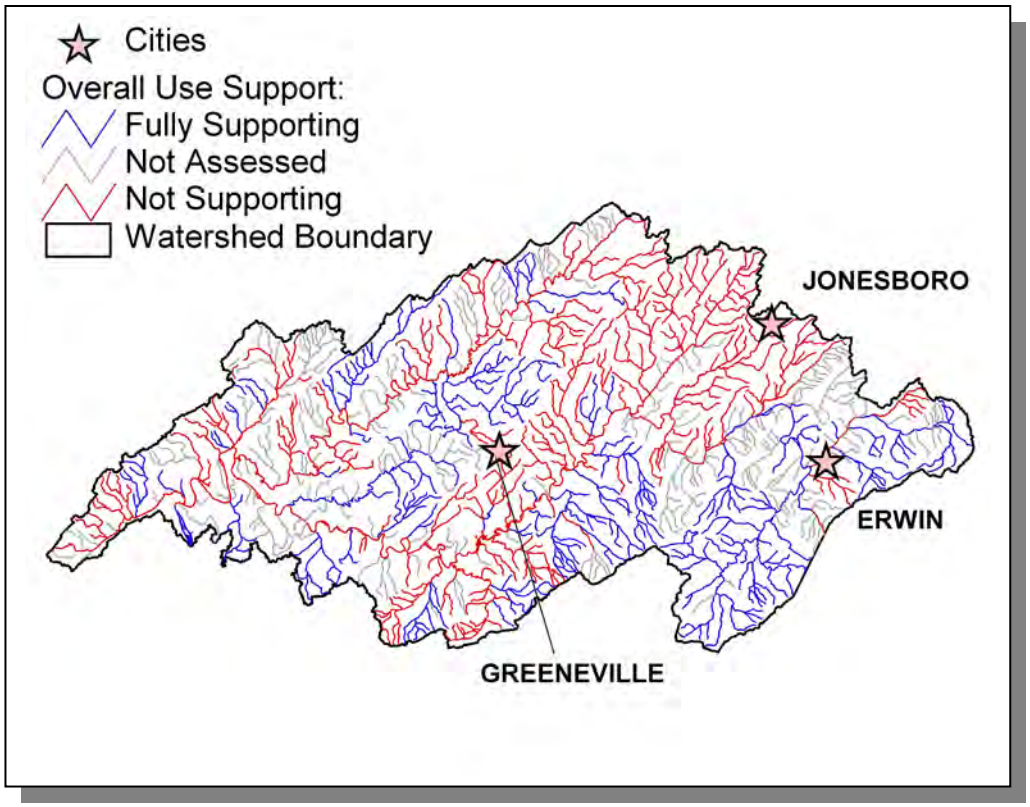


Figure 3-11. Overall Use Support Attainment in the Tennessee Portion of the Nolichucky River Watershed. *Assessment data are based on the 2006 Water Quality Assessment. Water Quality Standards are described at http://www.state.tn.us/sos/rules/1200/1200-04/1200-04.htm. Locations of Erwin, Greenville, and Jonesboro are shown for reference. More information is provided in Appendix III.*

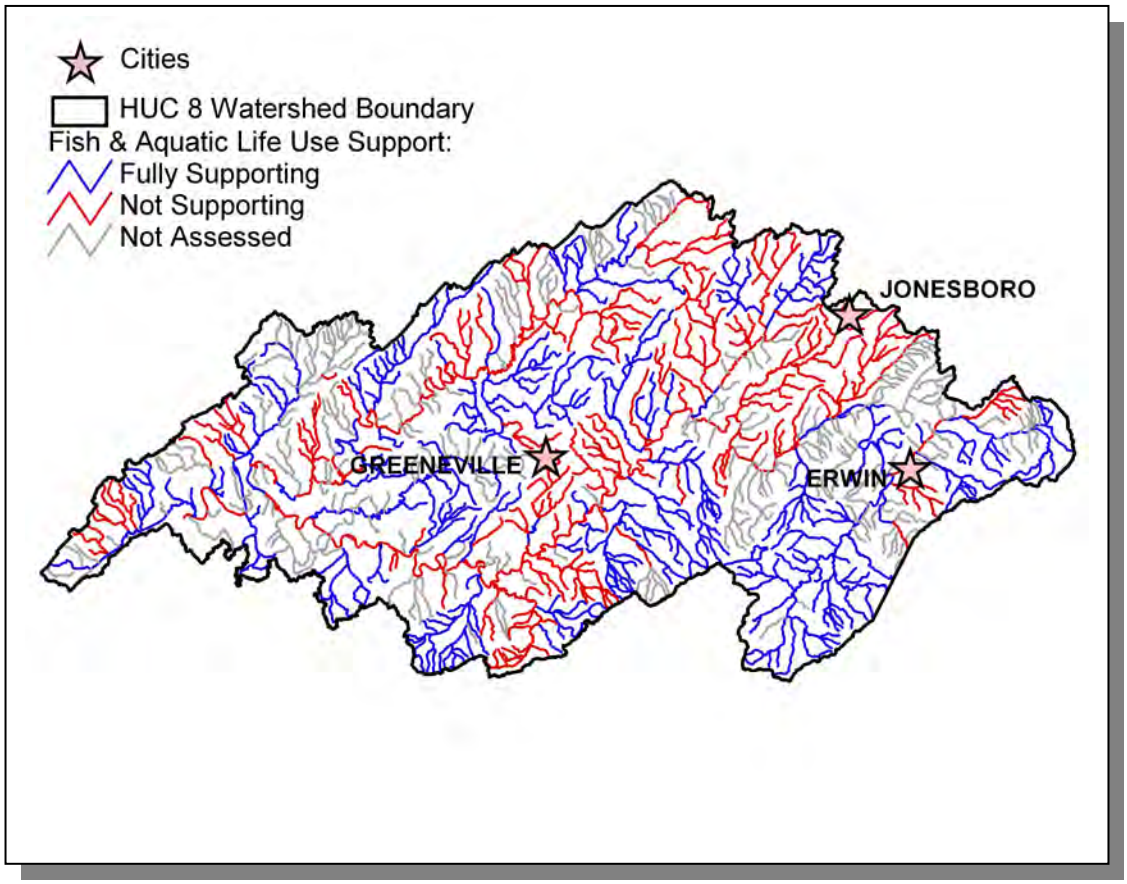


Figure 3-12. Fish and Aquatic Life Use Support Attainment in the Tennessee Portion of the Nolichucky River Watershed. *Assessment data are based on the 2006 Water Quality Assessment. Water Quality Standards are described at http://www.state.tn.us/sos/rules/1200/1200-04/1200-04.htm. Locations of Erwin, Greenville, and Jonesboro are shown for reference. More information is provided in Appendix III.*

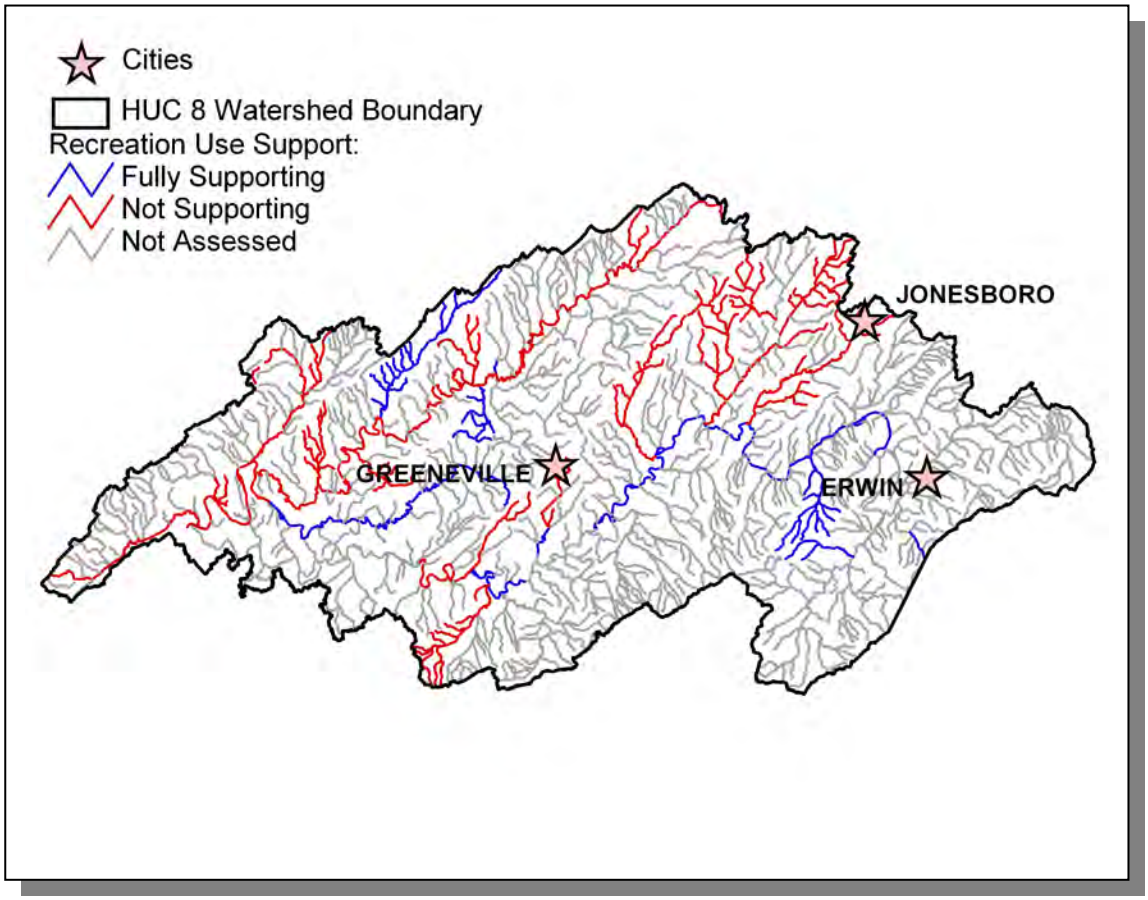


Figure 3-13. Recreation Use Support Attainment in the Tennessee Portion of the Nolichucky River Watershed. *Assessment data are based on the 2006 Water Quality Assessment. Water Quality Standards are described at http://www.state.tn.us/sos/rules/1200/1200-04/1200-04.htm. Locations of Erwin, Greenville, and Jonesboro are shown for reference. More information is provided in Appendix III.*

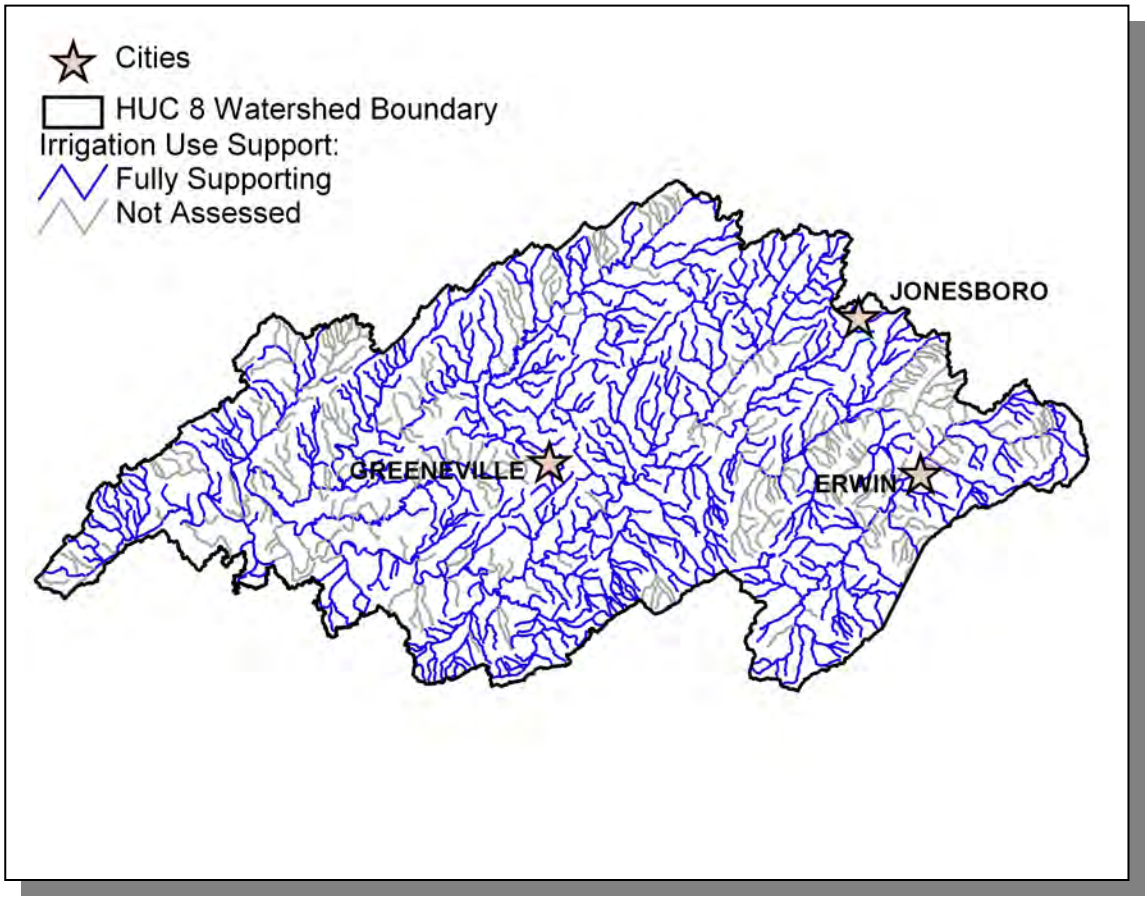


Figure 3-14. Irrigation Use Support Attainment in the Tennessee Portion of the Nolichucky River Watershed. *Assessment data are based on the 2006 Water Quality Assessment. Water Quality Standards are described at http://www.state.tn.us/sos/rules/1200/1200-04/1200-04.htm. Locations of Erwin, Greenville, and Jonesboro are shown for reference. More information is provided in Appendix III.*

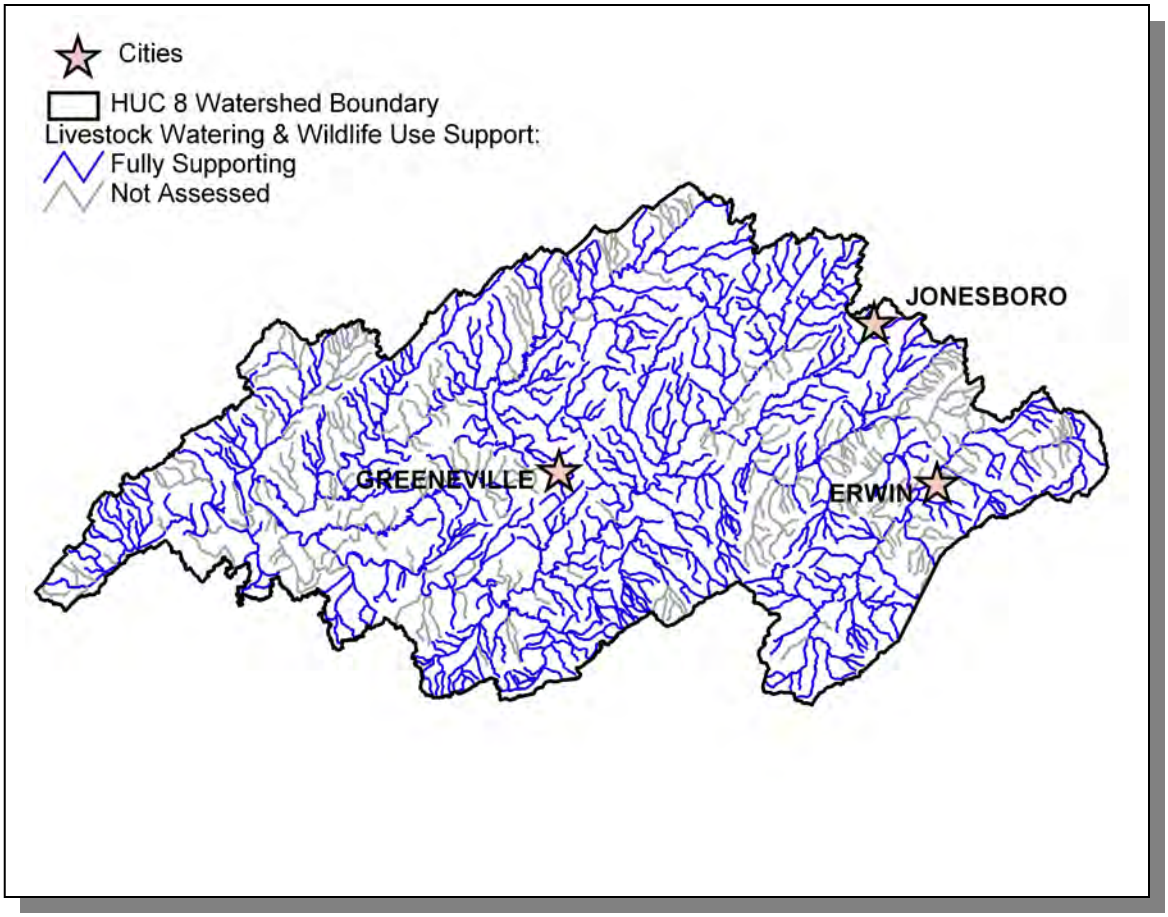


Figure 3-15. Livestock Watering and Wildlife Use Support Attainment in the Tennessee Portion of the Nolichucky River Watershed. *Assessment data are based on the 2006 Water Quality Assessment. Water Quality Standards are described at http://www.state.tn.us/sos/rules/1200/1200-04/1200-04.htm. Locations of Erwin, Greenville, and Jonesboro are shown for reference. More information is provided in Appendix III.*

3.3.B. Use Impairment Summary.

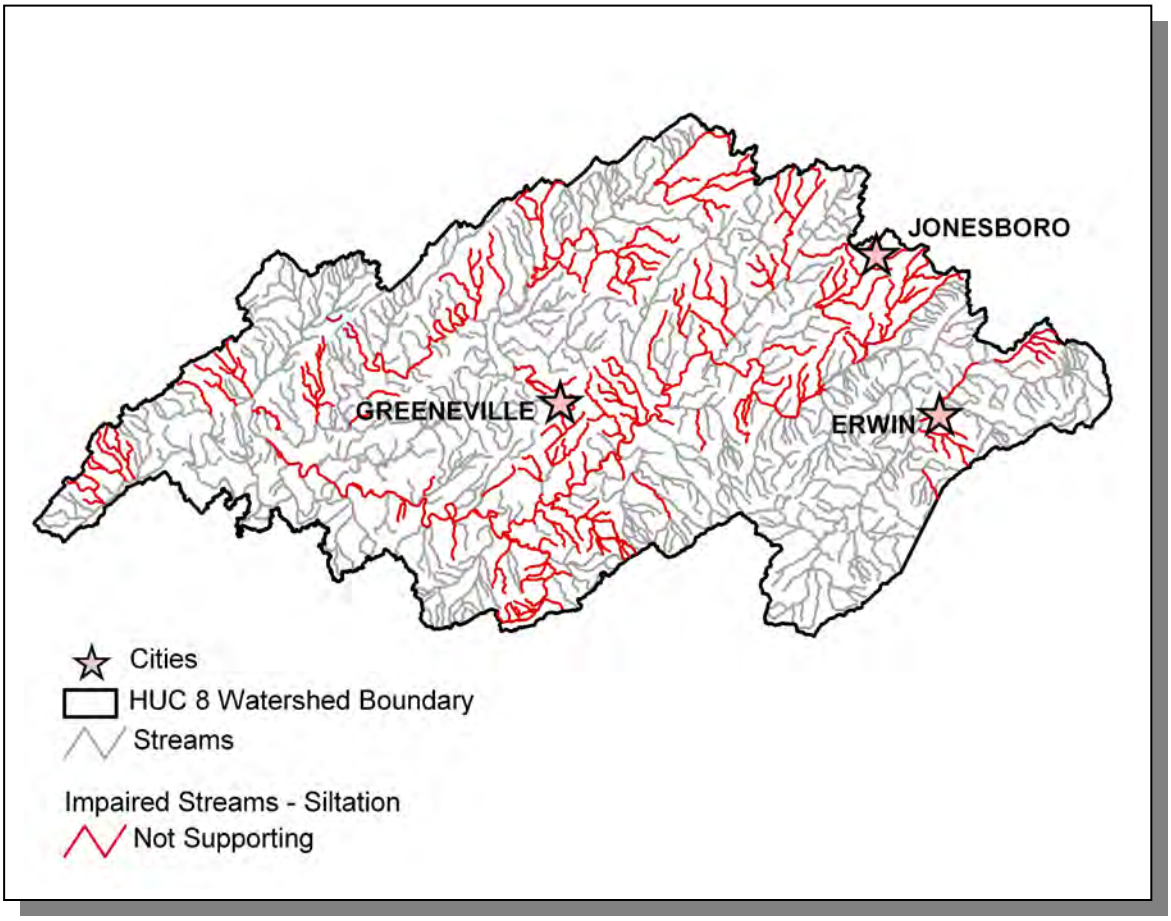


Figure 3-16. Impaired Streams Due to Siltation in the Tennessee Portion of the Nolichucky River Watershed. *Assessment data are based on the 2006 Water Quality Assessment. Locations of Erwin, Greenville, and Jonesboro are shown for reference. More information is provided in Appendix III.*

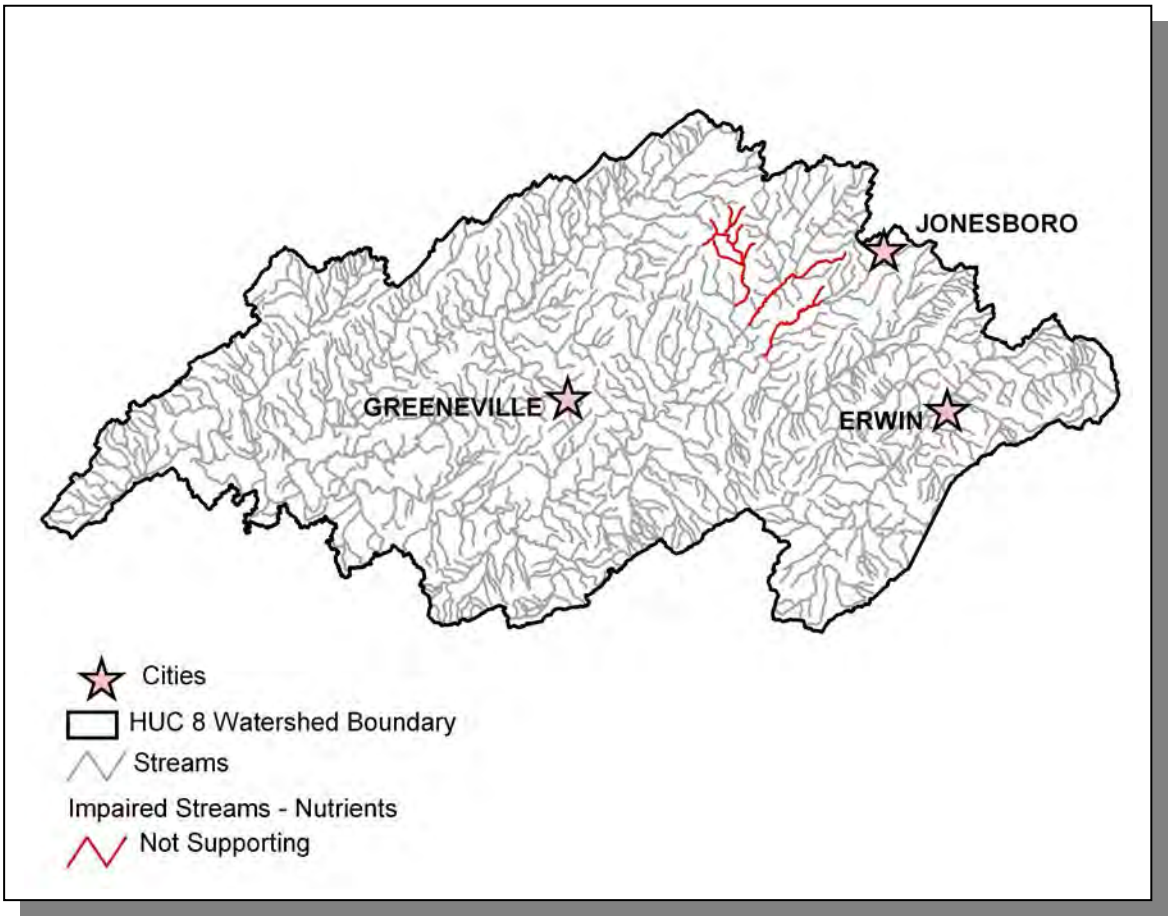


Figure 3-17. Impaired Streams Due to Nutrients in the Tennessee Portion of the Nolichucky River Watershed. *Assessment data are based on the 2006 Water Quality Assessment. Locations of Erwin, Greenville, and Jonesboro are shown for reference. More information is provided in Appendix III.*

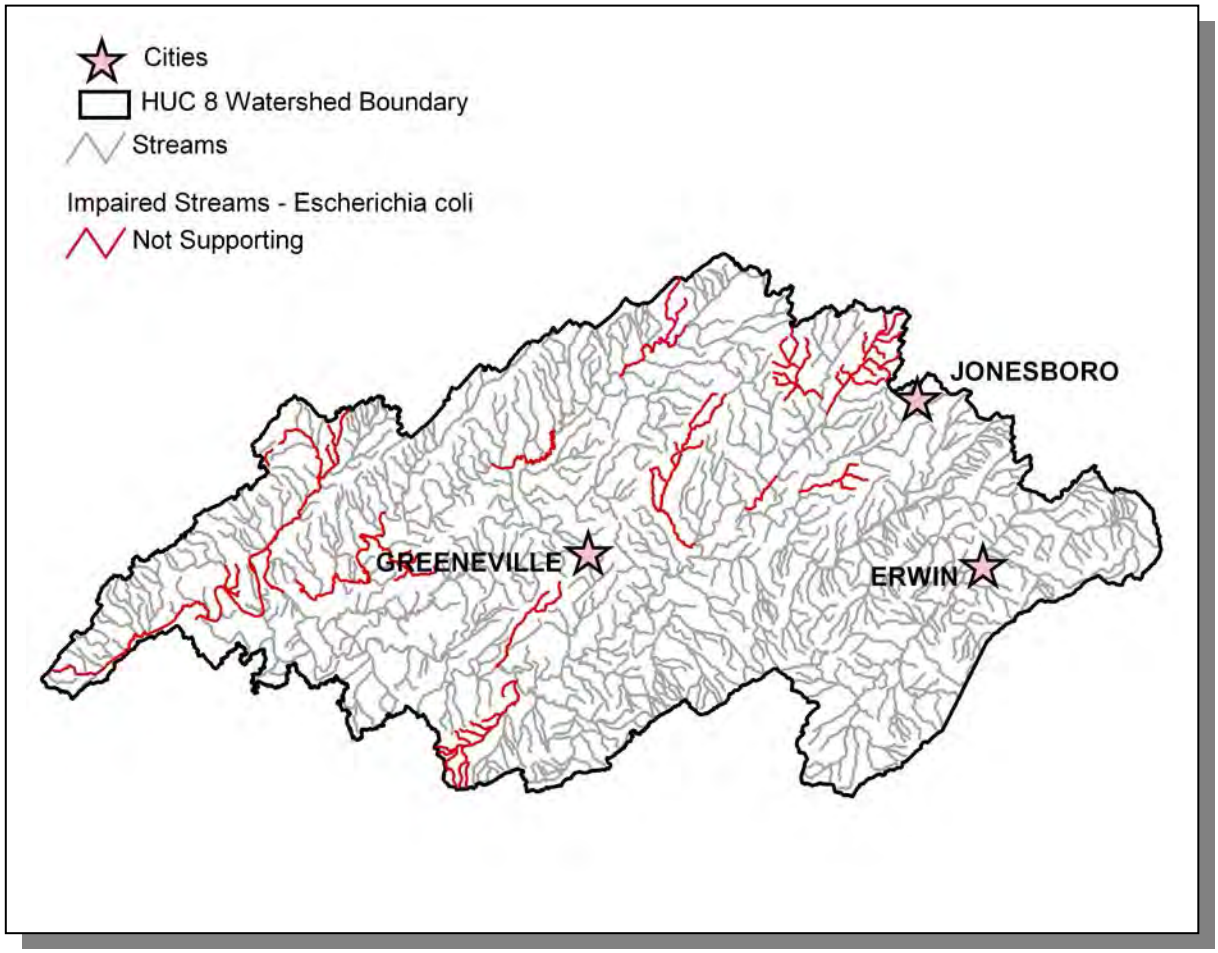


Figure 3-18. Impaired Streams Due to Escherichia coli in the Tennessee Portion of the Nolichucky River Watershed. *Assessment data are based on the 2006 Water Quality Assessment. Locations of Erwin, Greenville, and Jonesboro are shown for reference. More information is provided in Appendix III.*

The listing of impaired waters that do not support designated uses (the 303(d) list) is traditionally submitted to EPA every two years. A copy of the most recent 303(d) list may be downloaded from http://www.state.tn.us/environment/wpc/publications/.

Since the year 2002, the 303(d) list is compiled by using EPA's ADB (Assessment Database) software developed by RTI (Research Triangle Institute). The ADB allows for a more detailed segmentation of waterbodies. While this results in a more accurate description of the status of water quality, it makes it difficult when comparing water quality assessments with and without using this tool. A more meaningful comparison will be between assessments completed in Year 3 of each succeeding five-year cycle.

The ADB was used to create maps that illustrate water quality. These maps may be viewed at http://gis3.memphis.edu/wpc/.

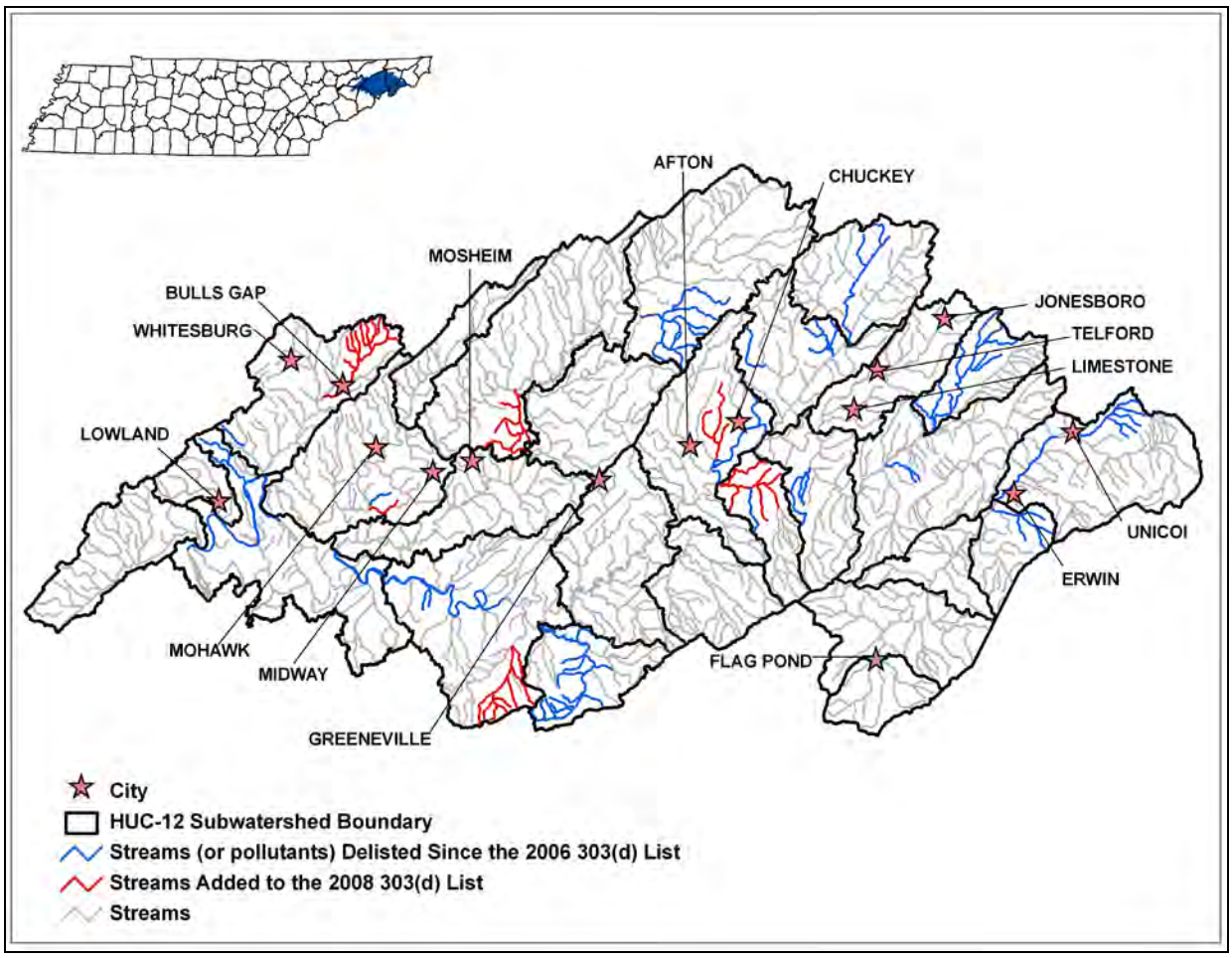


Figure 3-19. Changes to the 303(d) List of Impaired Waters in the Tennessee Portion of the Nolichucky River Watershed Since Approval of the 2006 List by EPA. *More information is provided in Appendix III.*

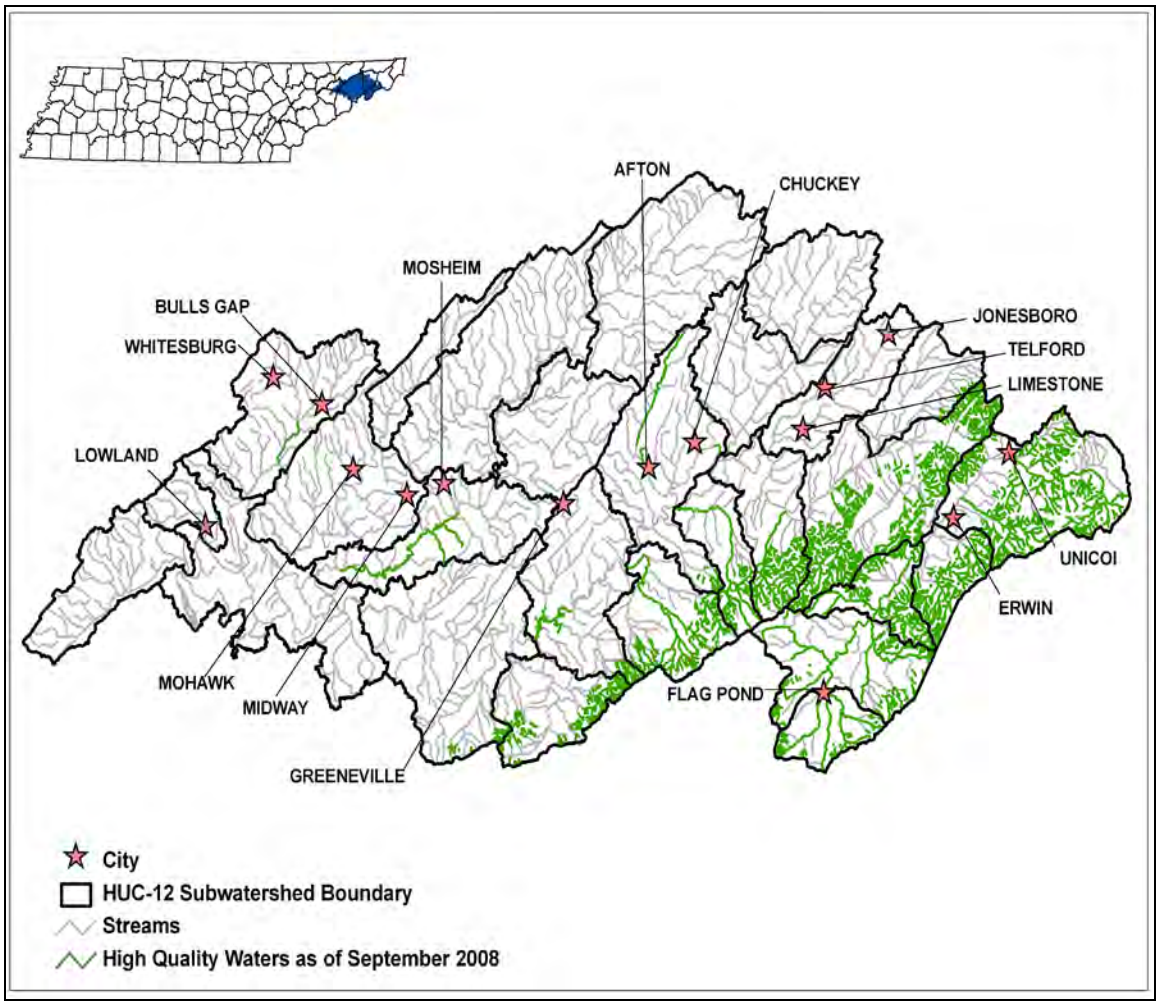


Figure 3-20. High Quality Waters Identified in the Tennessee Portion of the Nolichucky River Watershed. *More information is provided in Appendix III.*

CHAPTER 4

POINT AND NONPOINT SOURCE CHARACTERIZATION OF THE NOLICHUCKY RIVER WATERSHED

4.1. BACKGROUND. This chapter is organized by HUC-12 subwatershed, and the description of each subwatershed is divided into four parts:

i. General description of the subwatershed
ii. Location of USGS (United States Geological Survey) gaging stations and STORET sites
iii. Location of permitted activities
iv. Description of nonpoint source contributions

The HUC can range from 2 to 16 digits long, more digits indicating a smaller and smaller portion of the watershed is represented. The Tennessee portion of the Nolichucky River Watershed (HUC 06010108) has been delineated into twenty-seven HUC-12 subwatersheds.

Information for this chapter was obtained from databases maintained by the Division of Water Pollution Control or provided in the WCS (Watershed Characterization System) data set. The WCS used was version 2.0 (developed by Tetra Tech, Inc for EPA Region 4) released in 2003.

WCS integrates with ArcView® v3.x and Spatial Analyst® v1.1 to analyze user-delineated (sub)watersheds based on hydrologically connected water bodies. Reports are generated by integrating WCS with Microsoft® Word. Land Use/Land Cover information from 2001 MRLC (Multi-Resolution Land Cover) data are calculated based on the proportion of county-based land use/land cover in user-delineated (sub)watersheds. Nonpoint source data in WCS are based on agricultural census data collected 1992–1998; nonpoint source data were reviewed by Tennessee NRCS staff.

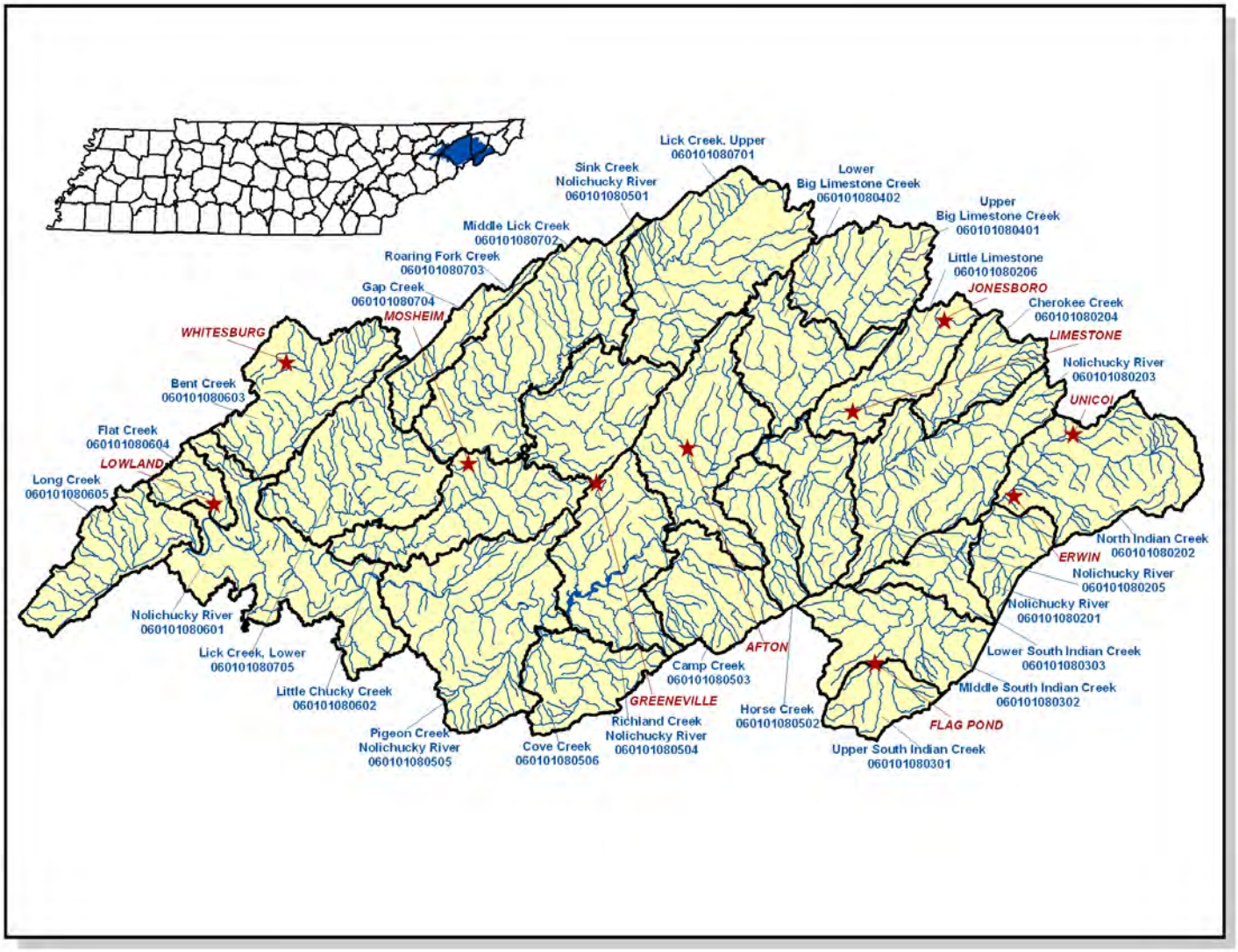


Figure 4-1. The Tennessee Portion of the Nolichucky River Watershed is Composed of Twenty-Seven USGS-Delineated Subwatersheds (12-Digit Subwatersheds).

4.2. CHARACTERIZATION OF HUC-12 SUBWATERSHEDS. The Watershed Characterization System (WCS) software and data sets provided by EPA Region IV were used to characterize each subwatershed in the Nolichucky River Watershed.

HUC-8	HUC-10	HUC-12
06010108	0601010802	060101080201 (Nolichucky River)
		060101080202 (North Indian Creek)
		060101080203 (Nolichucky River)
		060101080204 (Cherokee Creek)
		060101080205 (Nolichucky River)
		060101080206 (Little Limestone)
	0601010803	060101080301 (South Indian Creek, Upper)
		060101080302 (South Indian Creek, Middle)
		060101080303 (South Indian Creek, Lower)
	0601010804	060101080401 (Big Limestone Creek, Upper)
		060101080402 (Big Limestone Creek, Lower)
	0601010805	060101080501 (Sink Creek, Nolichucky River)
		060101080502 (Horse Creek)
		060101080503 (Camp Creek)
		060101080504 (Richland Creek, Nolichucky River)
		060101080505 (Pigeon River, Nolichucky River)
		060101080506 (Cove Creek)
	0601010806	060101080601 (Nolichucky River)
		060101080602 (Little Chucky Creek)
		060101080603 (Bent Creek)
		060101080604 (Flat Creek)
		060101080605 (Long Creek)
	0601010807	060101080701 (Lick Creek, Upper)
		060101080702 (Lick Creek, Middle)
		060101080703 (Roaring Fork Creek)
		060101080704 (Gap Creek)
		060101080705 (Lick Creek, Lower)

Table 4-1. HUC-12 Drainage Areas are Nested Within HUC-10 Drainages. *NRCS worked with USGS to delineate the HUC-10 and HUC-12 drainage boundaries.*

4.2.A. 060101080201(Nolichucky River).

4.2.A.i. General Description.

Figure 4-2. Location of Subwatershed 060101080201. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

Figure 4-3. Locational Details of Subwatershed 060101080201.

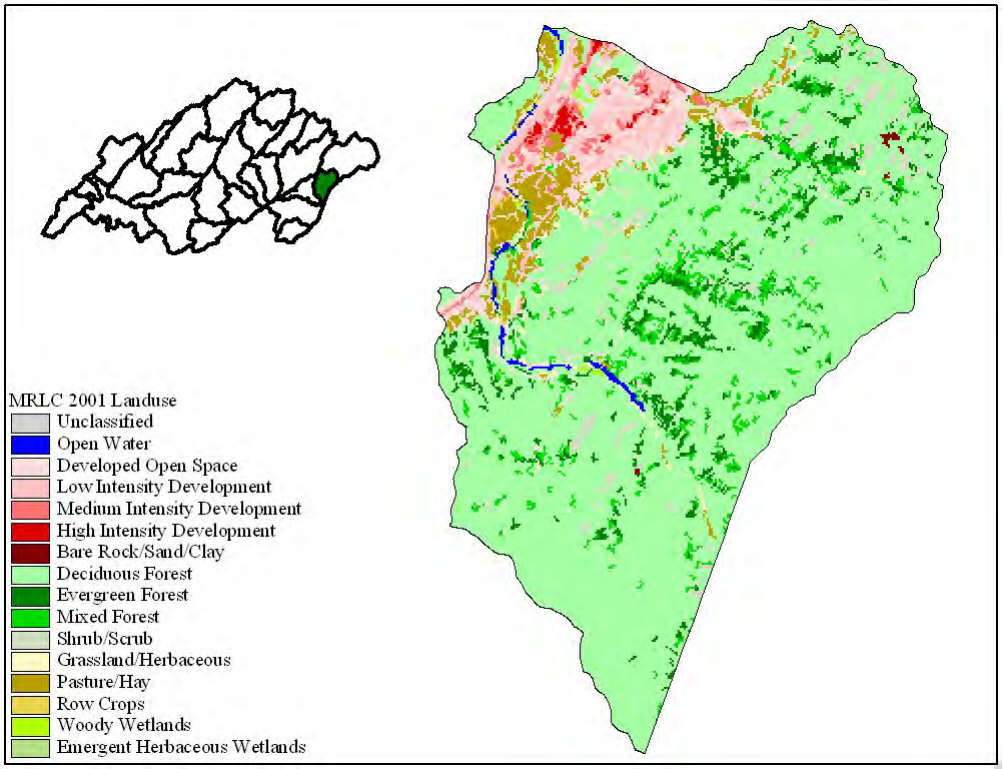


Figure 4-4. Illustration of Land Use Distribution in Subwatershed 060101080201.

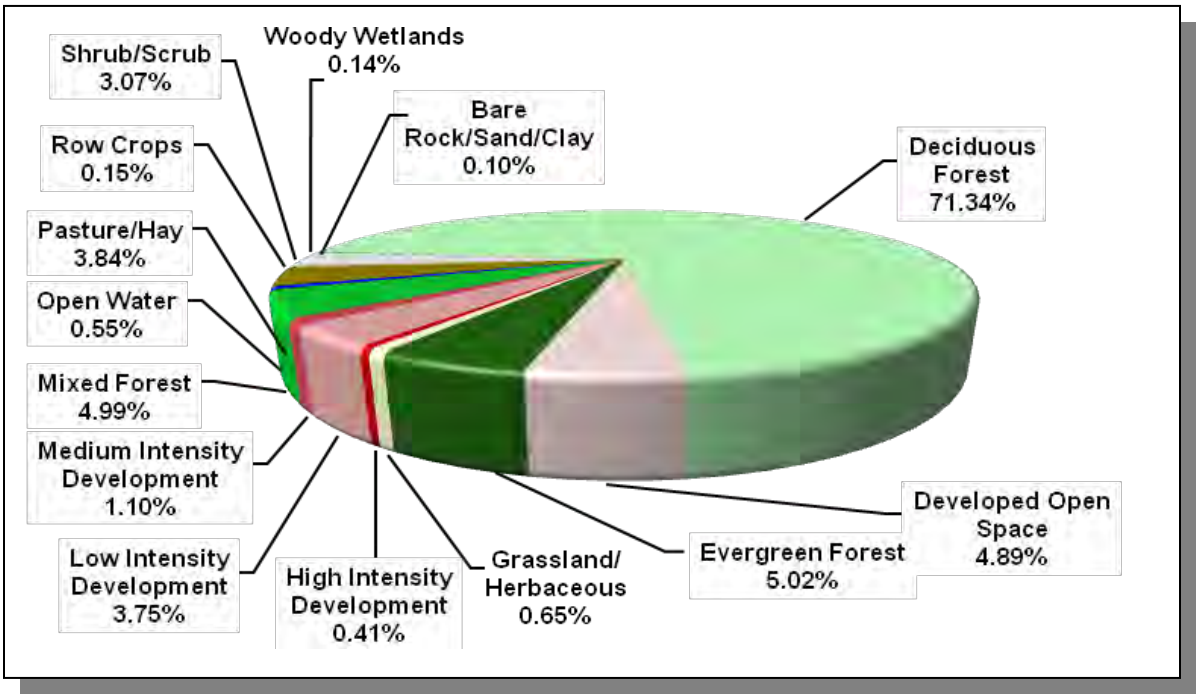


Figure 4-5. Land Use Distribution in Subwatershed 060101080201. *More information is provided in Appendix IV.*

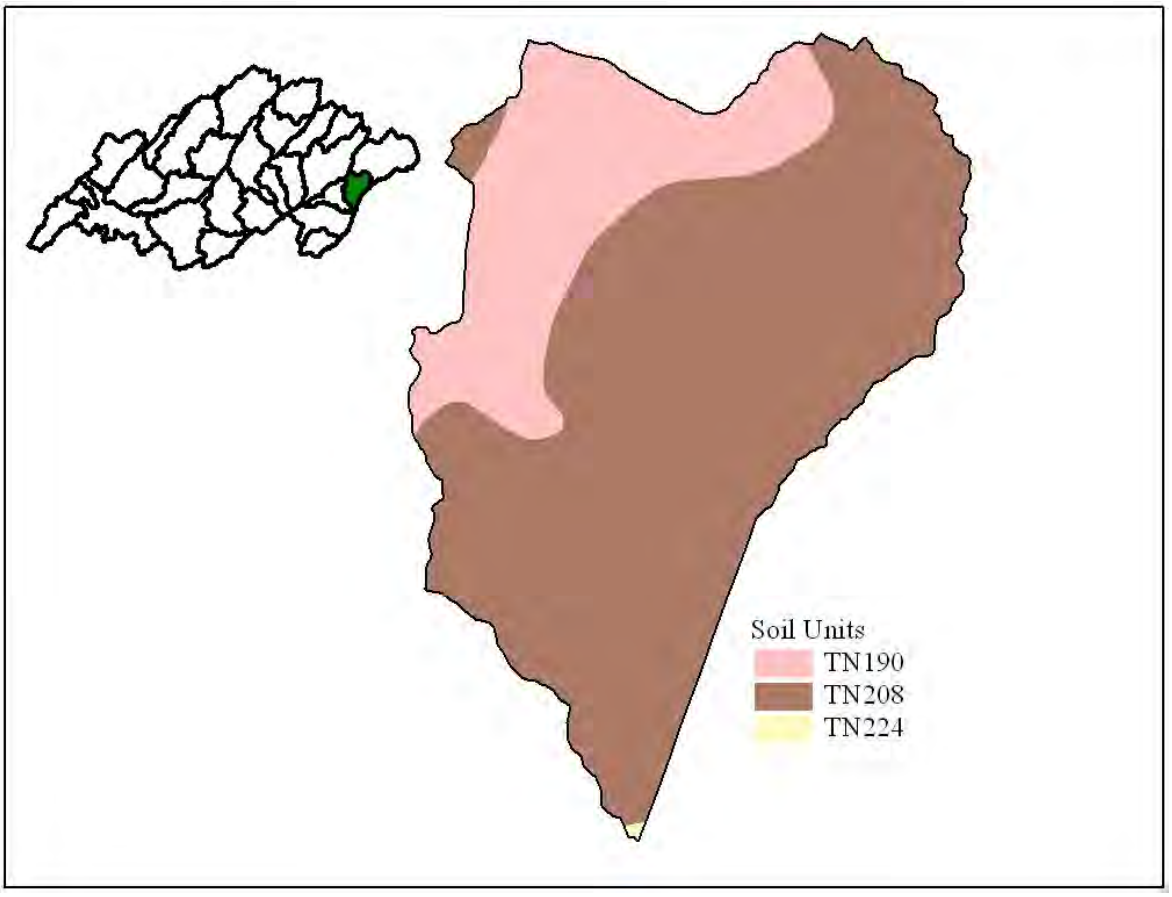


Figure 4-6. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080201.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN190	0.00	B	3.43	5.52	Loam	0.29
TN208	0.00	C	4.02	4.84	Loam	0.25
TN224	1.00	B	3.97	5.27	Loam	0.24

Table 4-2. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080201. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Unicoi	16,549	17,221	17,667	9.06	1,499	1,560	1,601	6.80

Table 4-3. Population Estimates in Subwatershed 060101080201.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Erwin	Unicoi	4,970	2,237	2,136	101	0

Table 4-4. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 060101080201.

4.2.A.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080201.

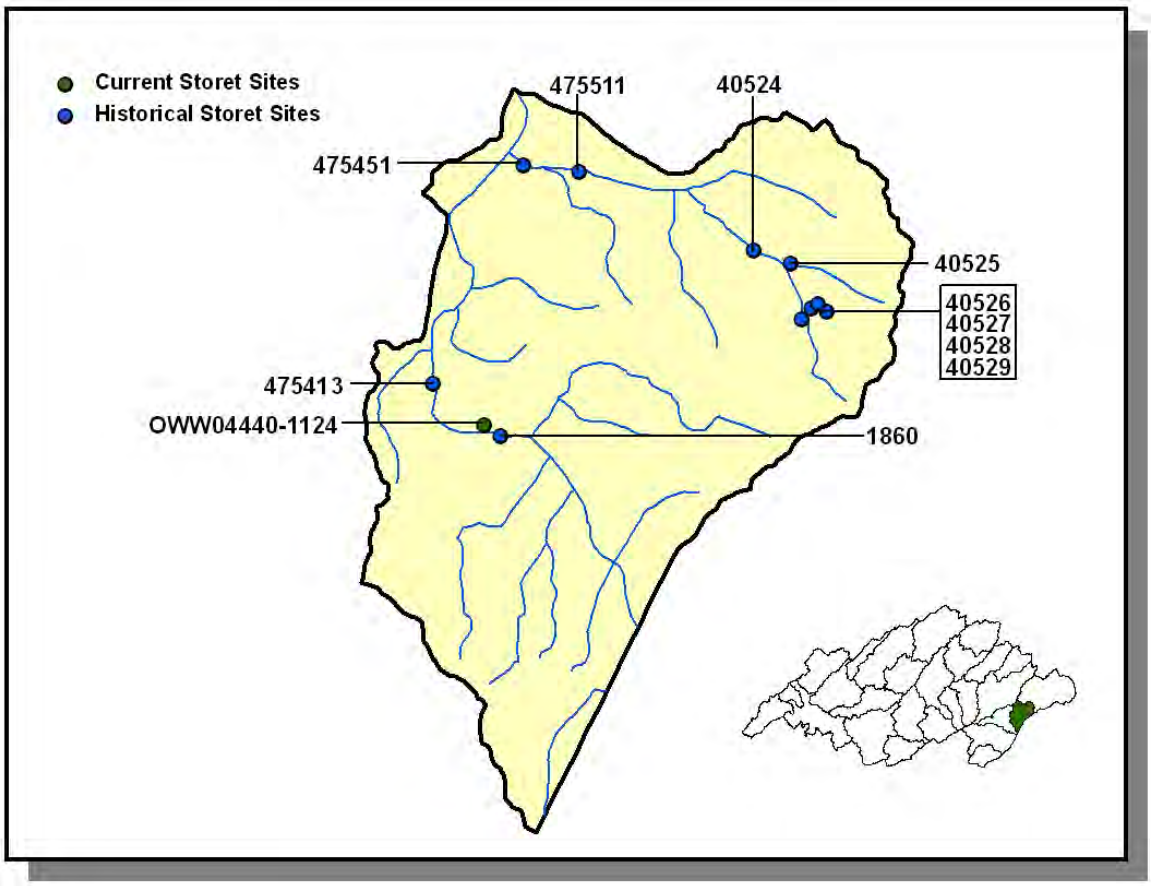


Figure 4-7. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080201. *More information, including site names and locations, is provided in Appendix IV.*

4.2.A.iii. Permitted Activities.

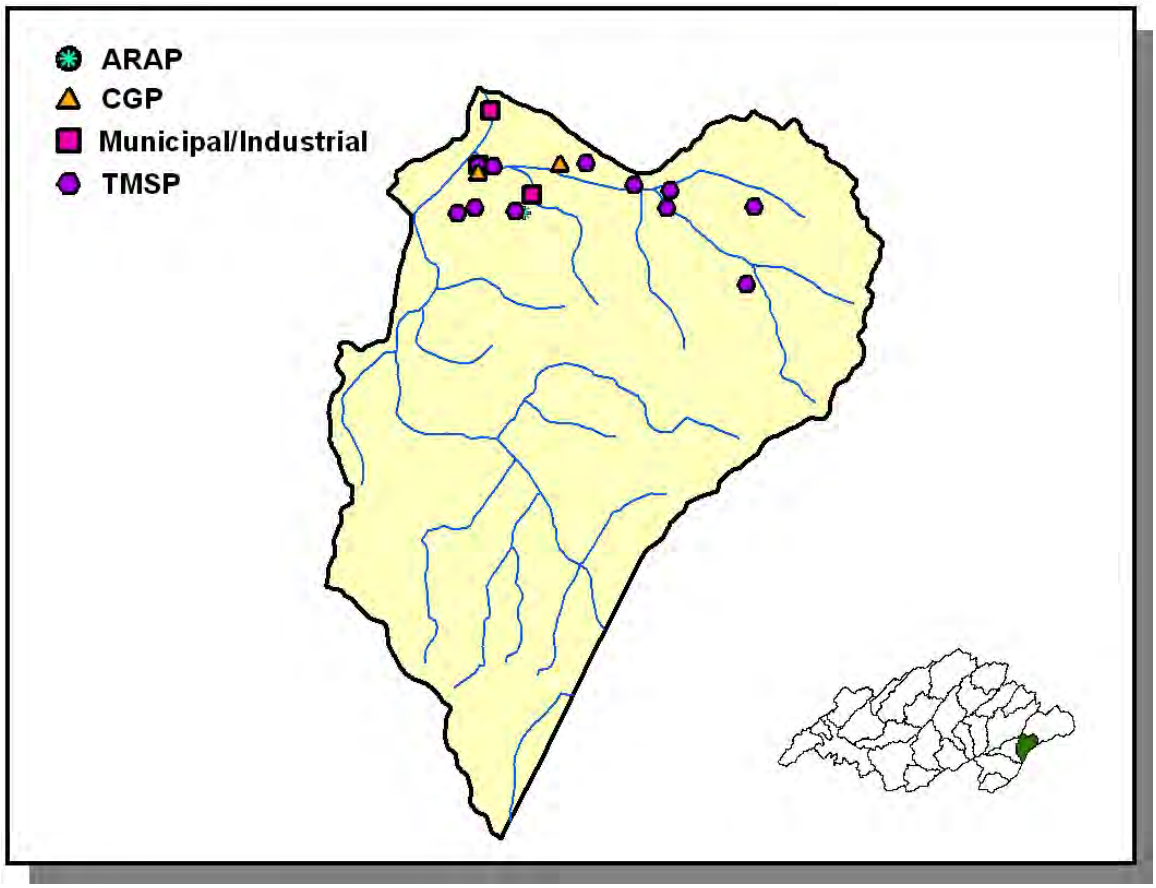


Figure 4-8. Location of Permits Issued in Subwatershed 060101080201. *More information, including the names of facilities, is provided in Appendix IV.*

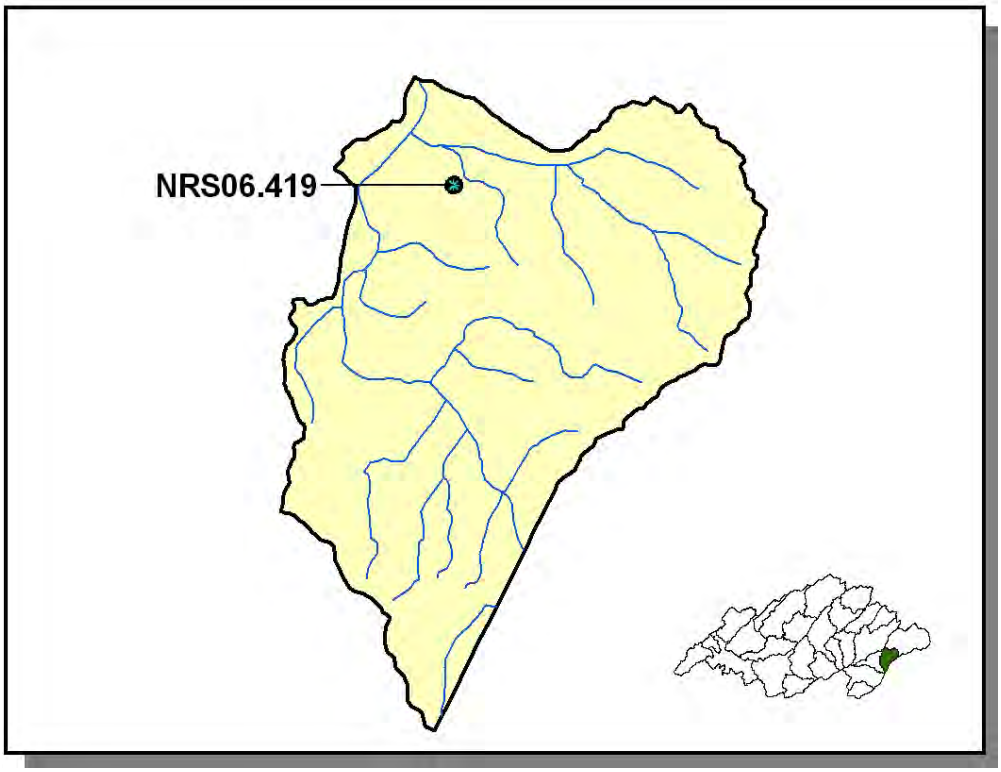


Figure 4-9. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080201. *More information is provided in Appendix IV.*

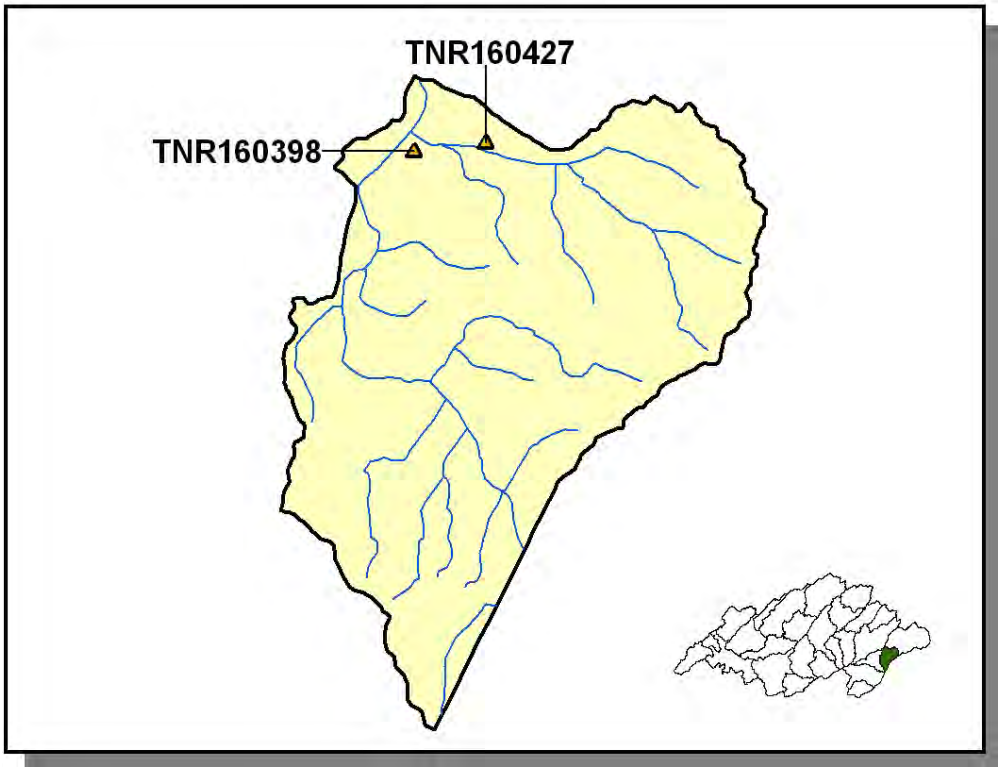


Figure 4-10. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080201. *More information is provided in Appendix IV.*

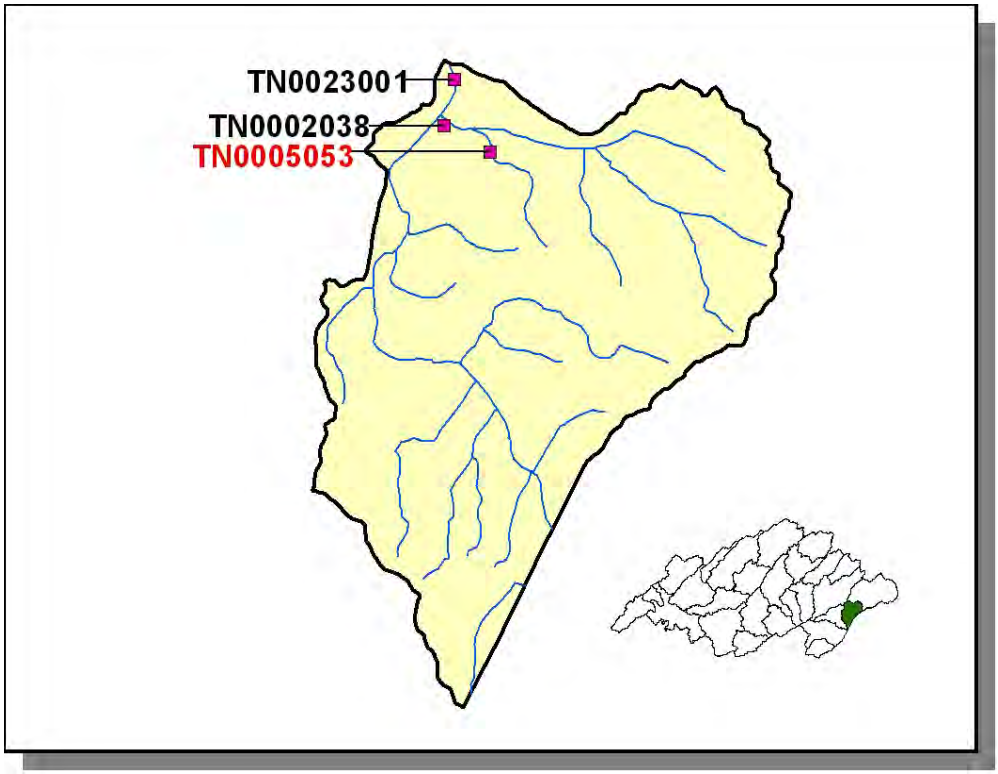


Figure 4-11. Location of Permitted Municipal and Industrial Facilities in Subwatershed 060101080201. *Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303 (d) list. More information, including the names of facilities, is provided in Appendix IV.*

PERMIT #	1Q10	7Q10	30Q5	DISCHARGE FLOW
TN0005053	0.0	0.0	0.0	1.86

Table 4-5. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080201. *Data are in million gallons per day (MGD).Data were obtained from permit files.*

PERMIT #	WET	DO	FLOW	pH	TSS	SS
TN0005053	X	X	X	X	X	X

Table 4-6. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080201. *WET, Whole Effluent Toxicity; DO, Dissolved Oxygen; TSS, Total Suspended Solids; SS, Settleable Solids.*

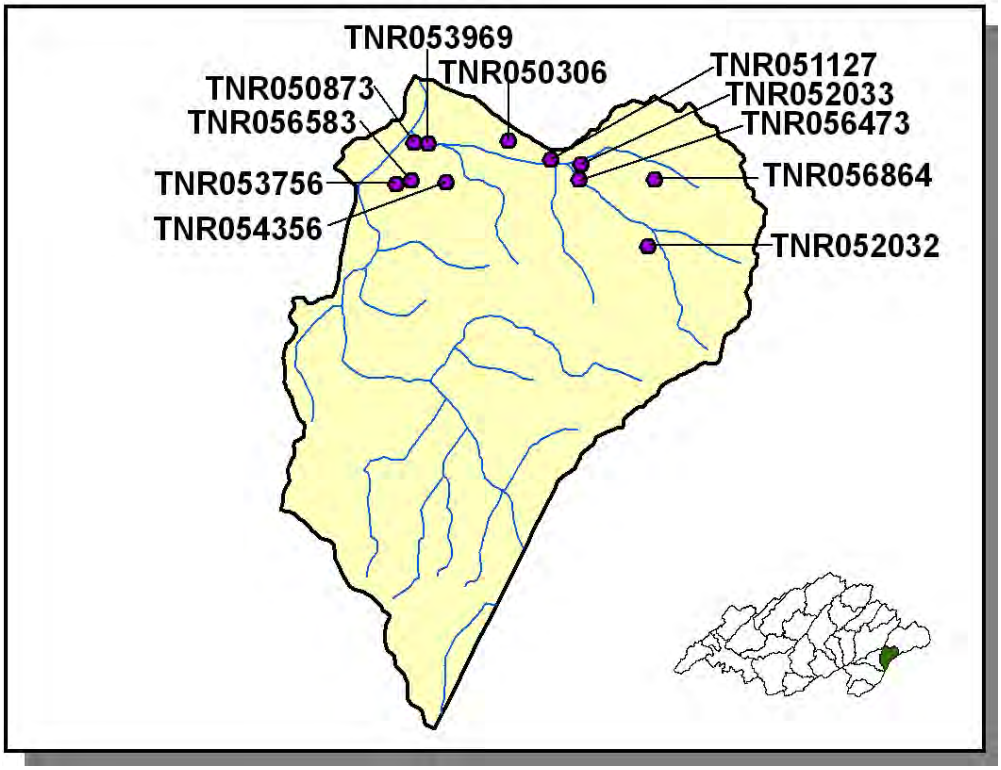


Figure 4-12. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080201. *More information is provided in Appendix IV.*

4.2.A.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Unicoi	657	1,410	9	6	66	0

Table 4-7. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/). "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Unicoi	99.3	89.4	3.1	8.5

Table 4-8. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Other Vegetable and Truck Crop	6.10
Grass Forbs Legumes Mixed (Pastureland)	0.36
Grass (Pastureland)	0.34
Legume (Hayland)	0.06
Farmsteads and Ranch Headquarters	0.03

Table 4-9. Annual Estimated Total Soil Loss in Subwatershed 060101080201.

4.2.B. 060101080202 (North Indian Creek).

4.2.B.i. General Description

Figure 4-13. Location of Subwatershed 060101080202. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

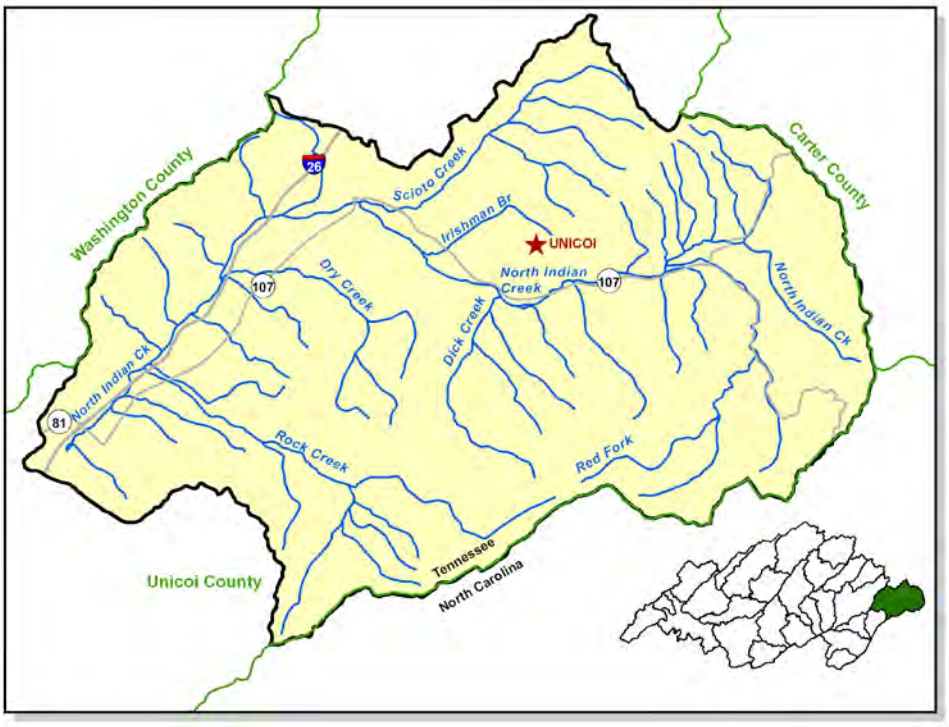


Figure 4-14 Locational Details of Subwatershed 060101080202.

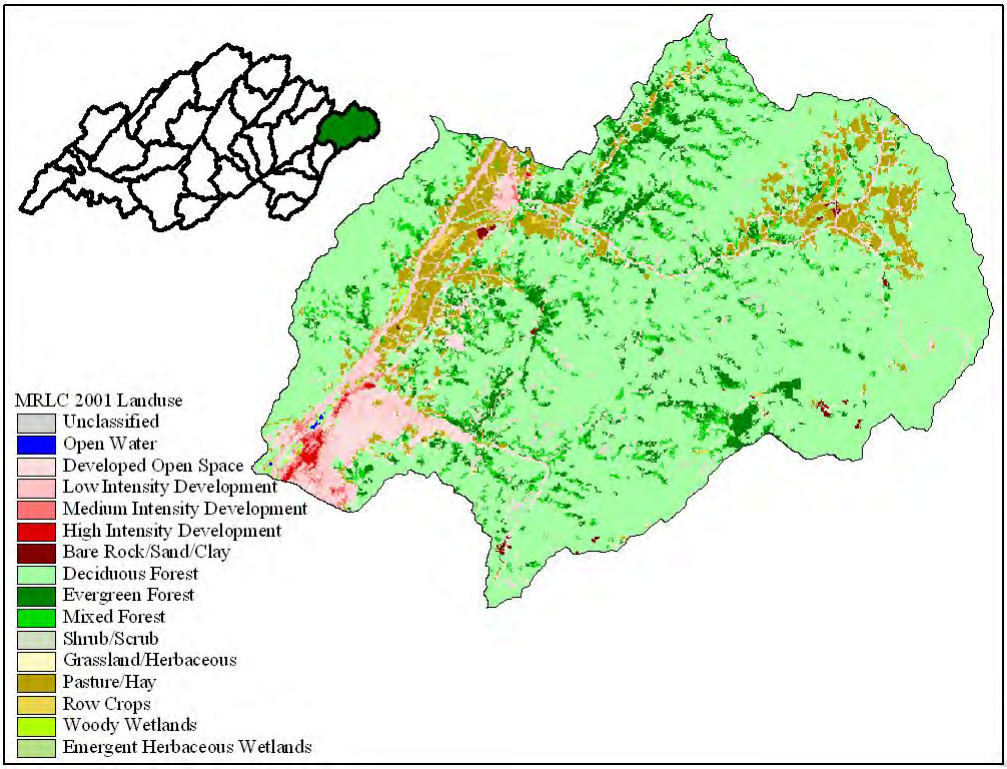


Figure 4-15. Illustration of Land Use Distribution in Subwatershed 060101080202.

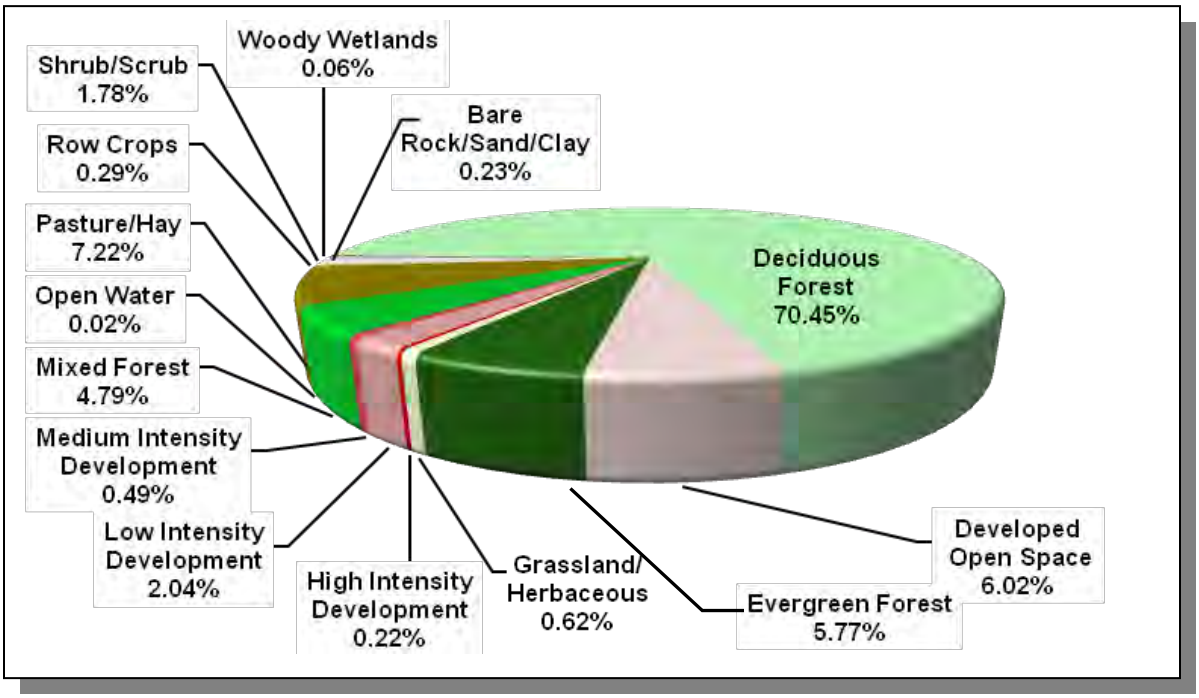


Figure 4-16. Land Use Distribution in Subwatershed 060101080202. *More information is provided in Appendix IV.*

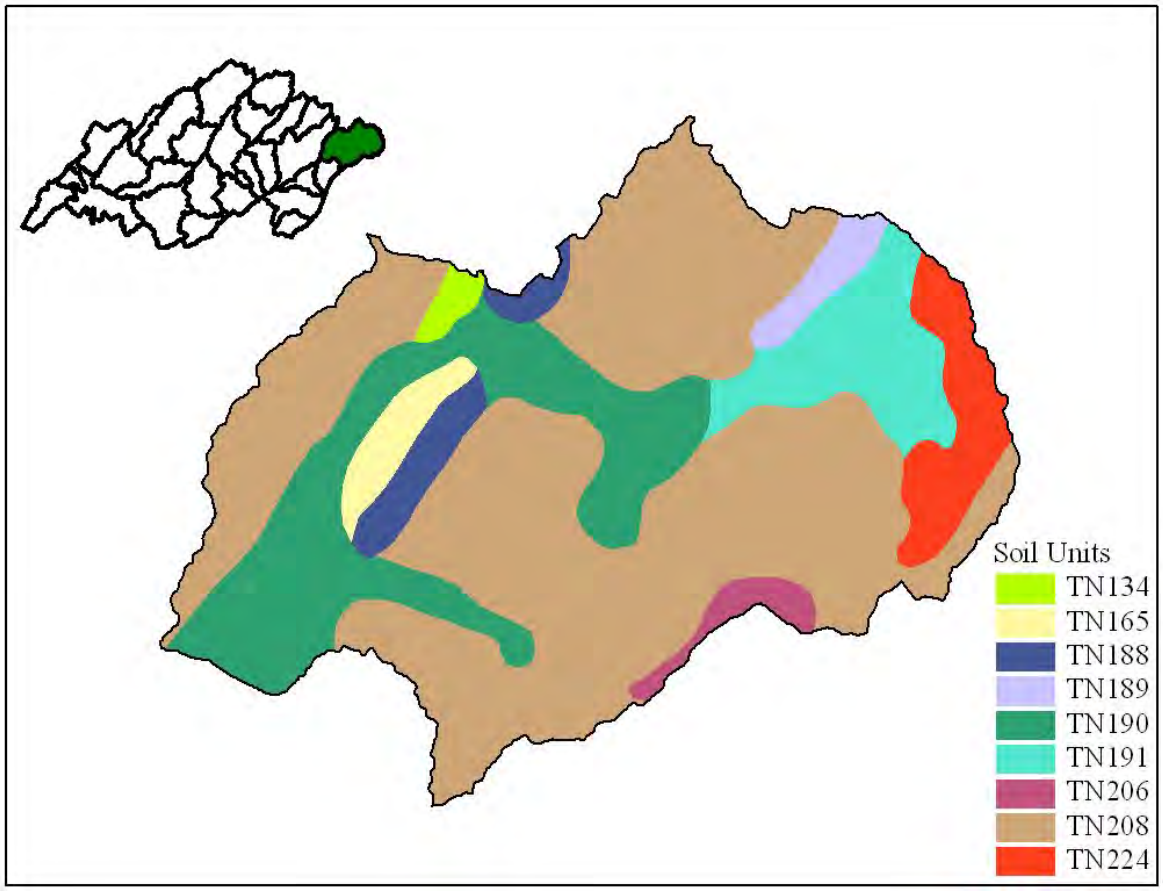


Figure 4-17. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080202.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN134	0.00	B	1.38	5.18	Loam	0.31
TN165	0.00	B	1.79	5.51	Silty Loam	0.32
TN188	0.00	B	2.65	5.40	Silty Loam	0.28
TN189	0.00	B	3.99	5.05	Loam	0.24
TN190	0.00	B	3.43	5.52	Loam	0.29
TN191	0.00	B	3.03	5.36	Loam	0.27
TN206	0.00	B	3.99	4.76	Sandy Loam	0.20
TN208	0.00	C	4.02	4.84	Loam	0.25
TN224	1.00	B	3.97	5.27	Loam	0.24

Table 4-10. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080202. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Unicoi	16,549	17,221	17,667	29.61	4,900	5,099	5,231	6.80

Table 4-11. Population Estimates in Subwatershed 060101080202.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Erwin	Unicoi	4,970	2,237	2,136	101	0

Table 4-12. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 060101080202.

4.2.B.ii. USGS Gaging Stations and STORET Sites.

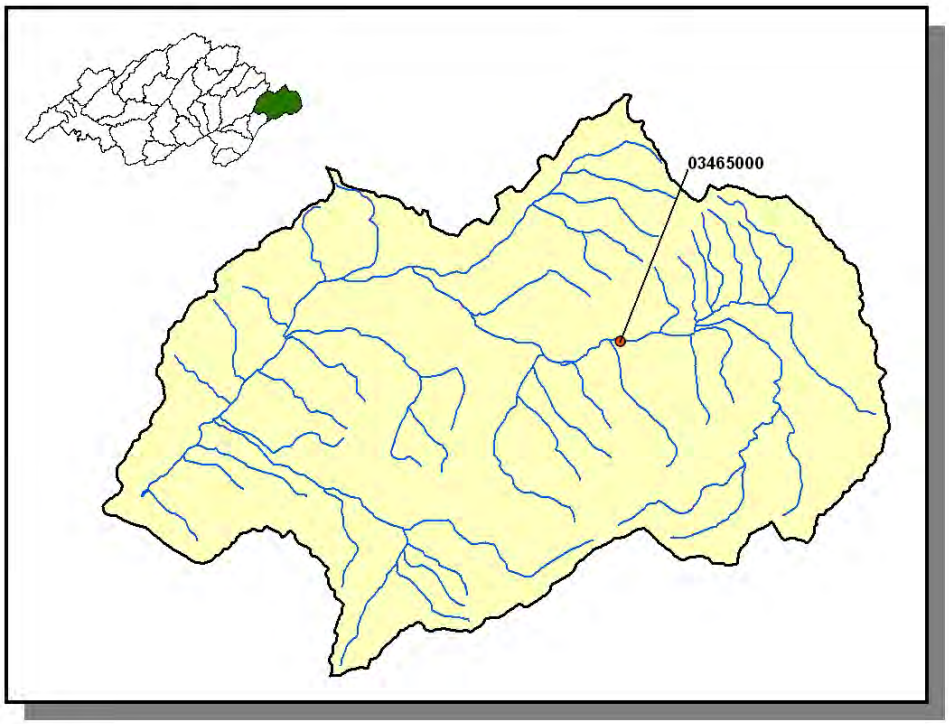


Figure 4-18. Location of USGS Continuous Record Gaging Stations in Subwatershed 060101080202. *More information is provided in Appendix IV.*

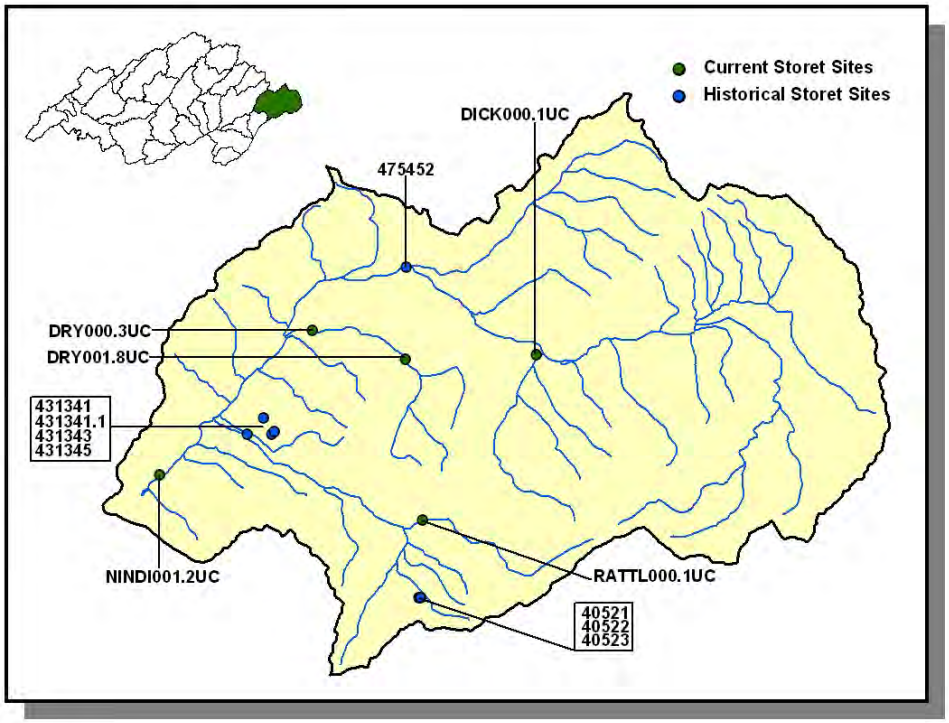


Figure 4-19. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080202. *More information, including site names and locations, is provided in Appendix IV.*

4.2.B.iii. Permitted Activities.

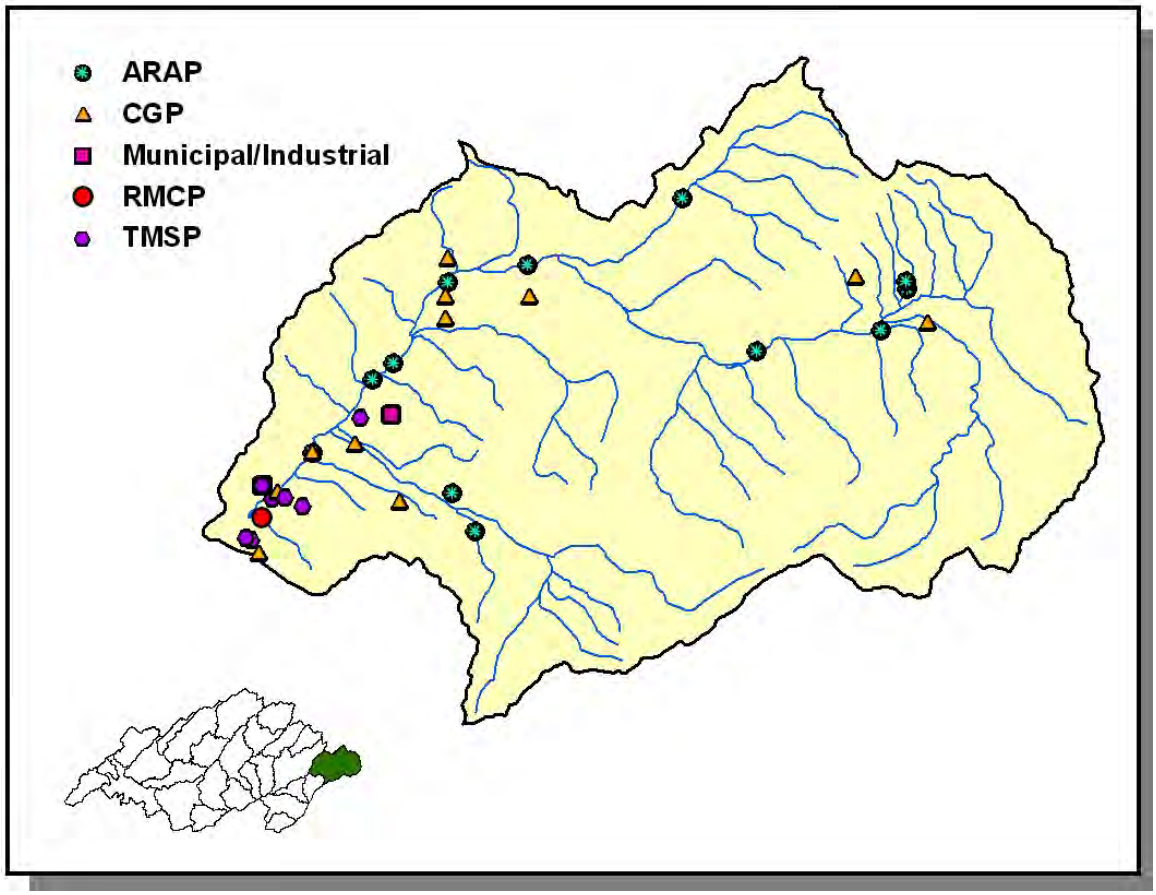


Figure 4-20. Location of Permits Issued in Subwatershed 060101080202. *More information, including the names of facilities, is provided in Appendix IV.*

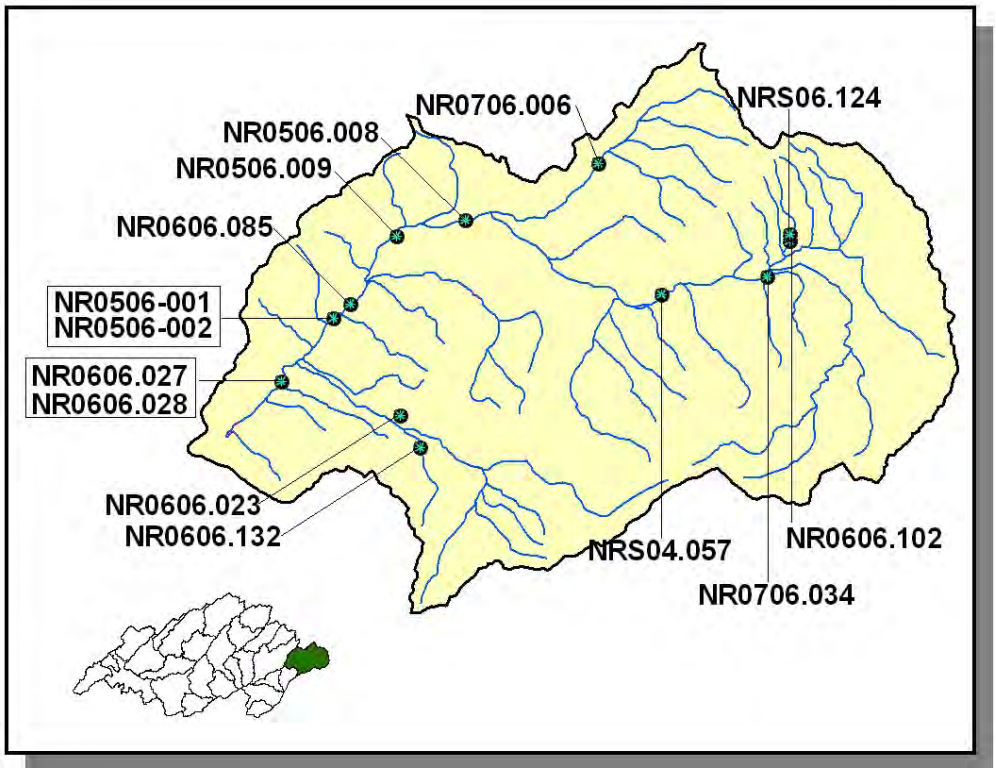


Figure 4-21. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080202. *More information is provided in Appendix IV.*

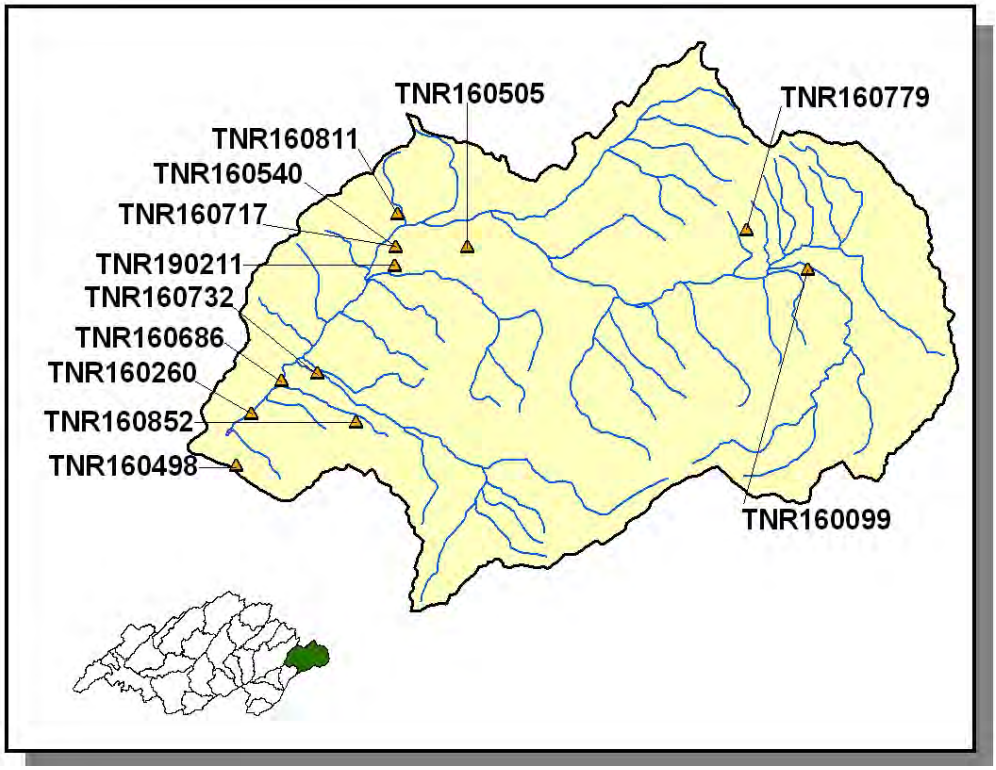


Figure 4-22. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080202. *More information is provided in Appendix IV.*

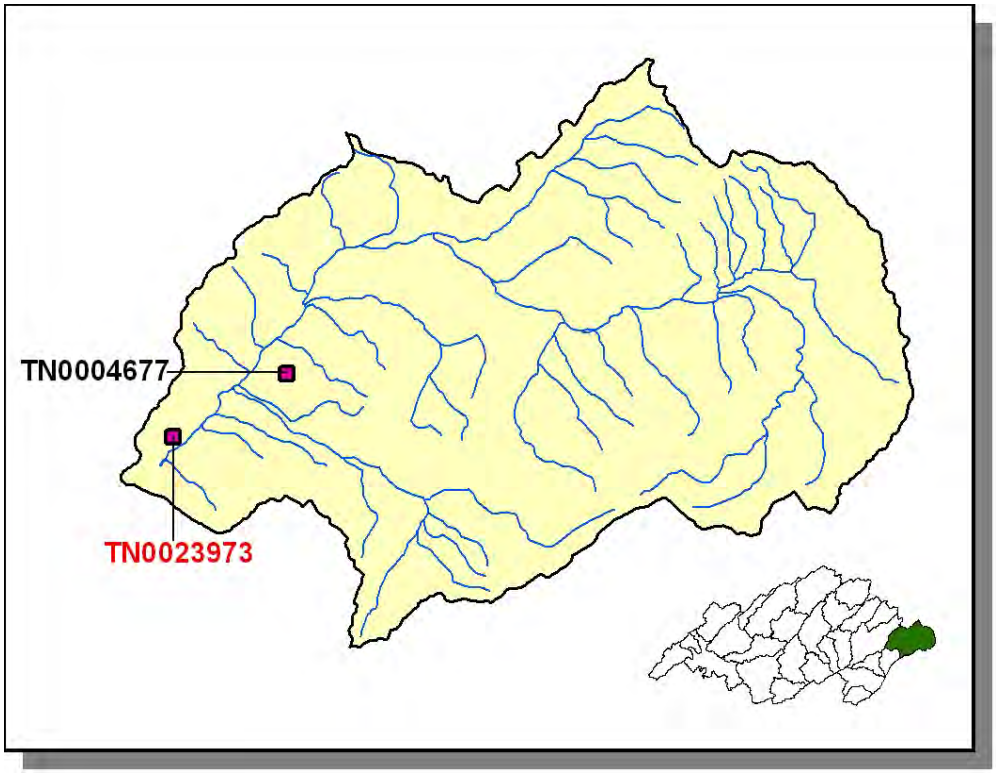


Figure 4-23. Location of Permitted Municipal and Industrial Facilities in Subwatershed 060101080202. *Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the names of facilities, is provided in Appendix IV.*

PERMIT #	7Q10	30Q5	DISCHARGE FLOW
TN0023973	0.0	0.0	0.1429

Table 4-13. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080202. *Data are in million gallons per day (MGD).Data were obtained from permit files.*

PERMIT #	BOD_5	FLOW	OIL AND GREASE	TSS	SS	pH
TN0023973	X	X	X	X	X	X

Table 4-14. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080202. *BOD_5, Biochemical Oxygen Demand (5-Day); TSS, Total Suspended Solids; SS, Settleable Solids.*

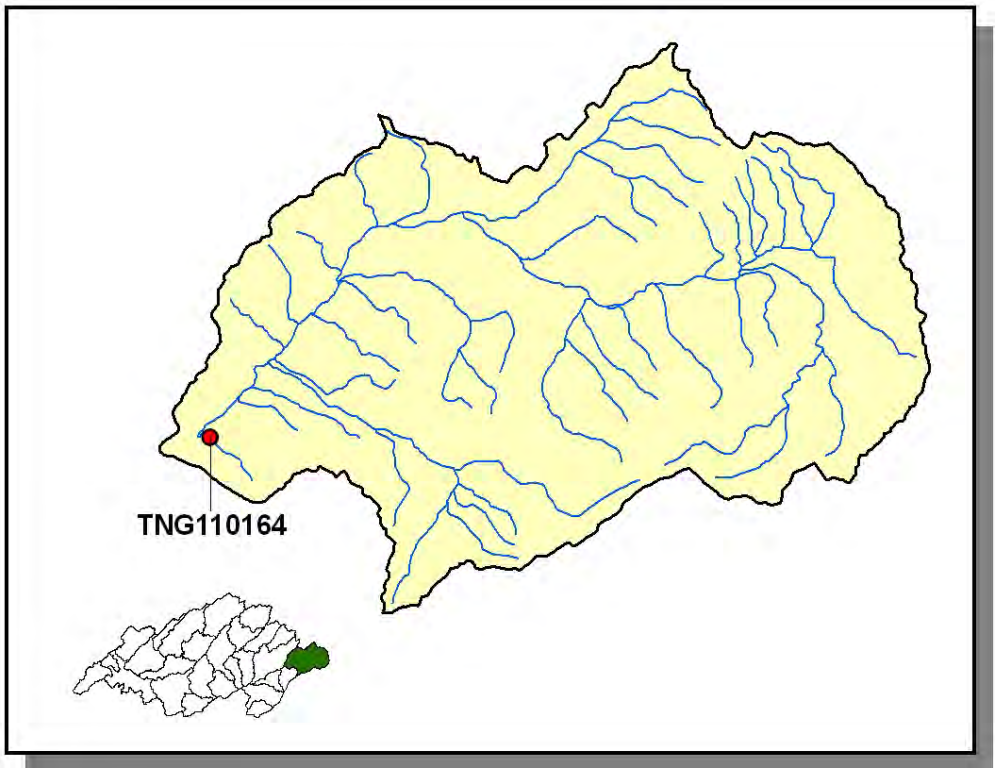


Figure 4-24. Location of RMCP (Ready Mix Concrete Plant) facilities in Subwatershed 060101080202. *More information, including the names of facilities, is provided in Appendix IV.*

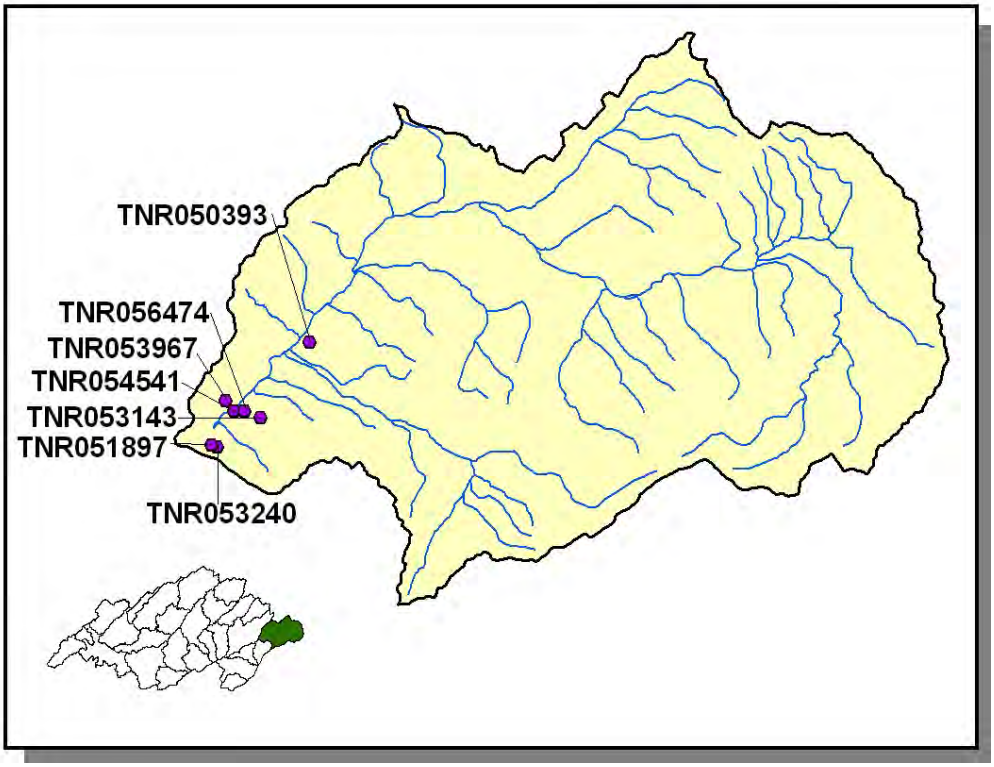


Figure 4-25. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080202. *More information is provided in Appendix IV.*

4.2.B.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Unicoi	657	1,410	9	6	66	
Washington	23,073	53,186	5,190	38	262	353

Table 4-15. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Unicoi	99.3	89.4	3.1	8.5

Table 4-16. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	13.57
Tobacco (Row Crops)	6.69
Other Vegetable and Truck Crop	6.10
Grass (Hayland)	0.62
Grass Forbs Legumes Mixed (Pastueland)	0.37
Grass (Pastureland)	0.34
Legume Grass (Hayland)	0.20
Legume (Hayland)	0.06
Farmsteads and Ranch Headquarters	0.03

Table 4-17. Annual Estimated Total Soil Loss in Subwatershed 060101080202.

4.2.C. 060101080203 (Nolichucky River).

4.2.C.i. General Description.

Figure 4-26. Location of Subwatershed 060101080203. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

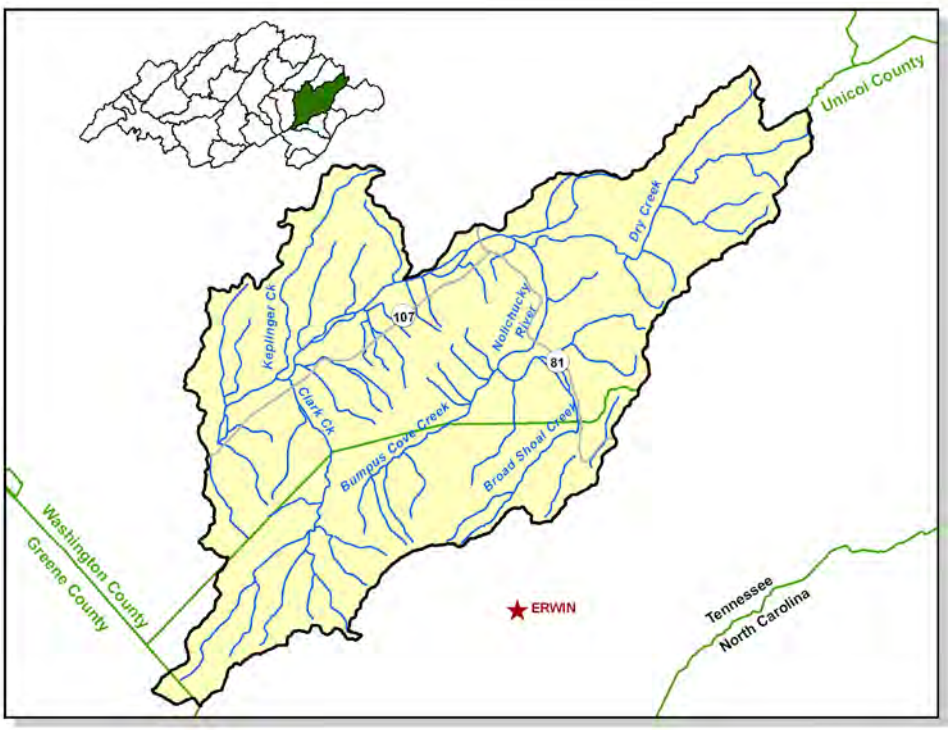


Figure 4-27. Locational Details of Subwatershed 060101080203.

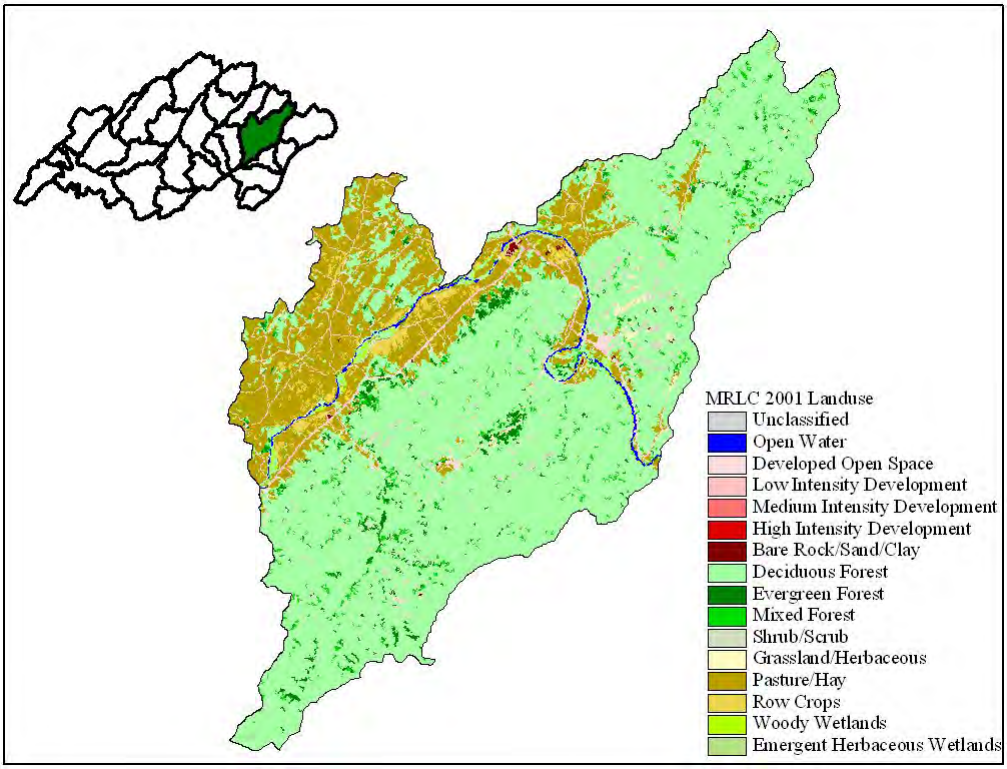


Figure 4-28. Illustration of Land Use Distribution in Subwatershed 060101080203.

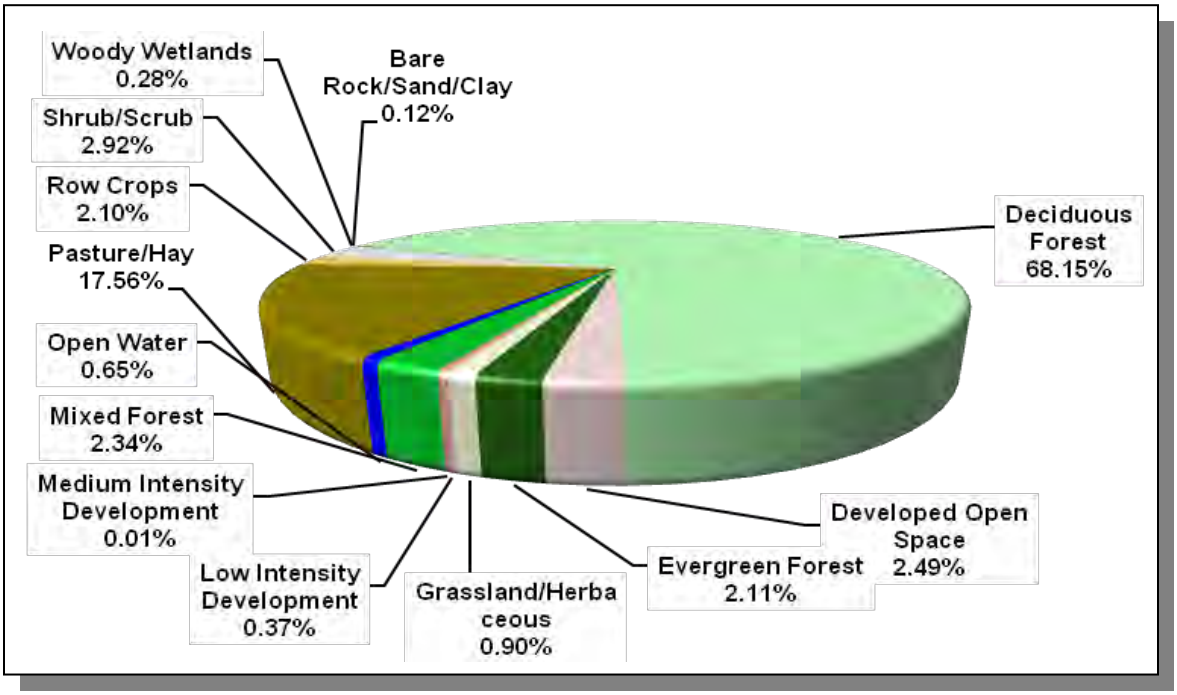


Figure 4-29. Land Use Distribution in Subwatershed 060101080203. *More information is provided in Appendix IV.*

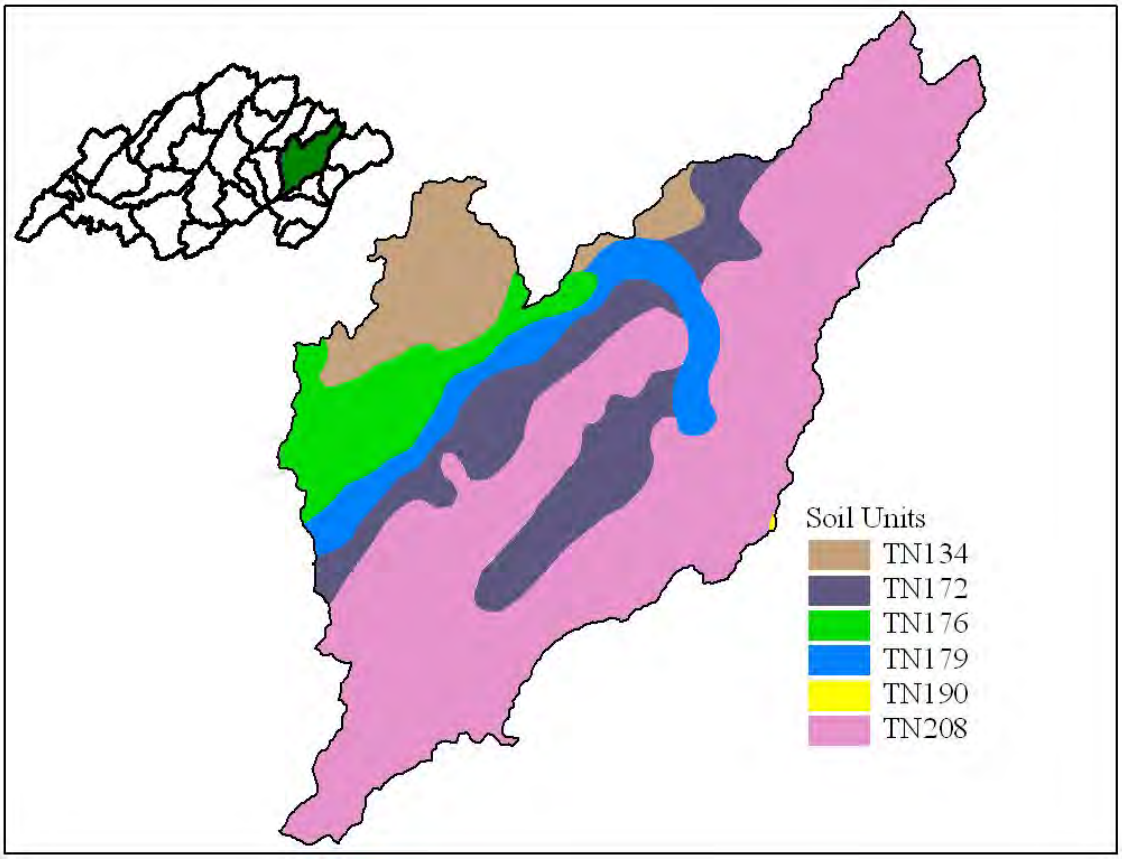


Figure 4-30. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080203.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN134	0.00	B	1.38	5.18	Loam	0.31
TN172	0.00	B	3.87	5.13	Loam	0.26
TN176	12.00	B	1.30	5.34	Loam	0.31
TN179	0.00	B	3.90	5.62	Sandy Loam	0.25
TN190	0.00	B	3.43	5.52	Loam	0.29
TN208	0.00	C	4.02	4.84	Loam	0.25

Table 4-18. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080203. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Greene	55,853	59,369	62,909	0.05	29	30	32	10.30
Unicoi	16,549	17,221	17,667	11.32	1,873	1,949	2,000	6.80
Washington	92,315	101,368	107,198	13.58	12,537	13,767	14,558	16.10
Totals	**164,717**	**177,958**	**187,774**		**14,439**	**15,746**	**16,590**	**14.90**

Table 4-19. Population Estimates in Subwatershed 060101080203.

4.2.C.ii. USGS Gaging Stations and STORET Sites.

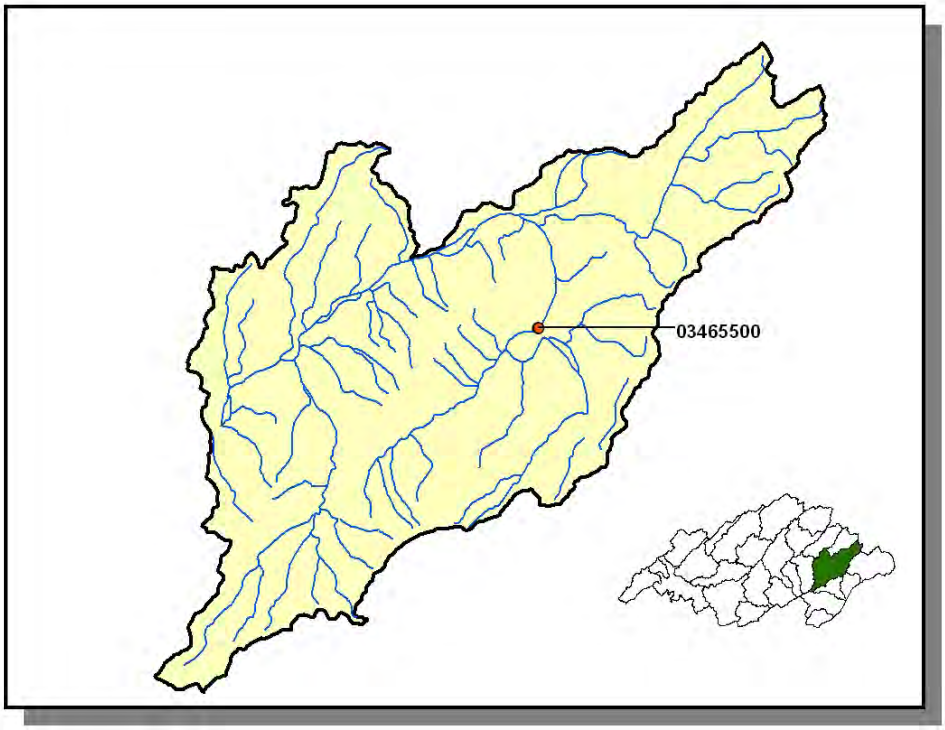


Figure 4-31. Location of USGS Continuous Record Gaging Stations in Subwatershed 060101080203. *More information is provided in Appendix IV.*

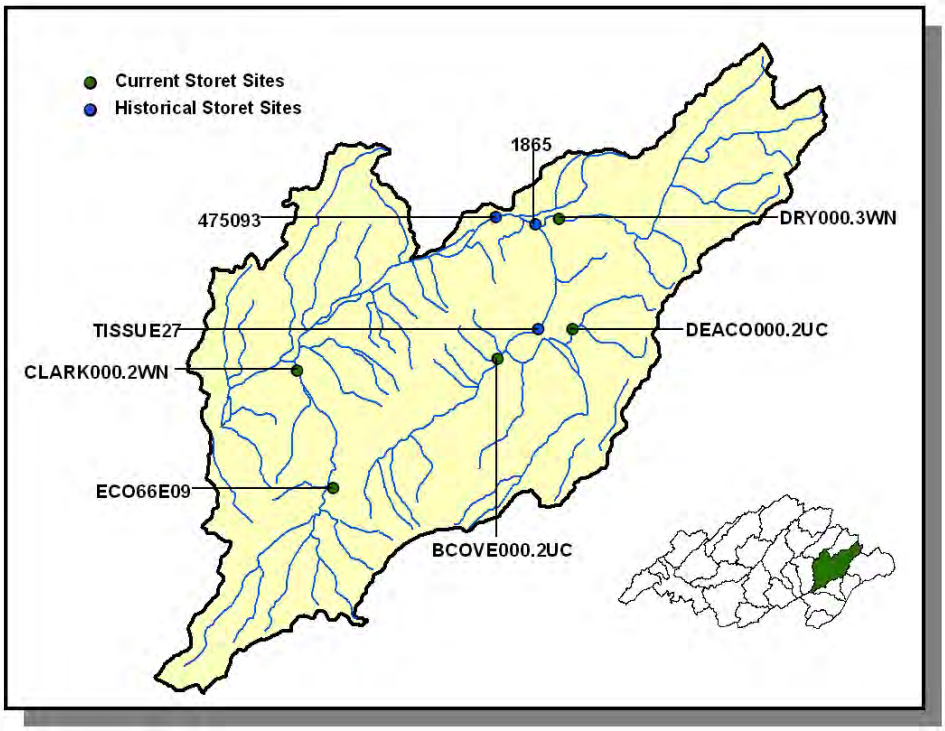


Figure 4-32. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080203. *More information, including site names and locations, is provided in Appendix IV.*

4.2.C.iii. Permitted Activities.

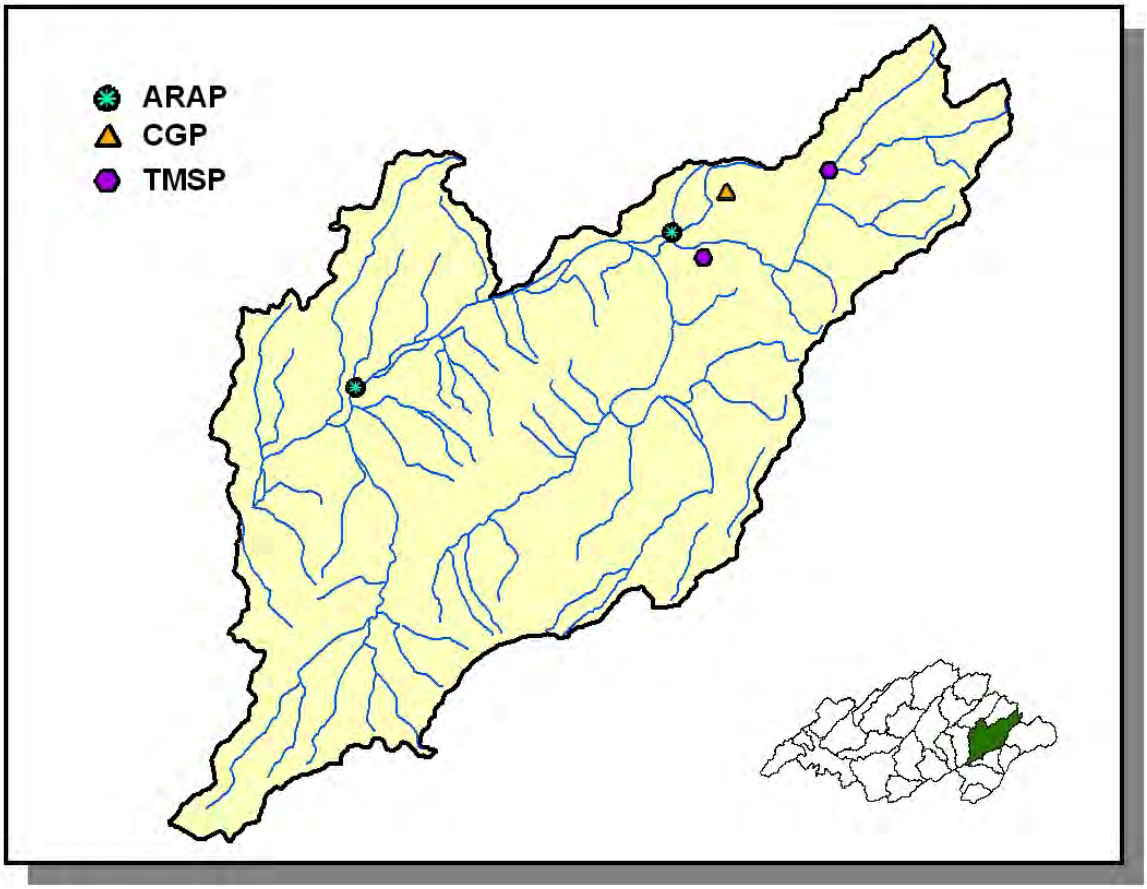


Figure 4-33. Location of Permits Issued in Subwatershed 060101080203. *More information, including the names of facilities, is provided in Appendix IV.*

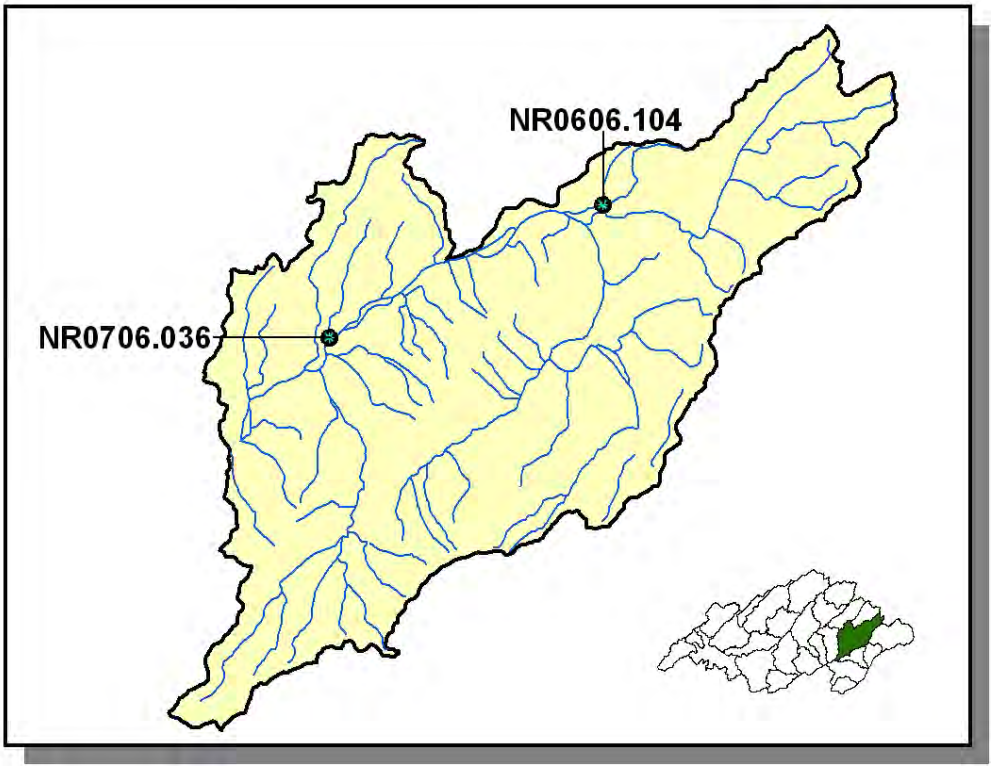


Figure 4-34. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080203. *More information is provided in Appendix IV.*

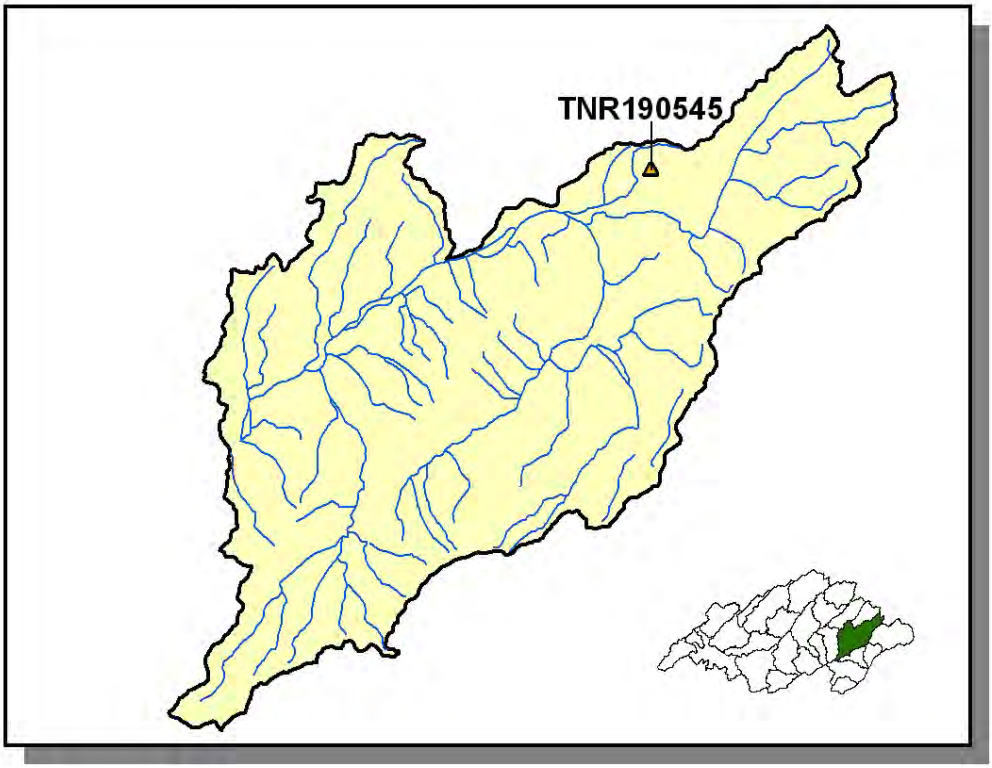


Figure 4-35. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080203. *More information is provided in Appendix IV.*

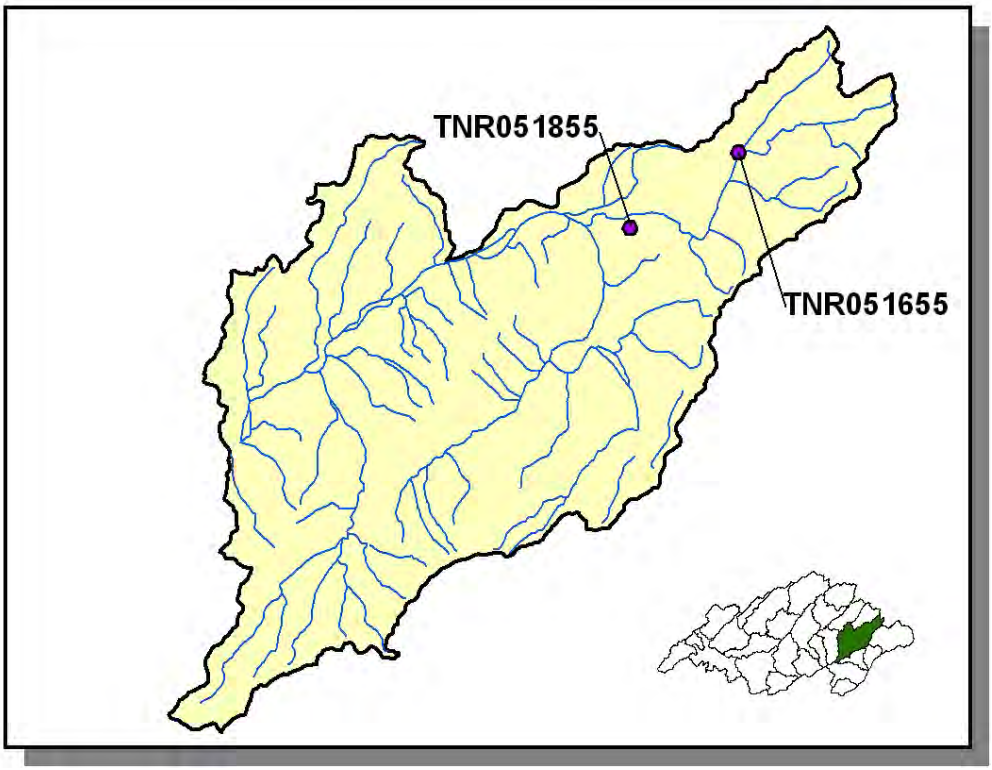


Figure 4-36. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080203. *More information is provided in Appendix IV.*

4.2.C.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Greene	33,962	72,582	7,282	1,190	495	226
Unicoi	657	1,410	9	6	66	
Washington	23,073	53,186	5,190	38	262	353

Table 4-20. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Greene	180.0	171.8	2.0	10.5
Unicoi	99.3	89.4	3.1	8.5

Table 4-21. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	13.59
Tobacco (Row Crops)	6.75
Other Vegetable and Truck Crop	6.07
Grass (Hayland)	0.62
Grass (Pastureland)	0.48
Grass Forbs Legumes Mixed (Pastureland)	0.39
Legume Grass (Hayland)	0.20
Farmsteads and Ranch Headquarters	0.16
Legume (Hayland)	0.06

Table 4-22. Annual Estimated Total Soil Loss in Subwatershed 060101080203.

4.2.D. 060101080204 (Cherokee Creek).

4.2.D.i. General Description.

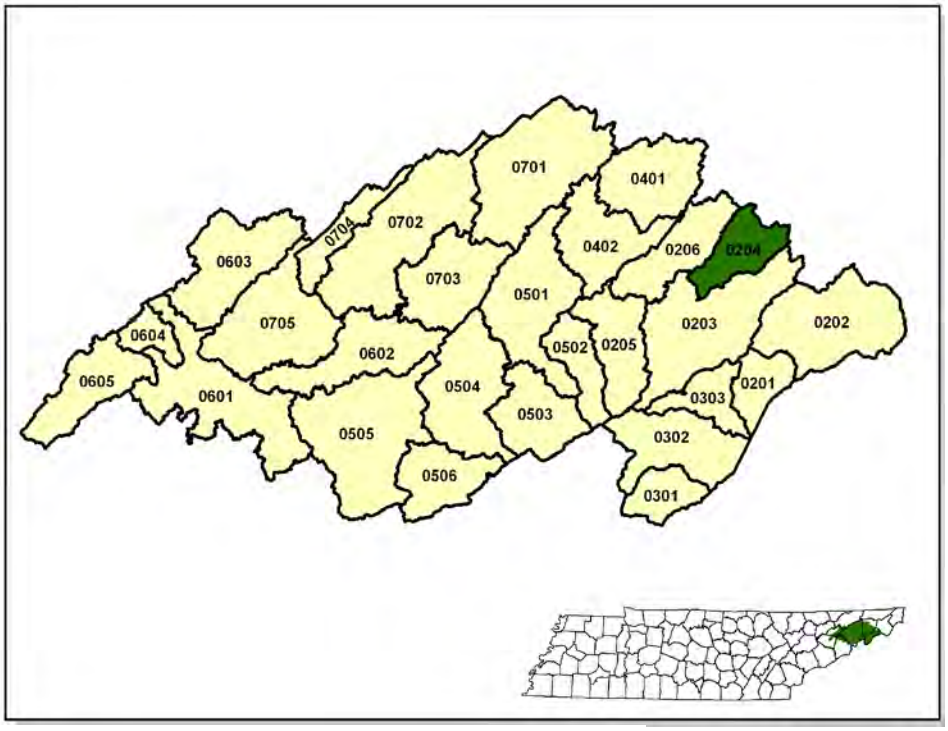


Figure 4-37. Location of Subwatershed 060101080204. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

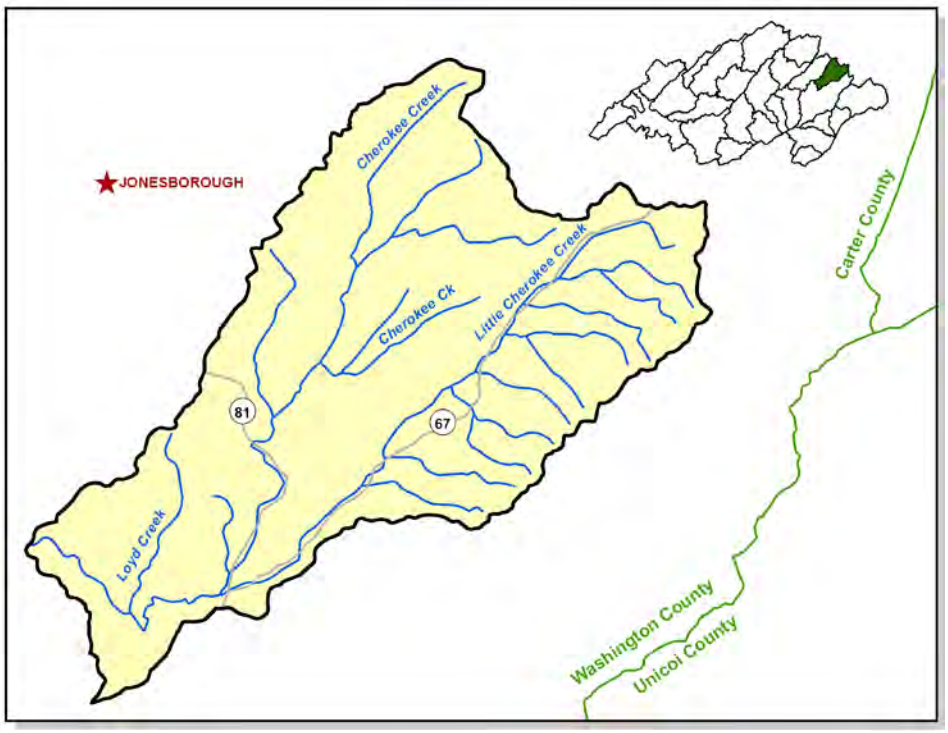


Figure 4-38. Locational Details of Subwatershed 060101080204.

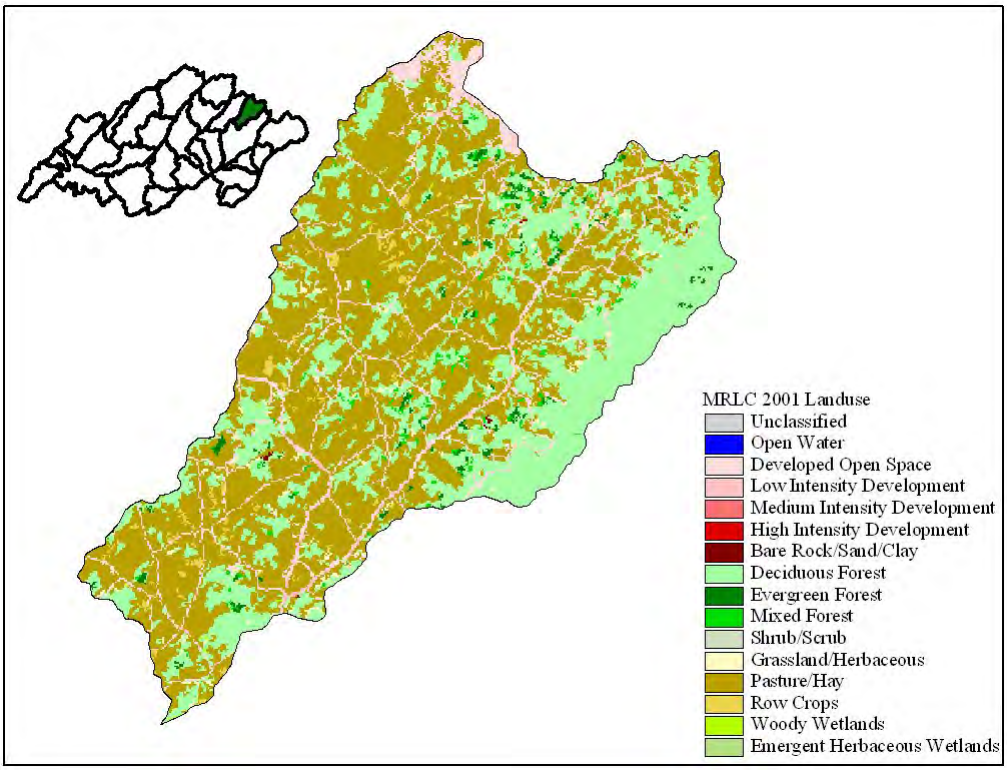


Figure 4-39. Illustration of Land Use Distribution in Subwatershed 060101080204.

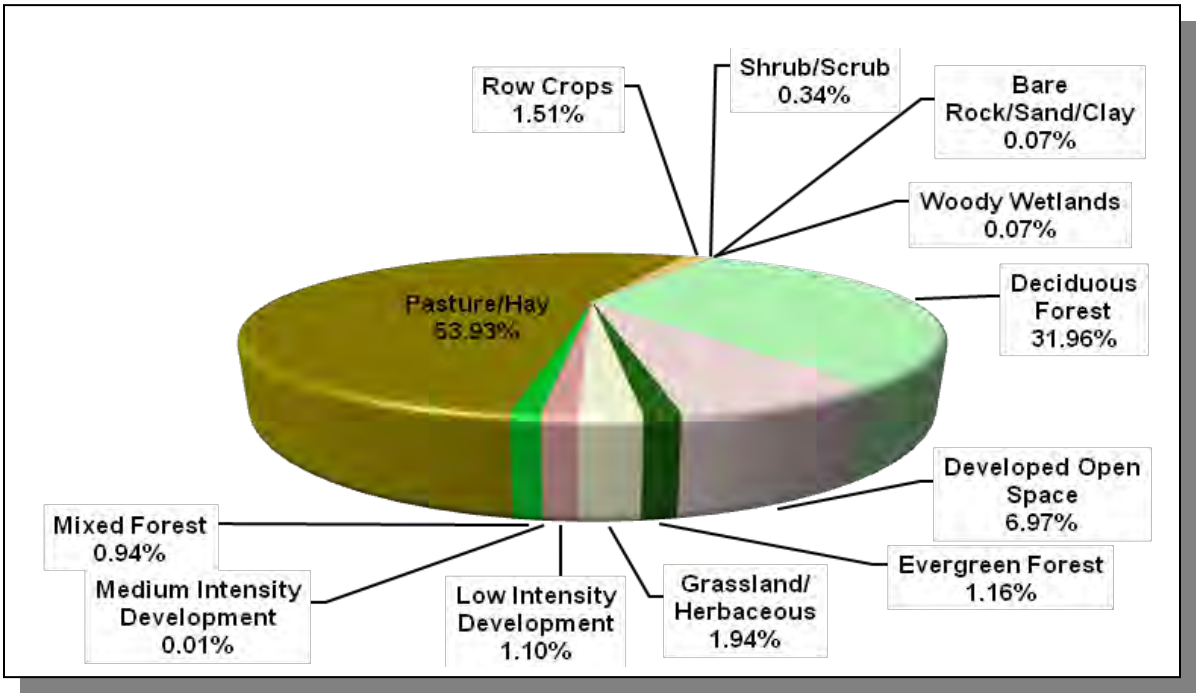


Figure 4-40. Land Use Distribution in Subwatershed 060101080204. *More information is provided in Appendix IV.*

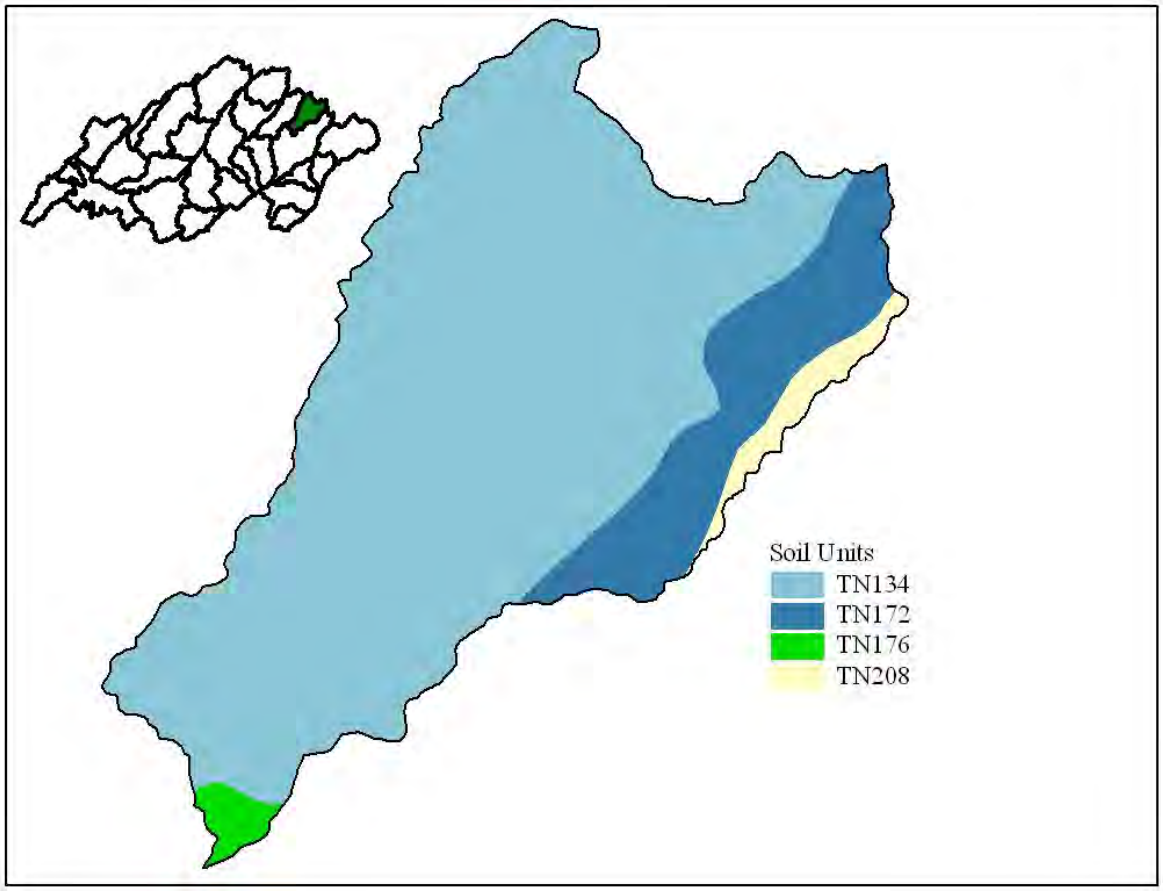


Figure 4-41. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080204.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN134	0.00	B	1.38	5.18	Loam	0.31
TN172	0.00	B	3.87	5.13	Loam	0.26
TN176	12.00	B	1.30	5.34	Loam	0.31
TN208	0.00	C	4.02	4.84	Loam	0.25

Table 4-23. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080204. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Washington	92,315	101,368	107,198	7.26	6,702	7,359	7,782	16.10

Table 4-24. Population Estimates in Subwatershed 060101080204.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Johnson City	Washington	49,178	21,214	19,213	2,001	0

Table 4-25. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 060101080204.

4.2.D.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080204.

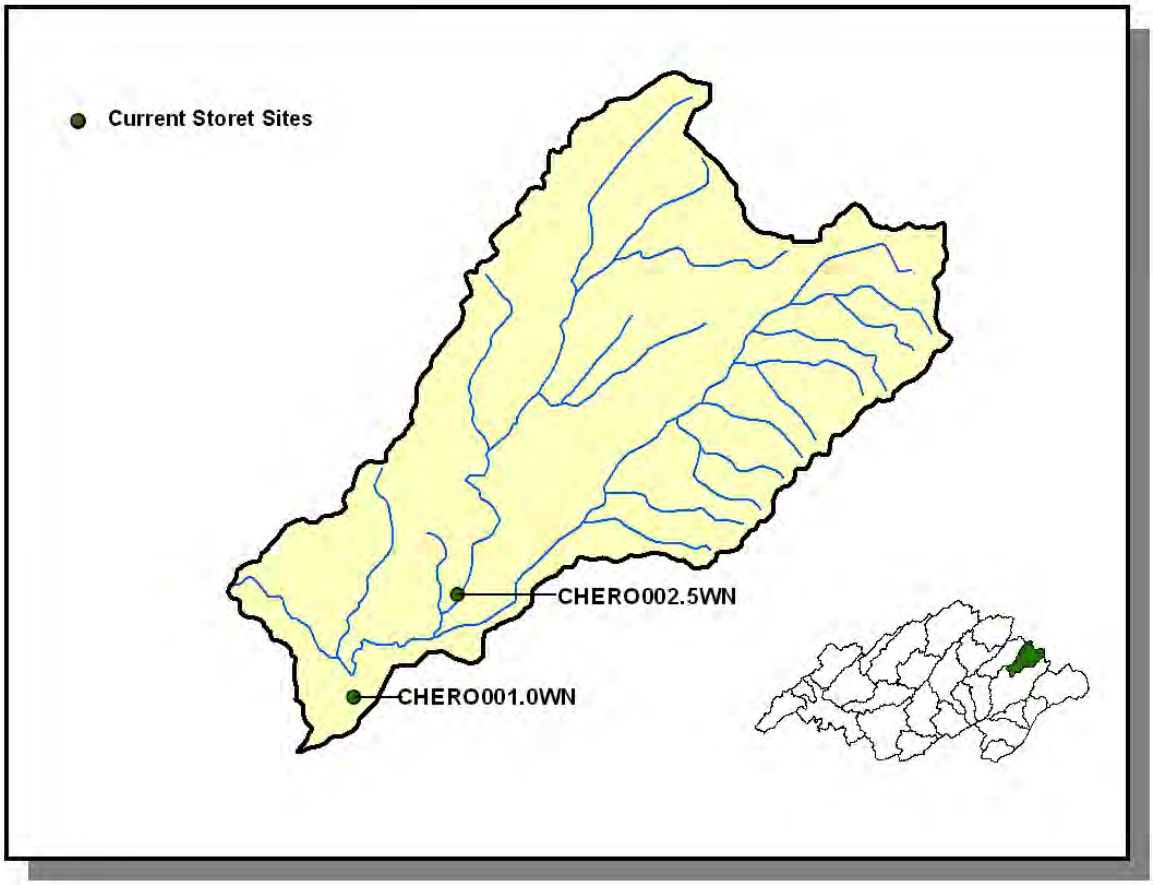


Figure 4-42. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080204. *More information, including site names and locations, is provided in Appendix IV.*

4.2.D.iii. Permitted Activities.

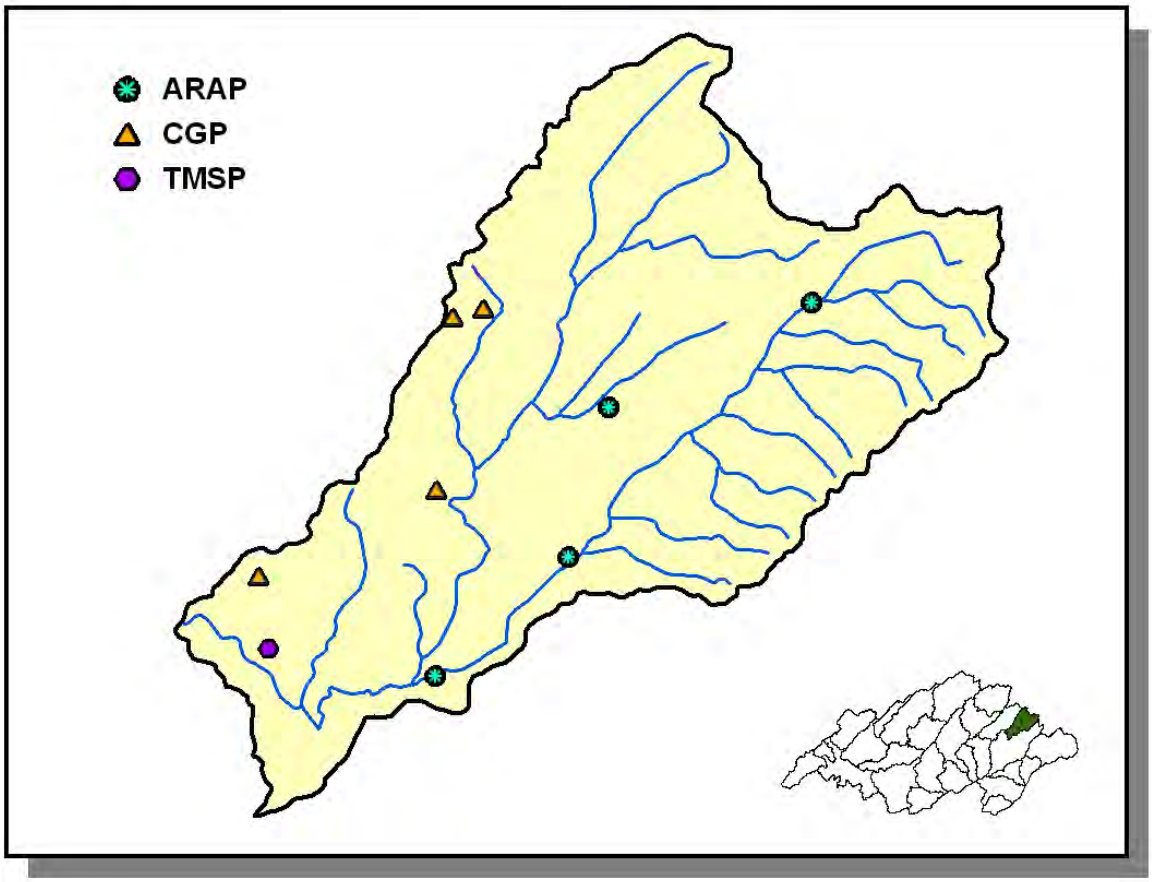


Figure 4-43. Location of Permits Issued in Subwatershed 060101080204. *More information, including the names of facilities, is provided in Appendix IV.*

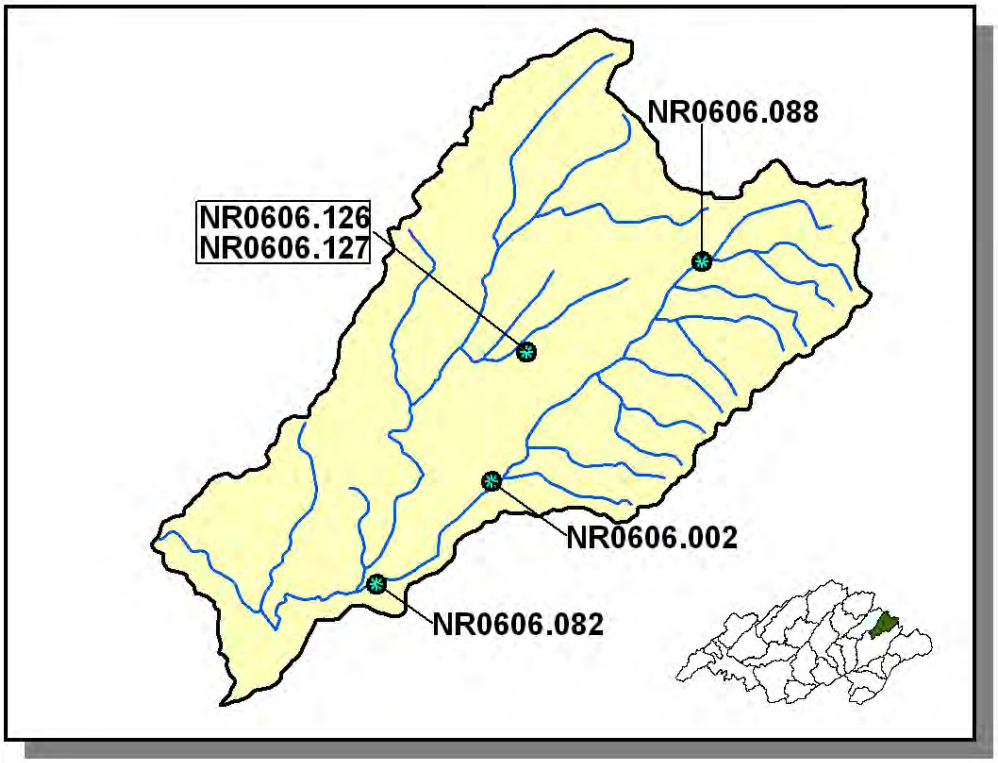


Figure 4-44. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080204. *More information is provided in Appendix IV.*

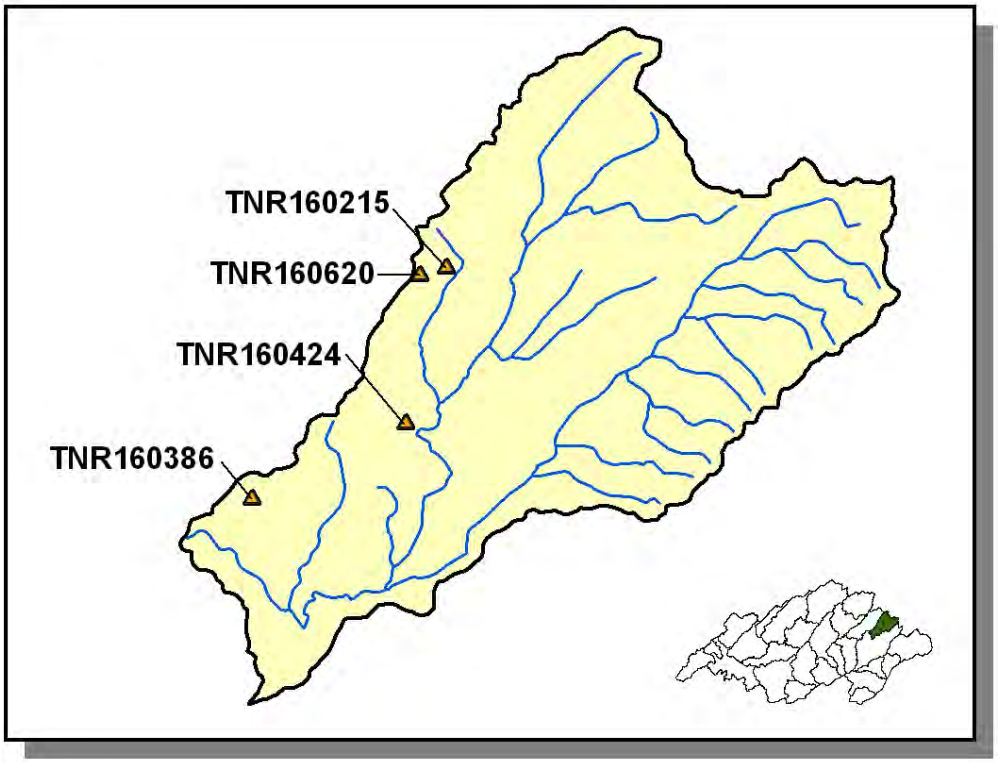


Figure 4-45. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080204. *More information is provided in Appendix IV.*

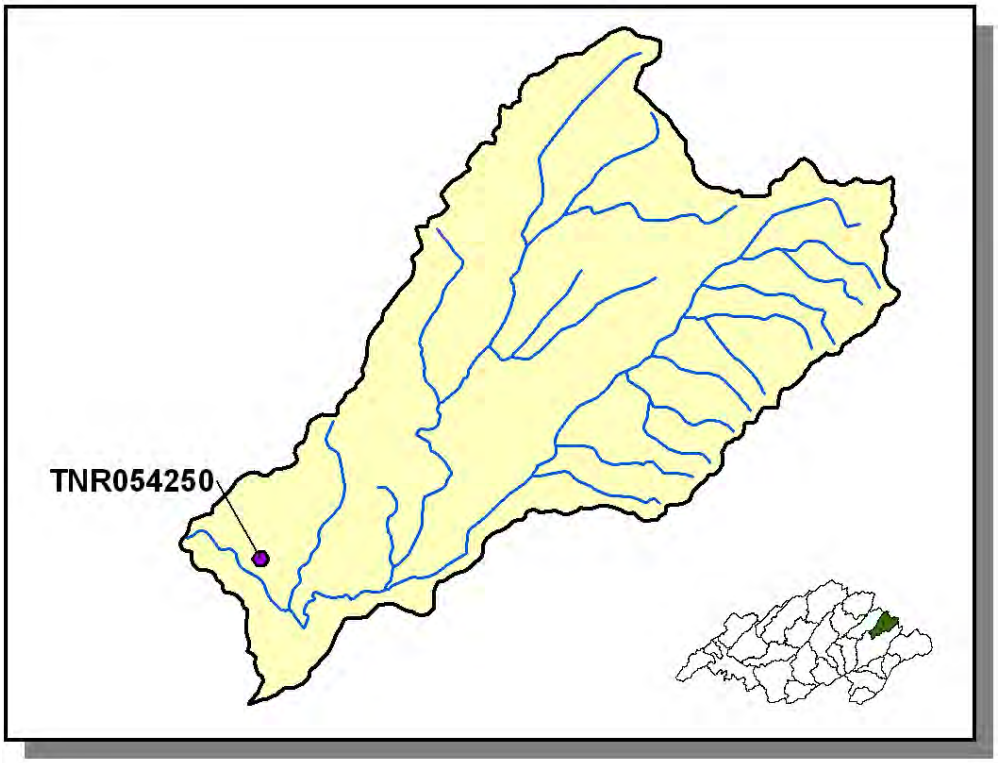


Figure 4-46. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080204. *More information is provided in Appendix IV.*

4.2.D.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Washington	23,073	53,186	5,190	38	262	353

Table 4-26. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	13.57
Tobacco (Row Crops)	6.69
Grass (Hayland)	0.62
Grass (Pastureland)	0.55
Grass Forbs Legumes Mixed (Pastureland)	0.41
Farmsteads and Ranch Headquarters	0.22
Legume Grass (Hayland)	0.20

Table 4-27. Annual Estimated Total Soil Loss in Subwatershed 060101080204.

4.2.E. 060101080205 (Nolichucky River).

4.2.E.i. General Description.

Figure 4-47. Location of Subwatershed 060101080205. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

Figure 4-48. Locational Details of Subwatershed 060101080205.

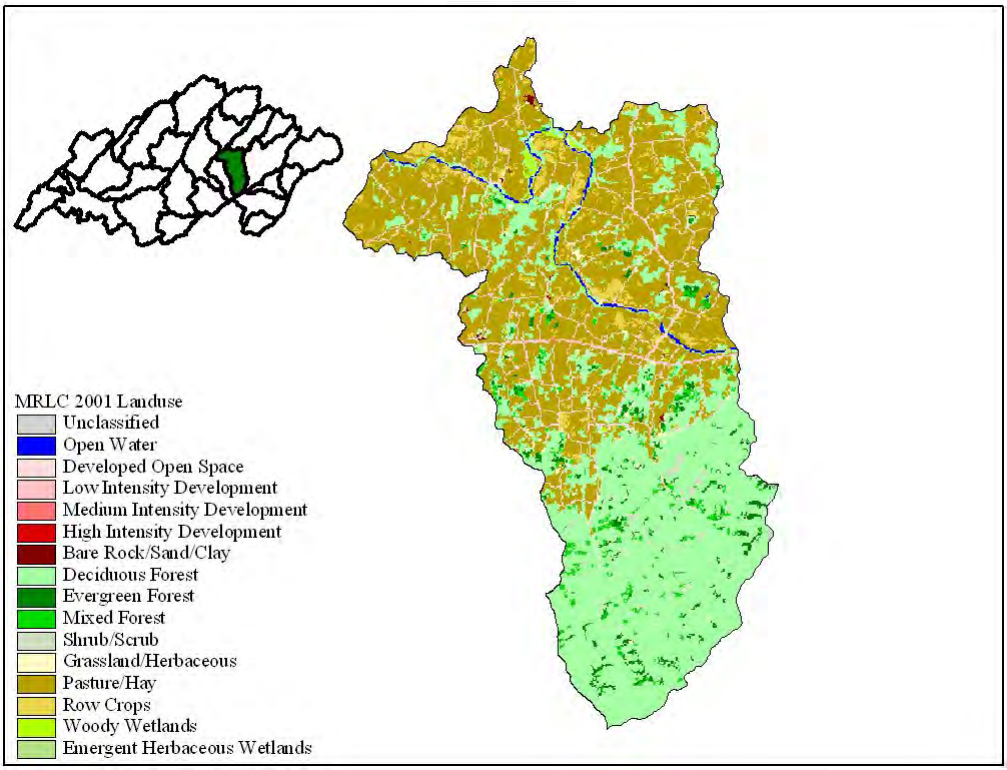


Figure 4-49. Illustration of Land Use Distribution in Subwatershed 060101080205.

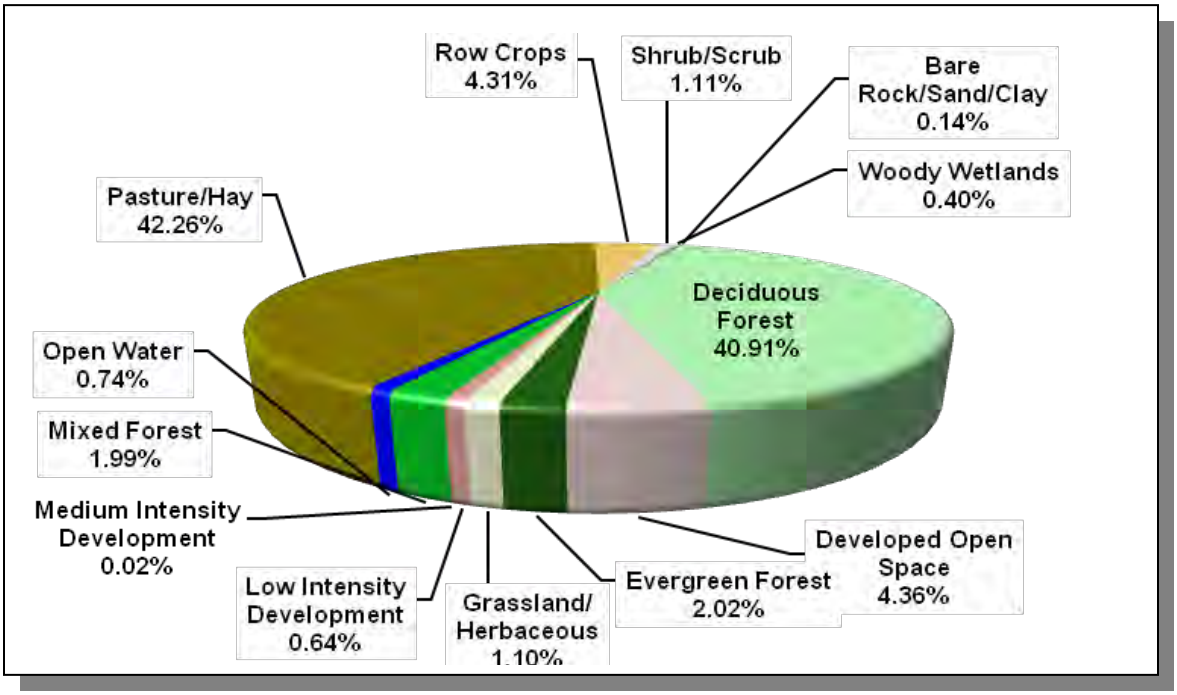


Figure 4-50. Land Use Distribution in Subwatershed 060101080205. *More information is provided in Appendix IV.*

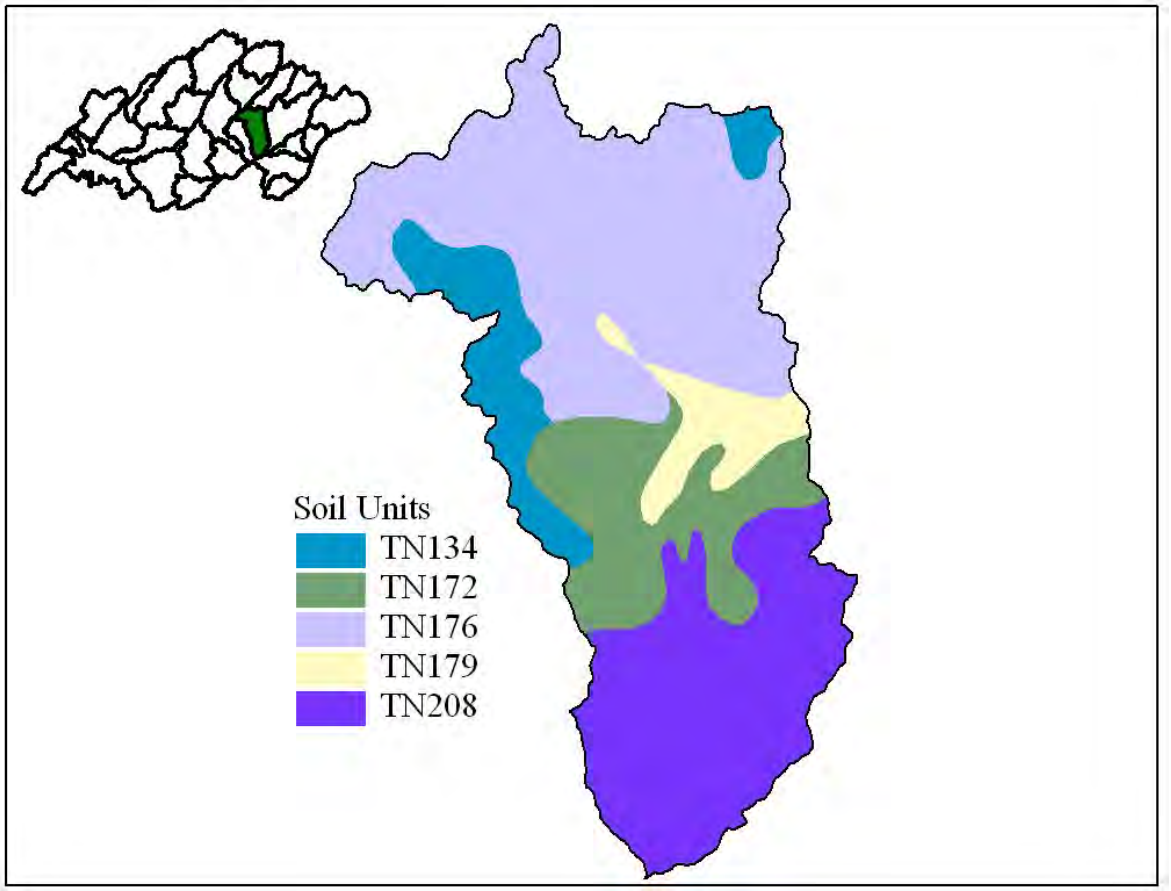


Figure 4-51. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080205.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN134	0.00	B	1.38	5.18	Loam	0.31
TN172	0.00	B	3.87	5.13	Loam	0.26
TN176	12.00	B	1.30	5.34	Loam	0.31
TN179	0.00	B	3.90	5.62	Sandy Loam	0.25
TN208	0.00	C	4.02	4.84	Loam	0.25

Table 4-28. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080205. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Greene	55,853	59,369	62,909	1.11	619	658	697	12.60
Unicoi	16,549	17,221	17,667	0.63	104	109	111	6.70
Washington	92,315	101,368	107,198	7.71	7,113	7,811	8,260	16.10
Totals	**164,717**	**177,958**	**187,774**		**7,836**	**8,578**	**9,068**	**15.70**

Table 4-29. Population Estimates in Subwatershed 060101080205.

4.2.E.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080205.

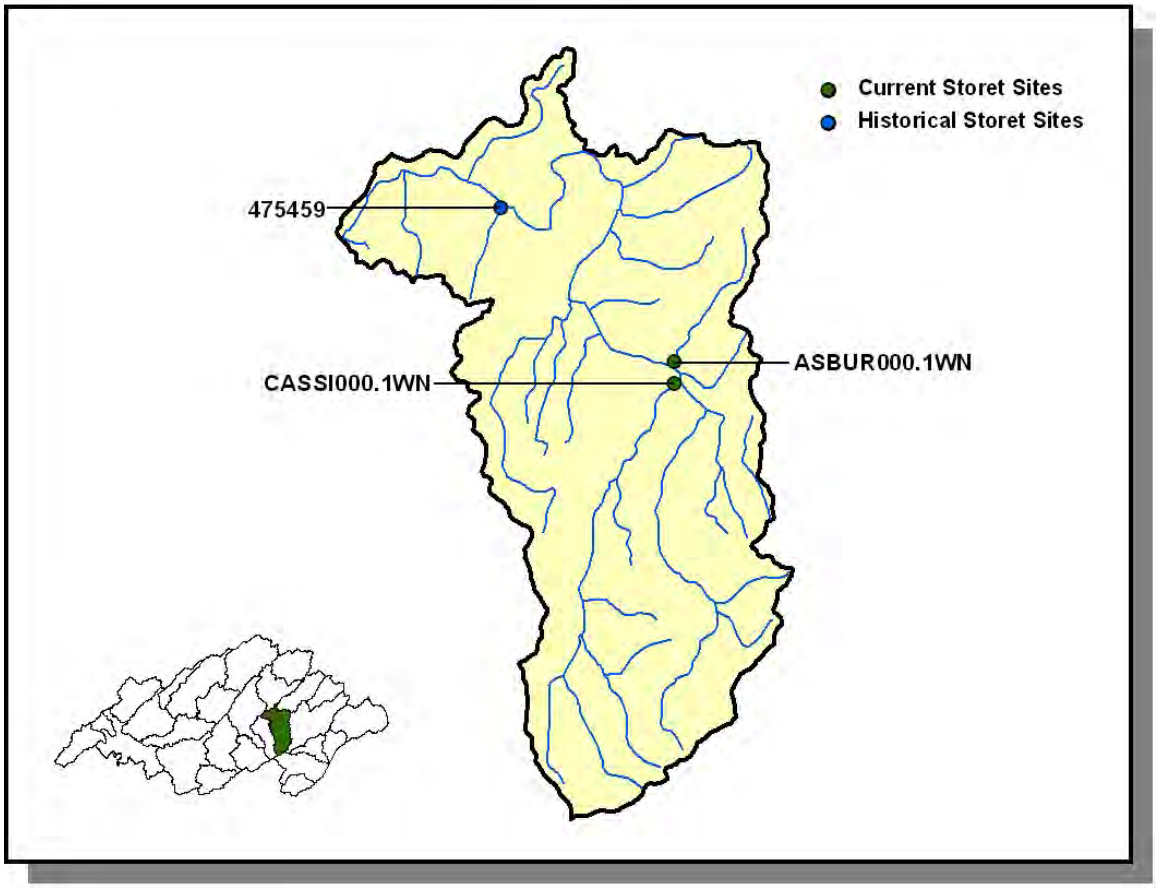


Figure 4-52. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080205. *More information, including site names and locations, is provided in Appendix IV.*

4.2.E.iii. Permitted Activities.

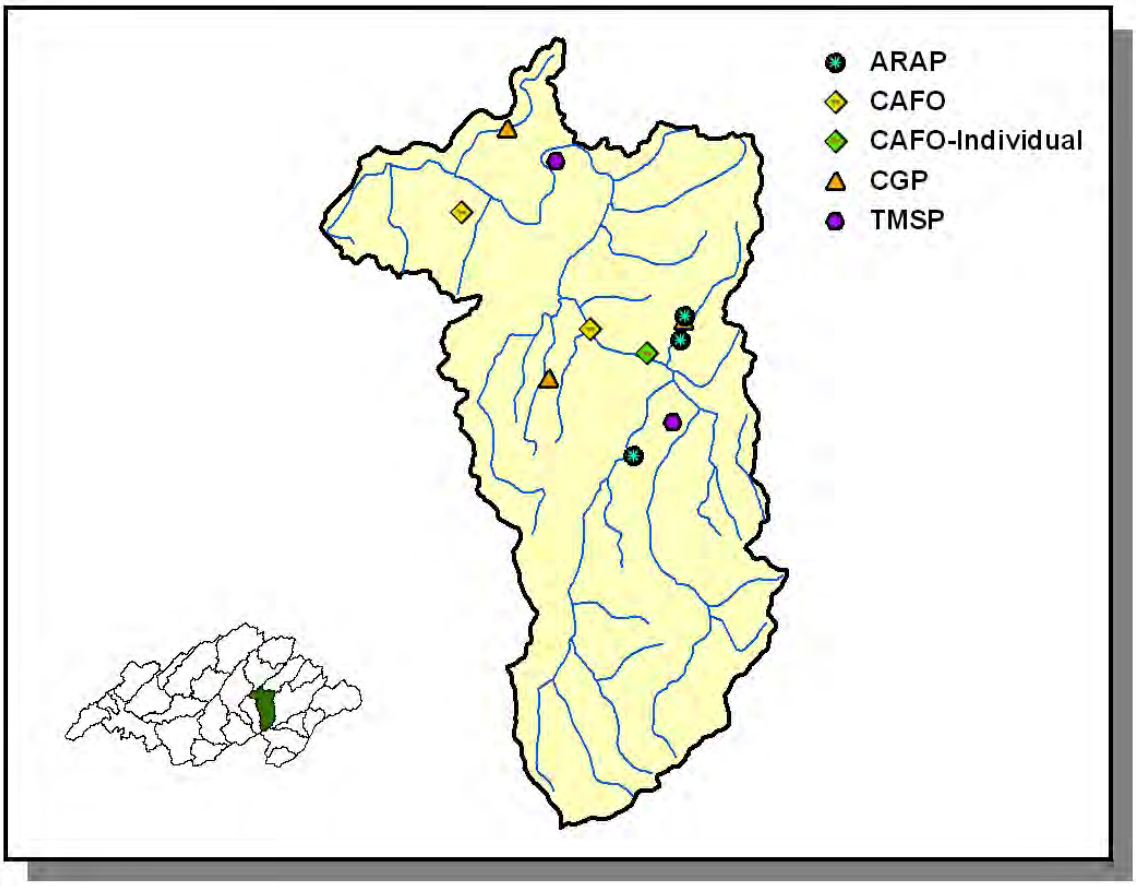


Figure 4-53. Location of Permits Issued in Subwatershed 060101080205. *More information, including the names of facilities, is provided in Appendix IV.*

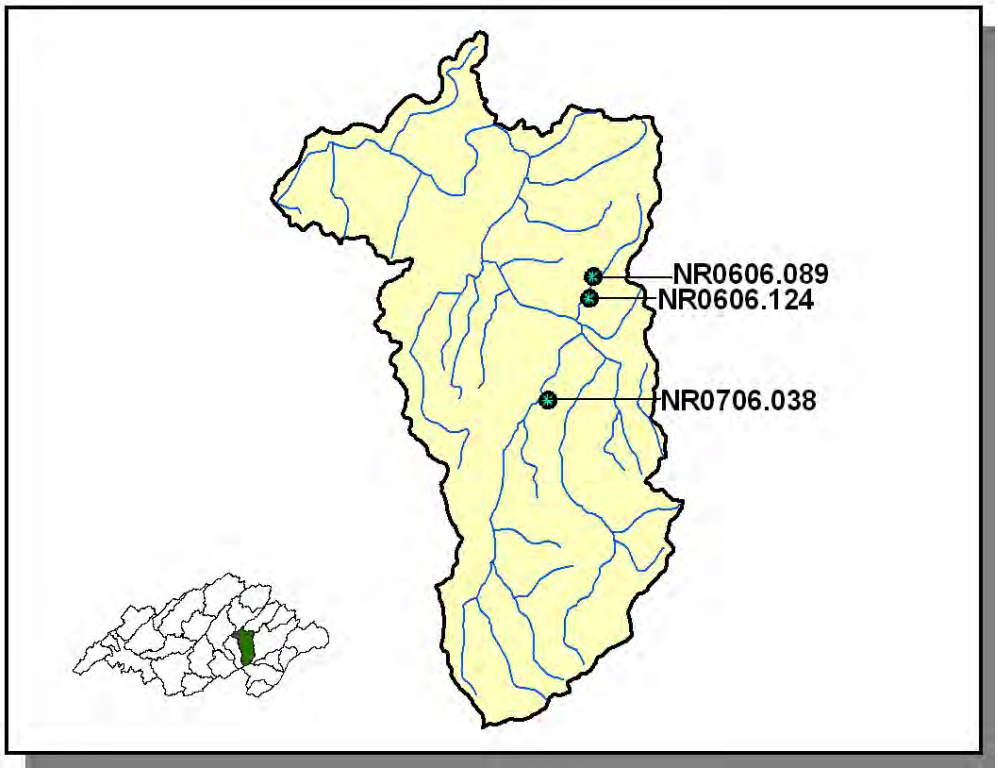


Figure 4-54. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080205. *More information is provided in Appendix IV.*

Figure 4-55. Location of CAFO (Concentrated Animal Feel Operation) Permit Sites in Subwatershed 060101080205. *More information, including the names of facilities, is provided in Appendix IV.*

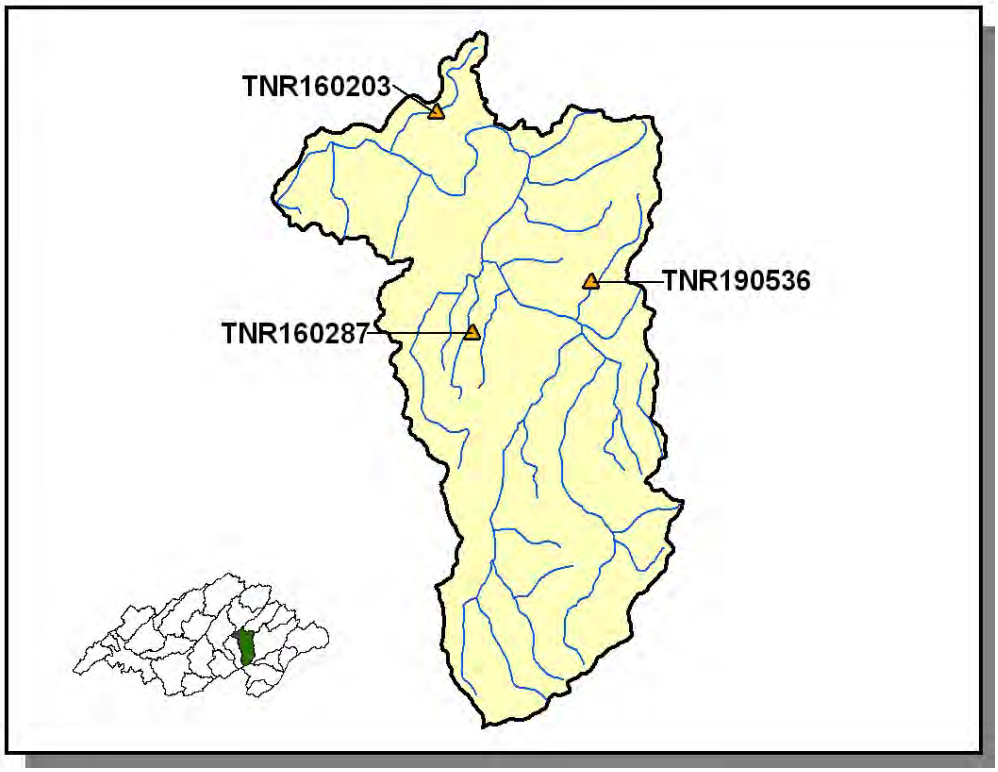


Figure 4-56. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080205. *More information is provided in Appendix IV.*

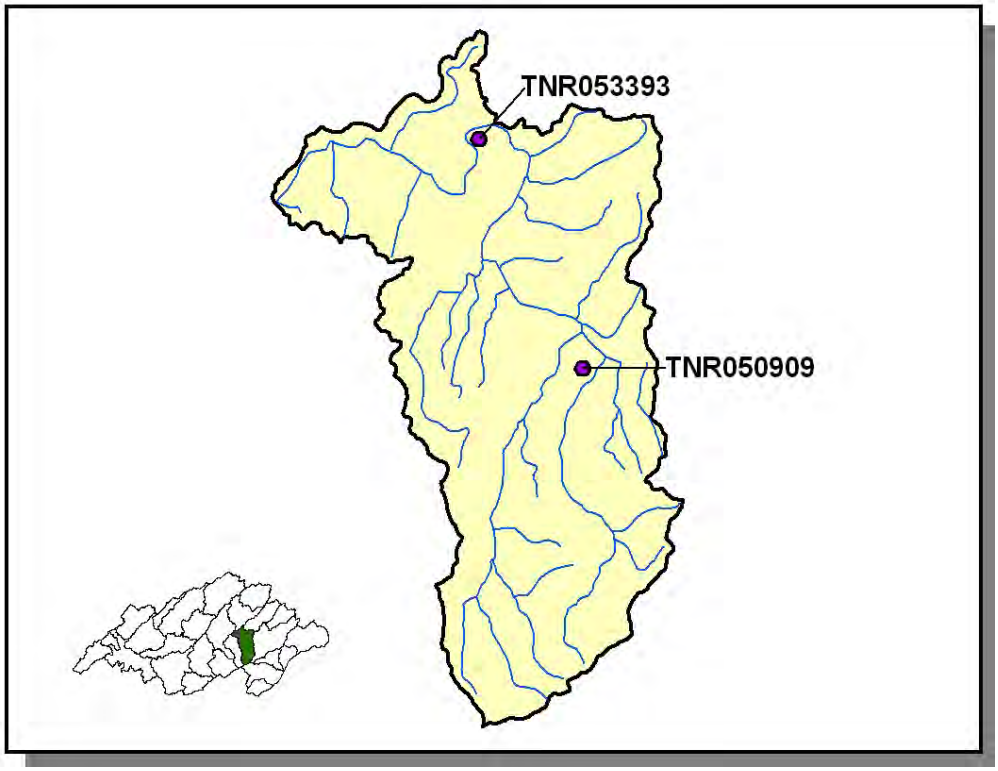


Figure 4-57. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080205. *More information is provided in Appendix IV.*

4.2.E.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Greene	33,962	72,582	7,282	1,190	495	226
Unicoi	657	1,410	9	6	66	
Washington	23,073	53,186	5,190	38	262	353

Table 4-30. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Greene	180.0	171.8	2.0	10.5
Unicoi	99.3	89.4	3.1	8.5

Table 4-31. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	14.25
Tobacco (Row Crops)	8.55
Other Vegetable and Truck Crop	4.16
Grass (Hayland)	0.52
Farmsteads and Ranch Headquarters	0.51
Grass (Pastureland)	0.50
Grass Forbs Legumes Mixed (Pastureland)	0.41
Legume Grass (Hayland)	0.23

Table 4-32. Annual Estimated Total Soil Loss in Subwatershed 060101080205.

4.2.F. 060101080206 (Little Limestone).

4.2.F.i. General Description.

Figure 4-58. Location of Subwatershed 060101080206. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

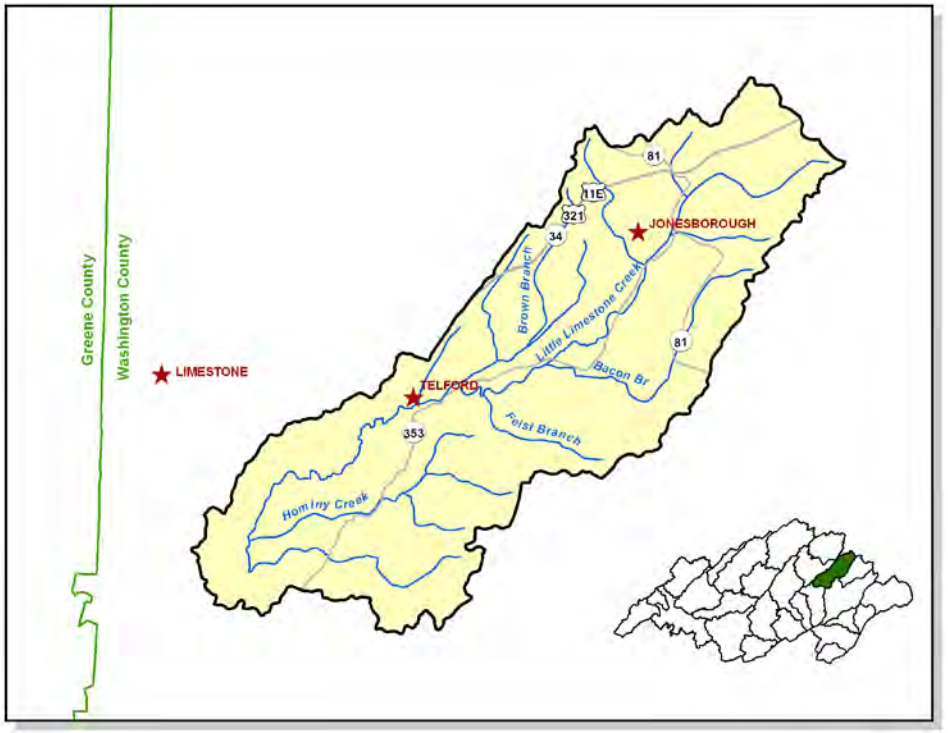


Figure 4-59. Locational Details of Subwatershed 060101080206.

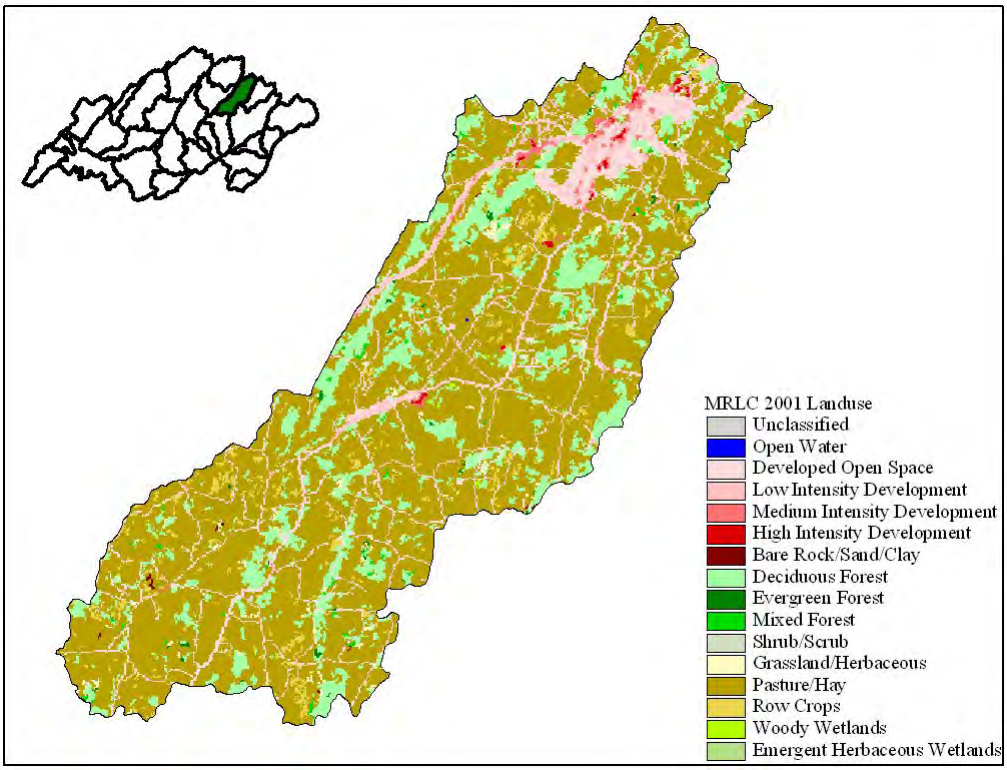


Figure 4-60. Illustration of Land Use Distribution in Subwatershed 060101080206.

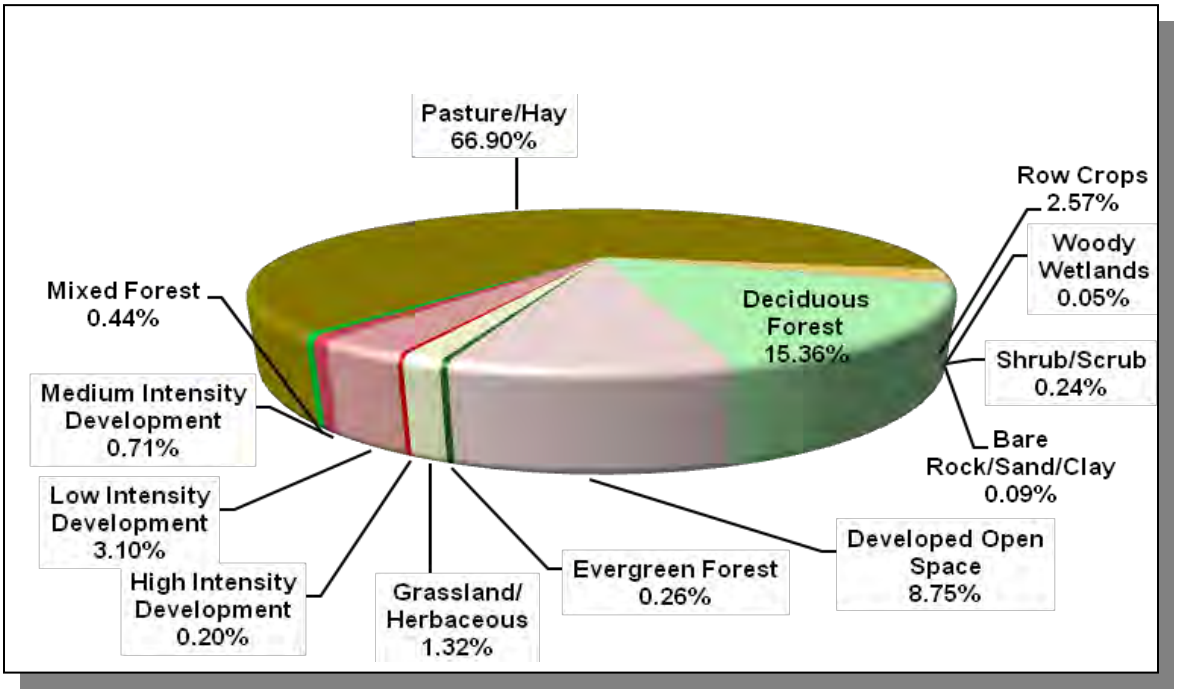


Figure 4-61. Land Use Distribution in Subwatershed 060101080206. *More information is provided in Appendix IV.*

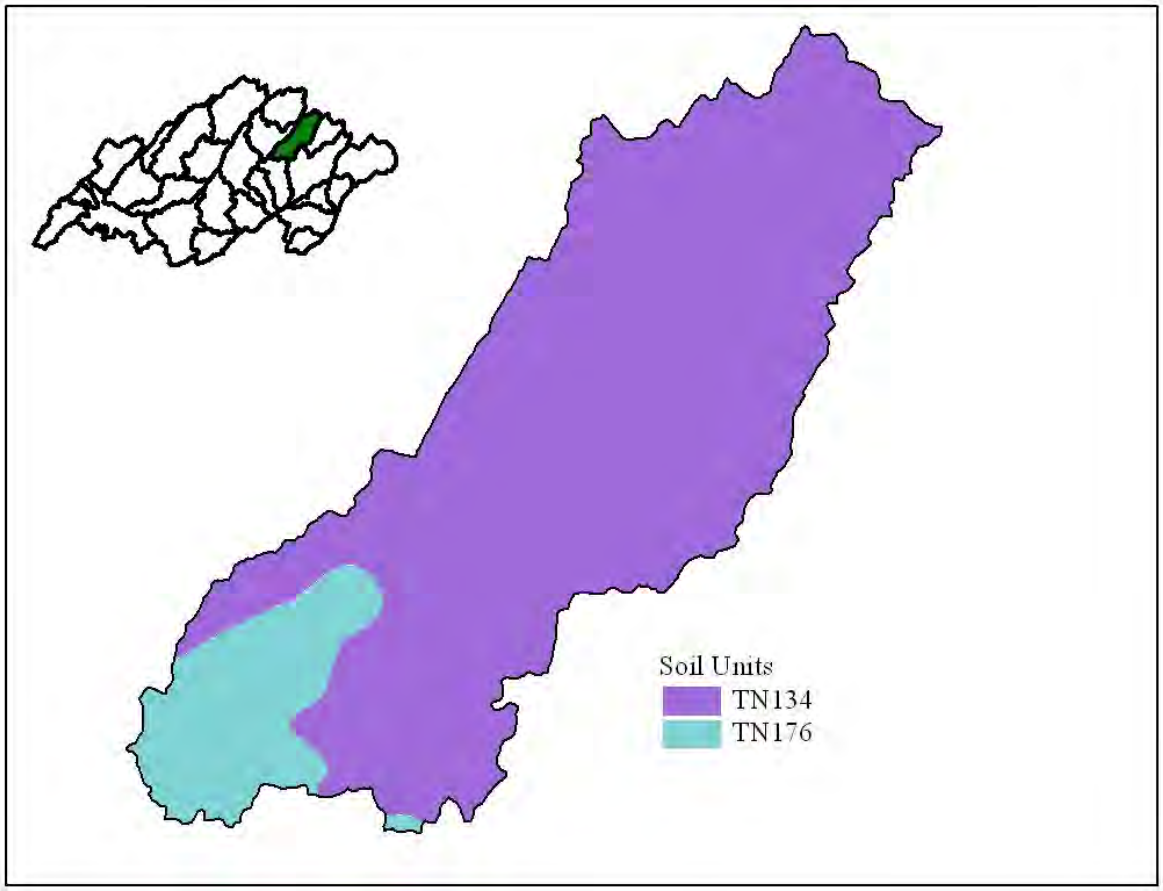


Figure 4-62. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080206.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN134	0.00	B	1.38	5.18	Loam	0.31
TN176	12.00	B	1.30	5.34	Loam	0.31

Table 4-33. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080206. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Washington	92,315	101,368	107,198	10	9,233	10,139	10,722	16.1

Table 4-34. Population Estimates in Subwatershed 060101080206.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Jonesborough	Washington	3,196	1,232	1,098	134	0

Table 4-35. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 060101080206.

4.2.F.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080206.

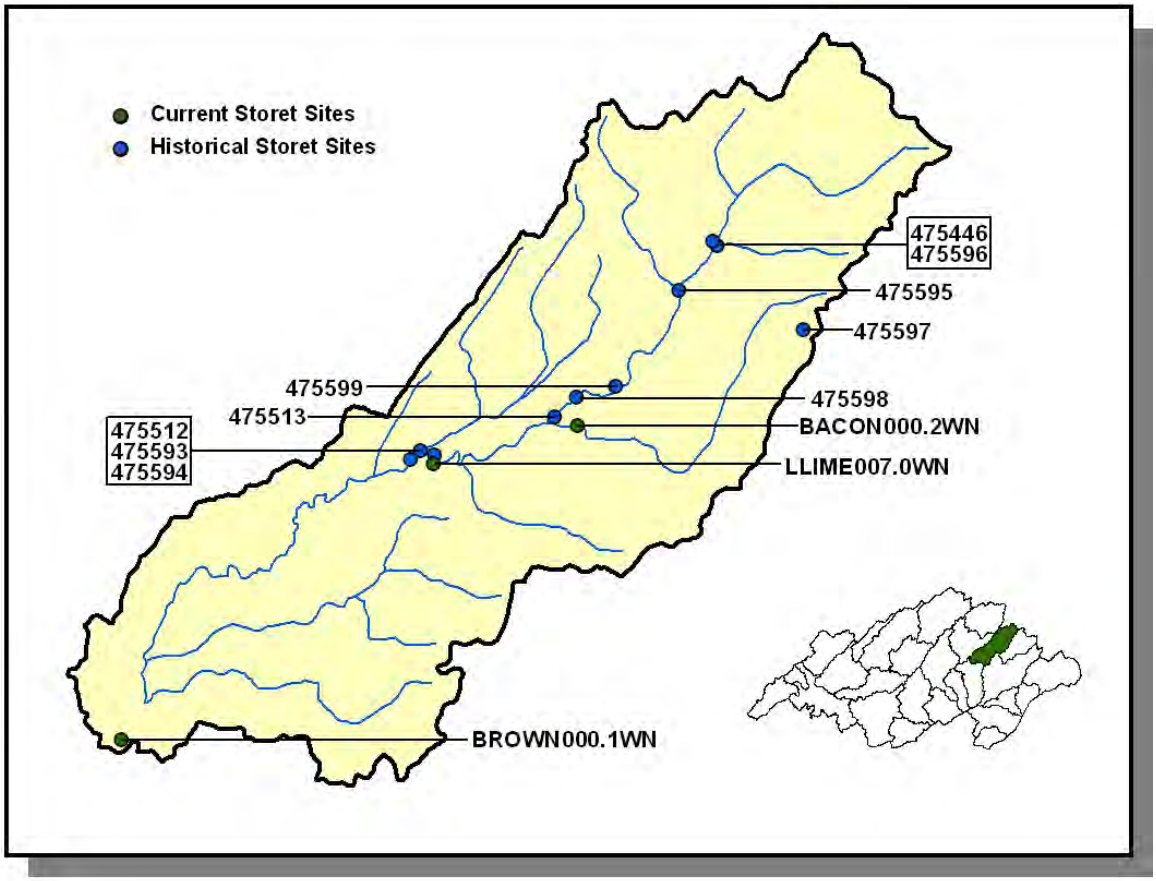


Figure 4-63. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080206. *More information, including site names and locations, is provided in Appendix IV.*

4.2.F.iii. Permitted Activities.

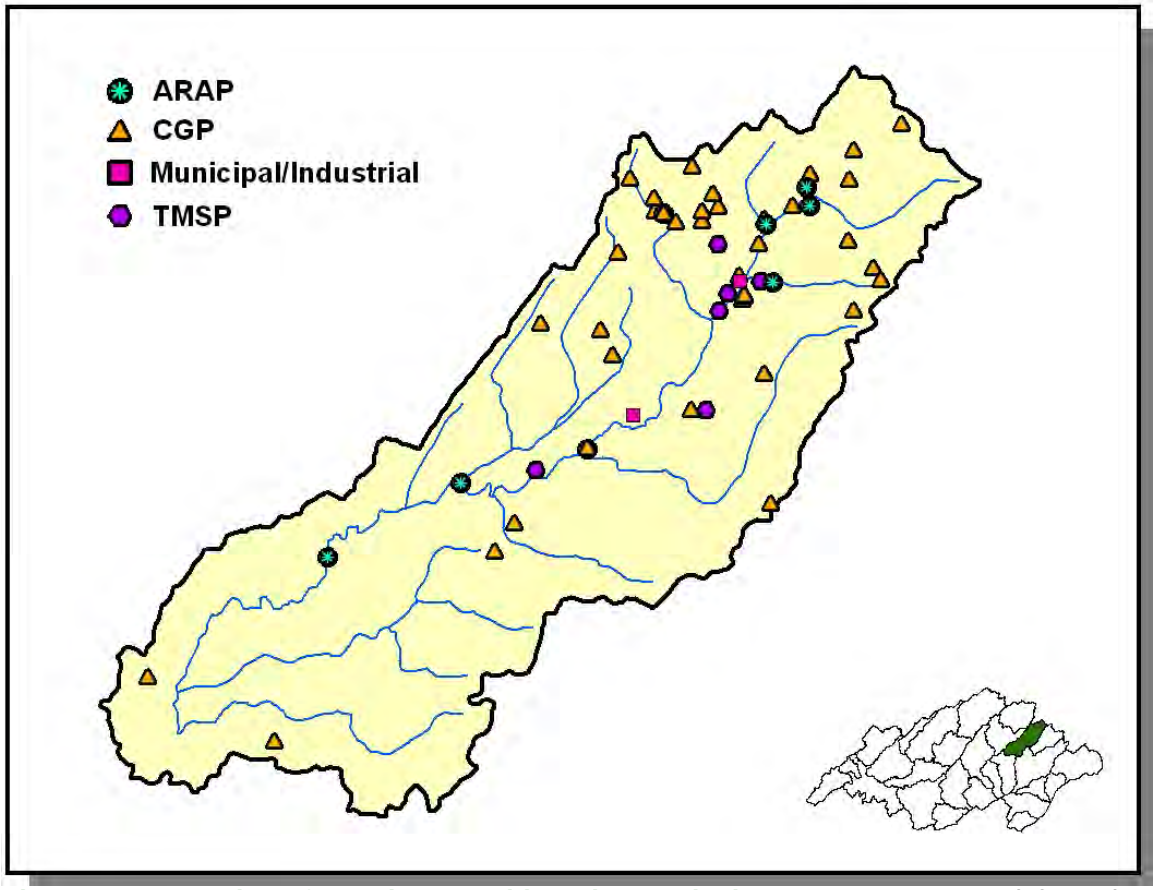


Figure 4-64. Location of Permits Issued in Subwatershed 060101080206. *More information, including the names of facilities, is provided in Appendix IV.*

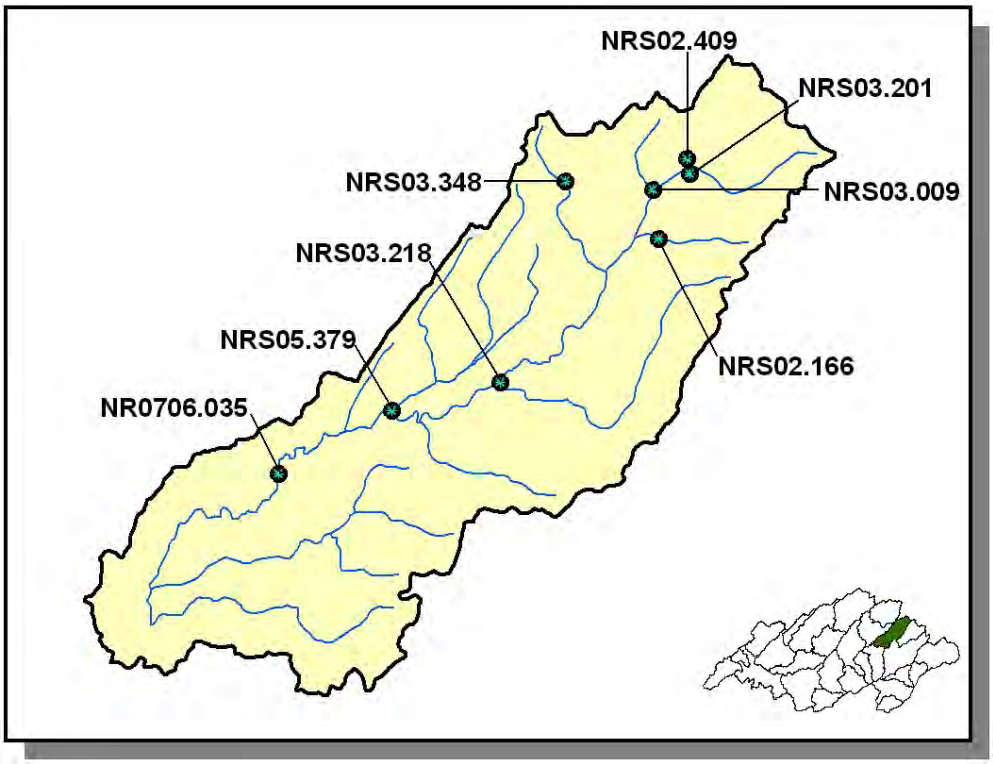


Figure 4-65. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080206. *More information is provided in Appendix IV.*

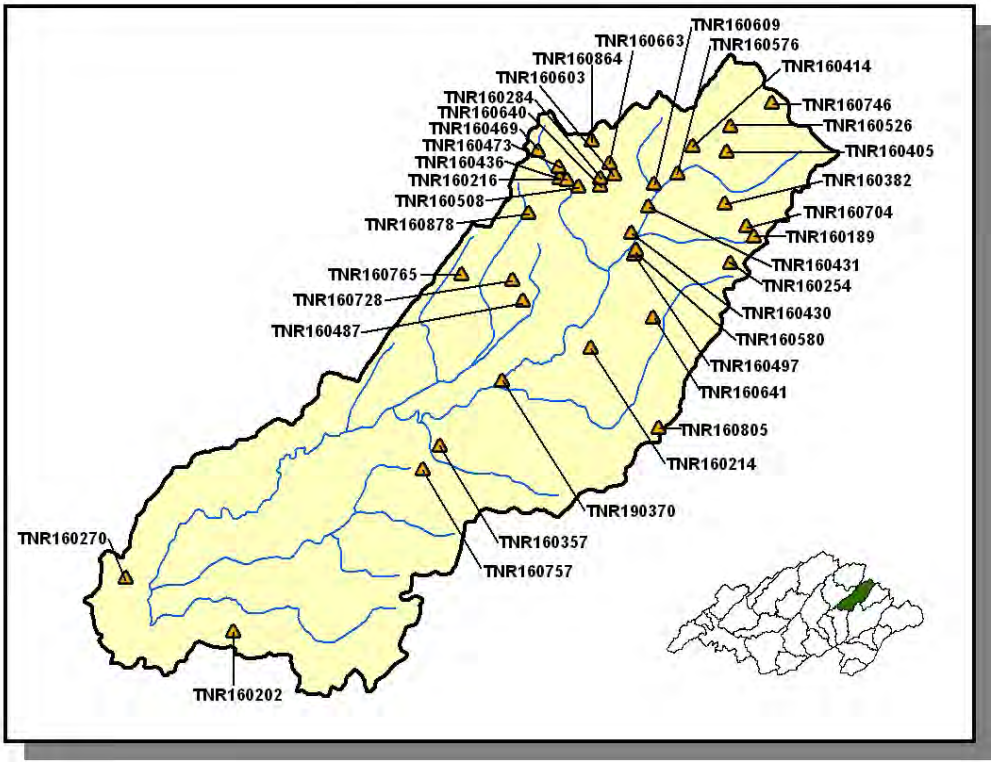


Figure 4-66. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080206. *More information is provided in Appendix IV.*

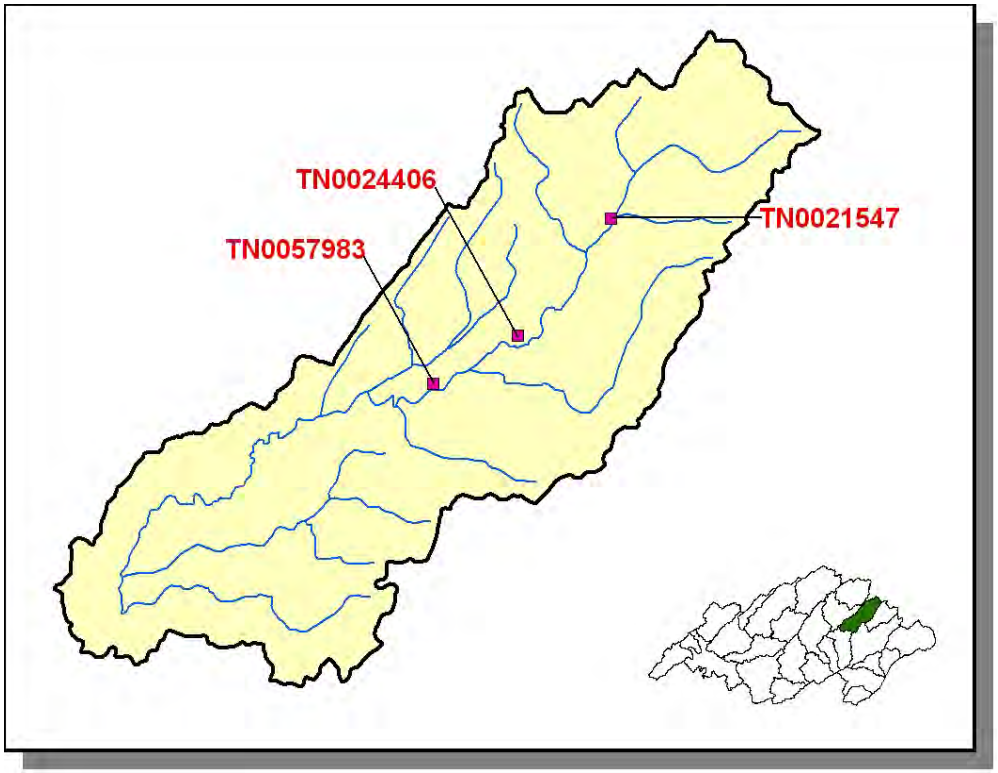


Figure 4-67. Location of Permitted Municipal and Industrial Facilities in Subwatershed 060101080206. *Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the names of facilities, is provided in Appendix IV.*

PERMIT #	1Q10	7Q10	30Q5	DISCHARGE FLOW
TN0021547		0.73		0.5000
TN0024406		1.13		0.0390
TN0057983	0.69	1.52	2.014	0.0096

Table 4-36. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080206. *Data are in million gallons per day (MGD).Data were obtained from permit files.*

PERMIT #	Cd	Cr	Cu	U	Pb	Mo	Ni
TN0057983	X	X	X	X	X	X	X

Table 4-37. Metal Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080206.

PERMIT #	OIL AND GREASE	AMMONIA AS N TOTAL	CYANIDE TOTAL (CN-)	BOD_5	$CBOD_5$	CBOD % REMOVAL	PHOSPHORUS TOTAL
TN0021547		X	X		X	X	X
TN0024406				X			
TN0057983	X	X		X			

Table 4-38. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080206. *BOD_5, Biochemical Oxygen Demand (5-Day); $CBOD_5$, Carbonaceous Biochemical Oxygen Demand (5-Day).*

PERMIT #	WET	FLOW	DO	TSS	TSS % REMOVAL	SS	TRC	F	pH	TEMPERATURE
TN0021547	X	X	X	X	X	X	X		X	
TN0024406		X	X	X		X	X		X	
TN0057983	X	X	X	X		X	X	X	X	X

Table 4-39. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080206. *DO, Dissolved Oxygen; TSS, Total Suspended Solids; SS, Settleable Solids; TRC, Total Residual Chlorine.*

PERMIT #	E. *coli*	FECAL COLLIFORM
TN0021547	X	
TN0024406	X	
TN0057983		X

Table 4-40. Pathogen Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080206.

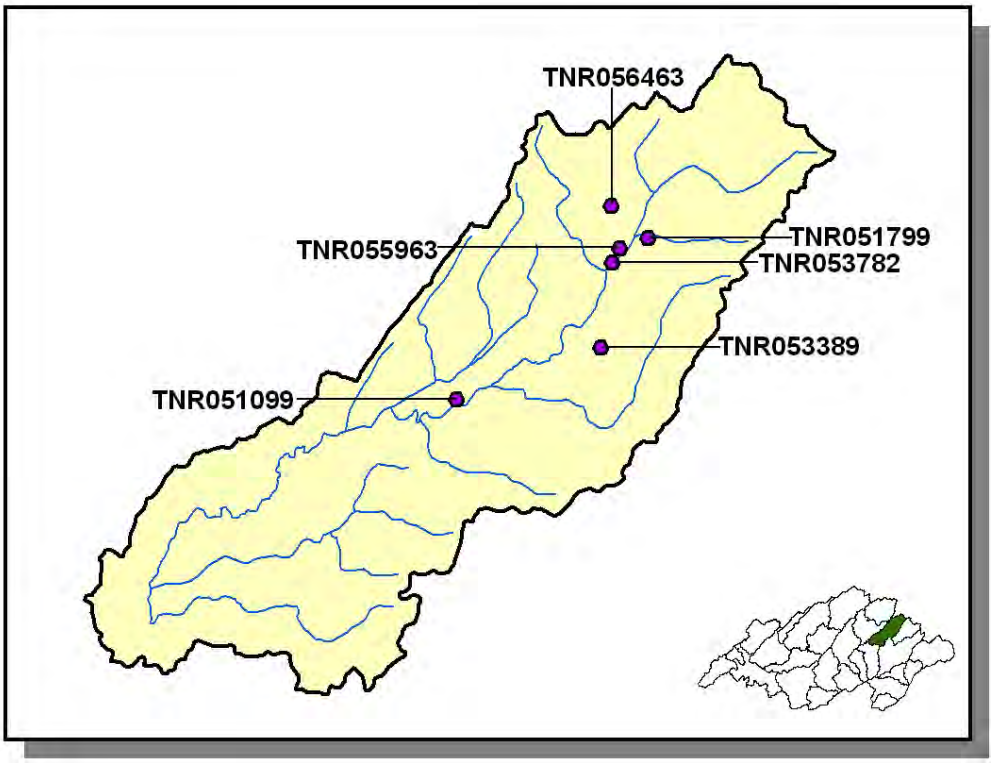


Figure 4-68. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080206. *More information is provided in Appendix IV.*

4.2.F.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Washington	23,073	53,186	5,190	38	262	353

Table 4-41. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	13.57
Tobacco (Row Crops)	6.69
Grass (Hayland)	0.62
Grass (Pastureland)	0.55
Grass Forbs Legumes Mixed (Pastureland)	0.41
Farmsteads and Ranch Headquarters	0.22
Legume Grass (Hayland)	0.20

Table 4-42. Annual Estimated Total Soil Loss in Subwatershed 060101080206.

4.2.G. 060101080301 (South Indian Creek, Upper).

4.2.G.i. General Description.

Figure 4-69. Location of Subwatershed 060101080301. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

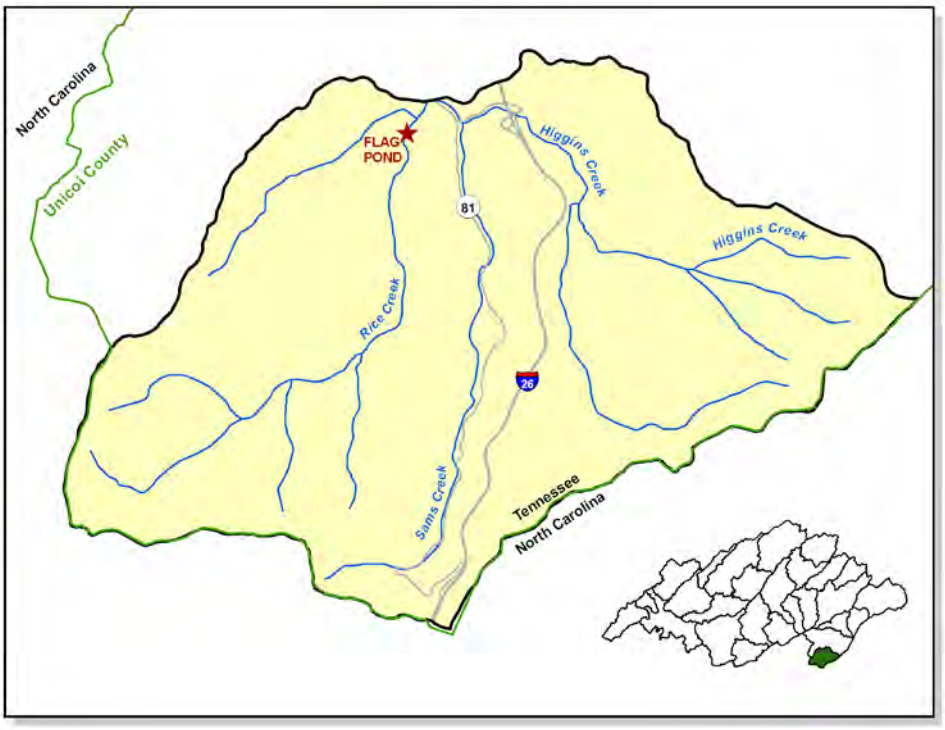


Figure 4-70. Locational Details of Subwatershed 060101080301.

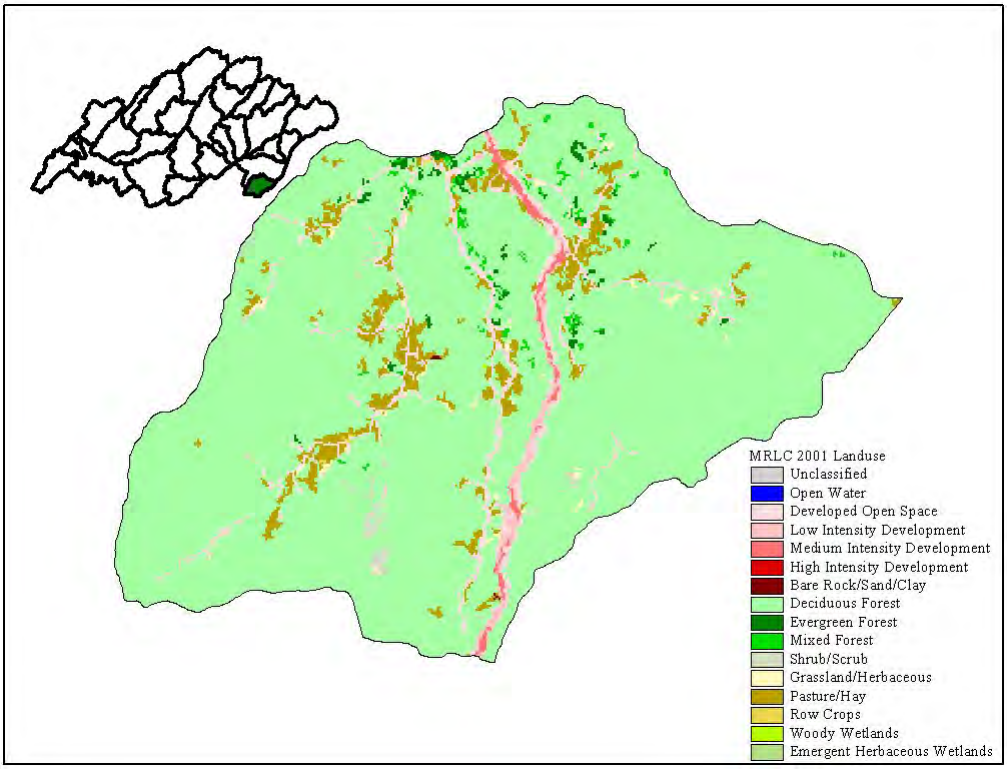


Figure 4-71. Illustration of Land Use Distribution in Subwatershed 060101080301.

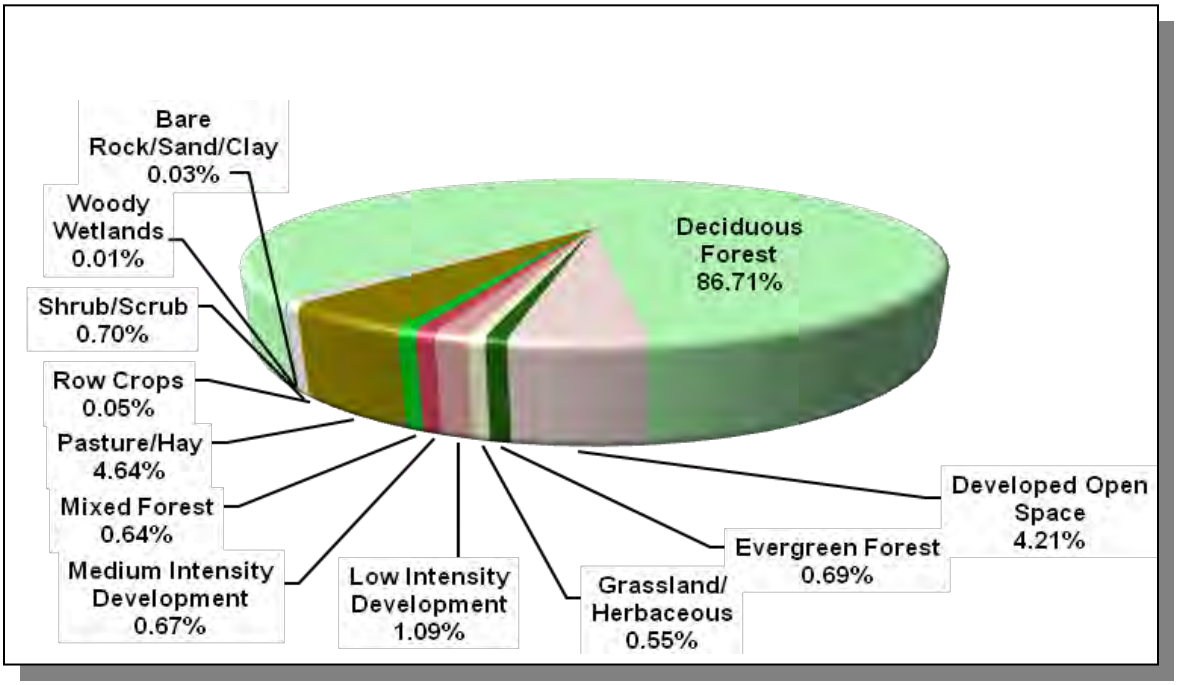


Figure 4-72. Land Use Distribution in Subwatershed 060101080301. *More information is provided in Appendix IV.*

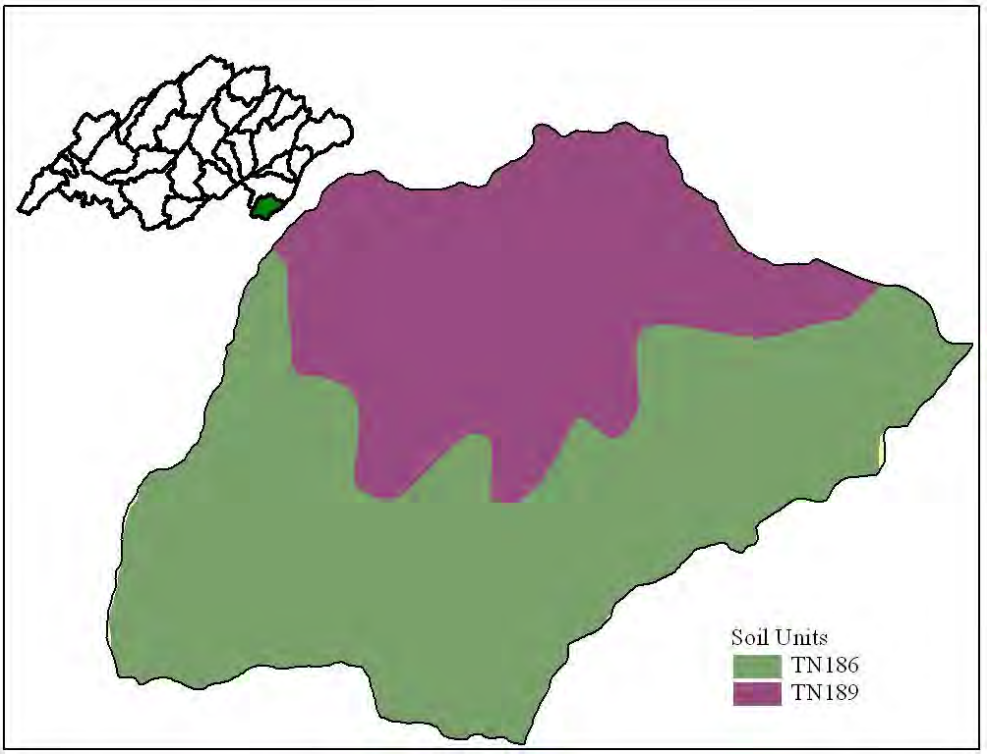


Figure 4-73. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080301.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN186	0.00	B	3.96	5.33	Loam	0.24
TN189	0.00	B	3.99	5.05	Loam	0.24

Table 4-43. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080301. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Unicoi	16,549	17,221	17,667	8.41	1,393	1,449	1,487	6.7

Table 4-44. Population Estimates in Subwatershed 060101080301.

4.2.G.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080301.

4.2.G.iii. Permitted Activities.

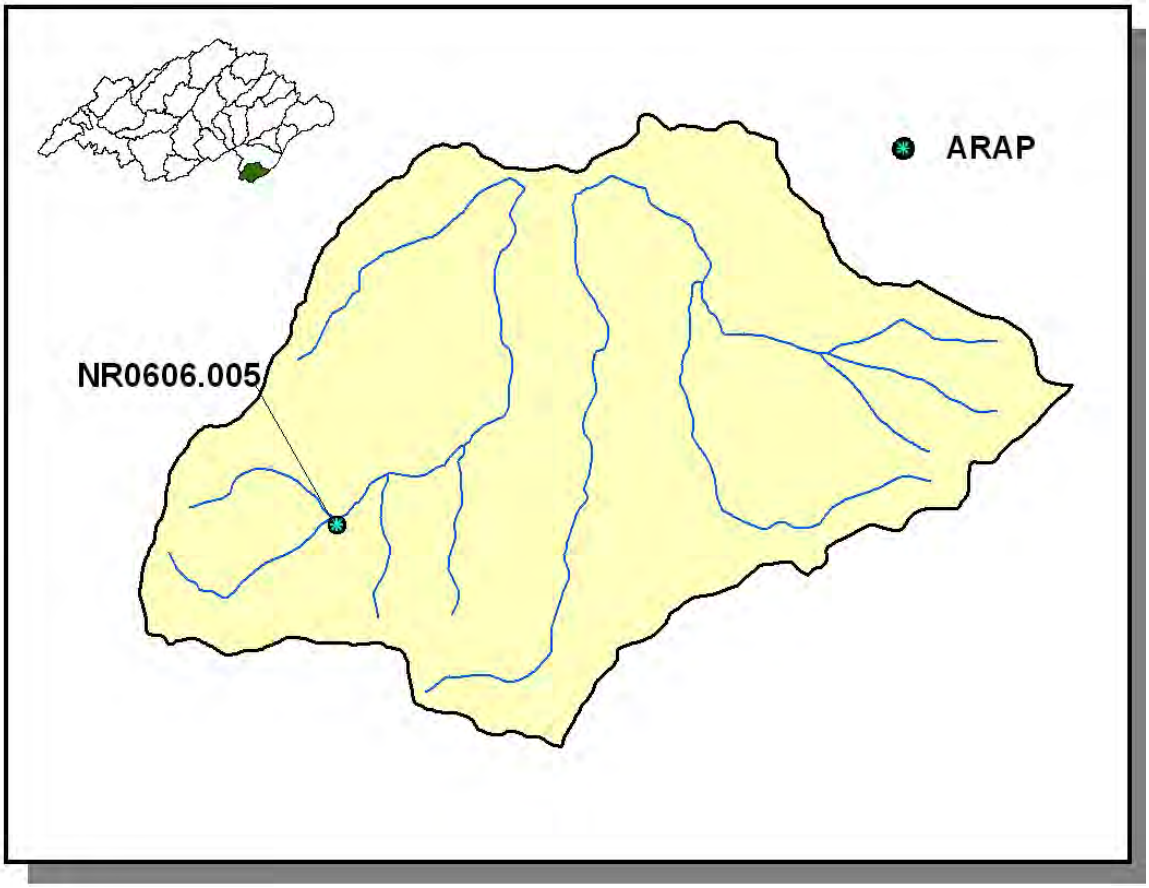


Figure 4-74. Location of Permits Issued in Subwatershed 060101080301. *More information, including the names of facilities, is provided in Appendix IV.*

4.2.G.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Unicoi	657	1410	9	6	66	

Table 4-45. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Unicoi	99.3	89.4	3.1	8.5

Table 4-46. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	8.51
Tobacco (Row Crops)	4.46
Grass (Pastureland)	0.61
Grass Forbs Legumes Mixed (Pastureland)	0.58
Legume (Hayland)	0.06
Farmsteads and Ranch Headquarters	0.03
Corn (Row Crops)	8.51
Other Vegetable and Truck Crop	6.10

Table 4-47. Annual Estimated Total Soil Loss in Subwatershed 060101080301.

4.2.H. 060101080302 (South Indian Creek, Middle).

4.2.H.i. General Description.

Figure 4-75. Location of Subwatershed 060101080302. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

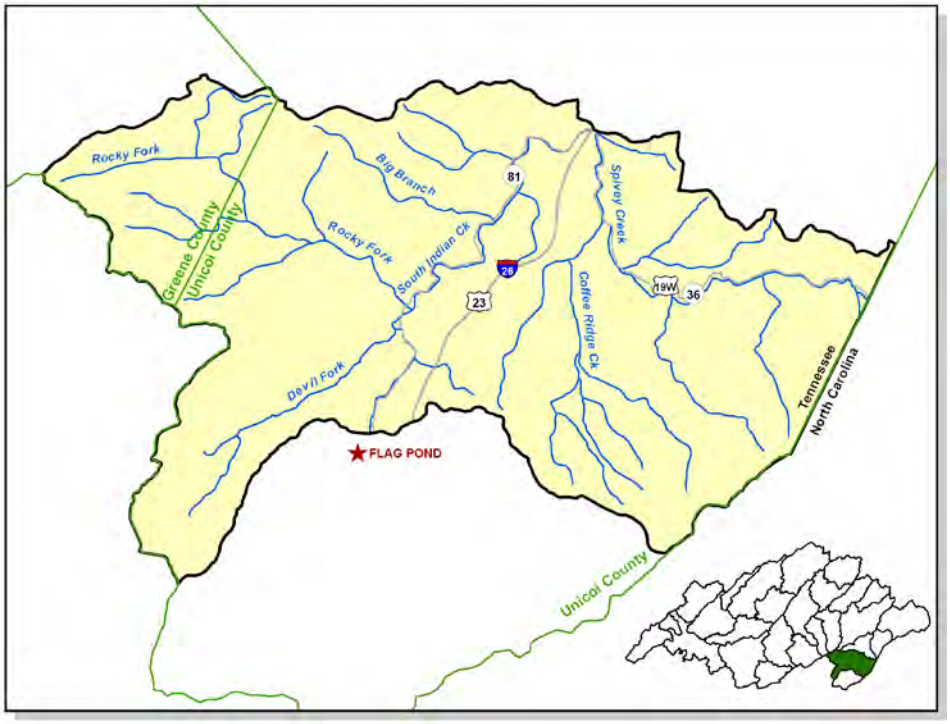


Figure 4-76. Locational Details of Subwatershed 060101080302.

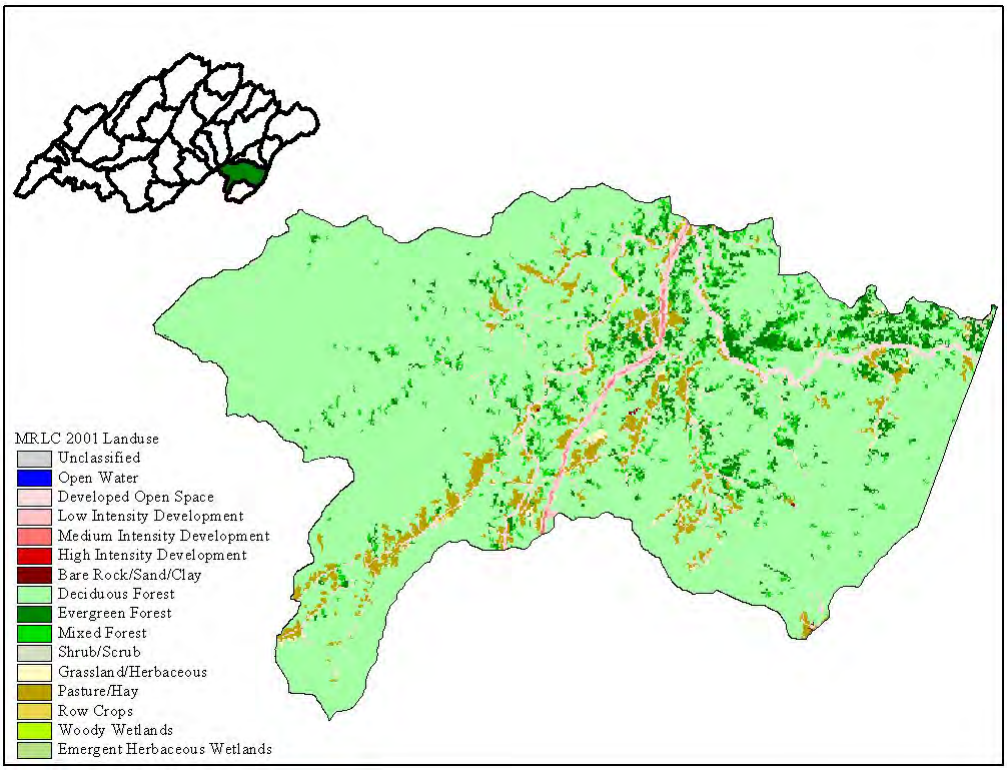


Figure 4-77. Illustration of Land Use Distribution in Subwatershed 060101080302.

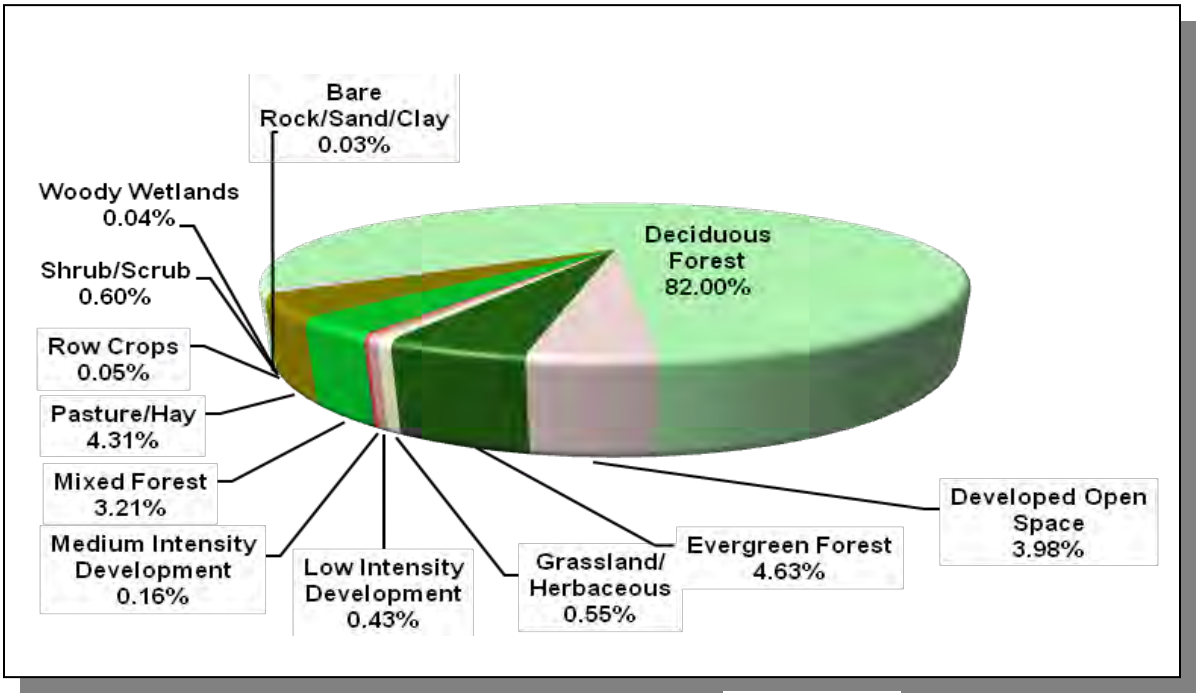


Figure 4-78. Land Use Distribution in Subwatershed 060101080302. *More information is provided in Appendix IV.*

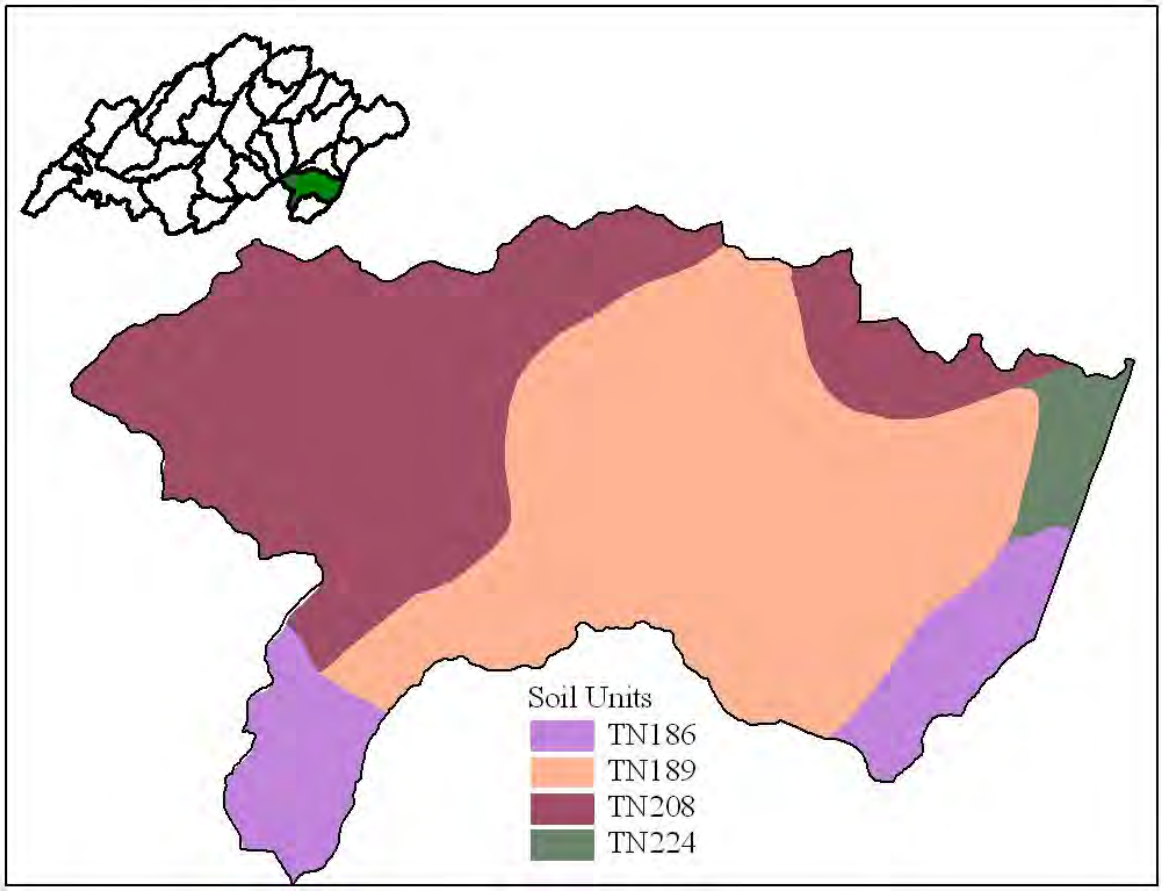


Figure 4-79. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080302.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN186	0.00	B	3.96	5.33	Loam	0.24
TN189	0.00	B	3.99	5.05	Loam	0.24
TN208	0.00	C	4.02	4.84	Loam	0.25
TN224	1.00	B	3.97	5.27	Loam	0.24

Table 4-48. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080302. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Greene	55,853	59,369	62,909	0.57	319	339	360	12.9
Unicoi	16,549	17,221	17,667	18.21	3,014	3,136	3,218	6.8
Totals	**72,402**	**76,590**	**80,576**		**3,333**	**3,475**	**3,578**	**7.4**

Table 4-49. Population Estimates in Subwatershed 060101080302.

4.2.H.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080302.

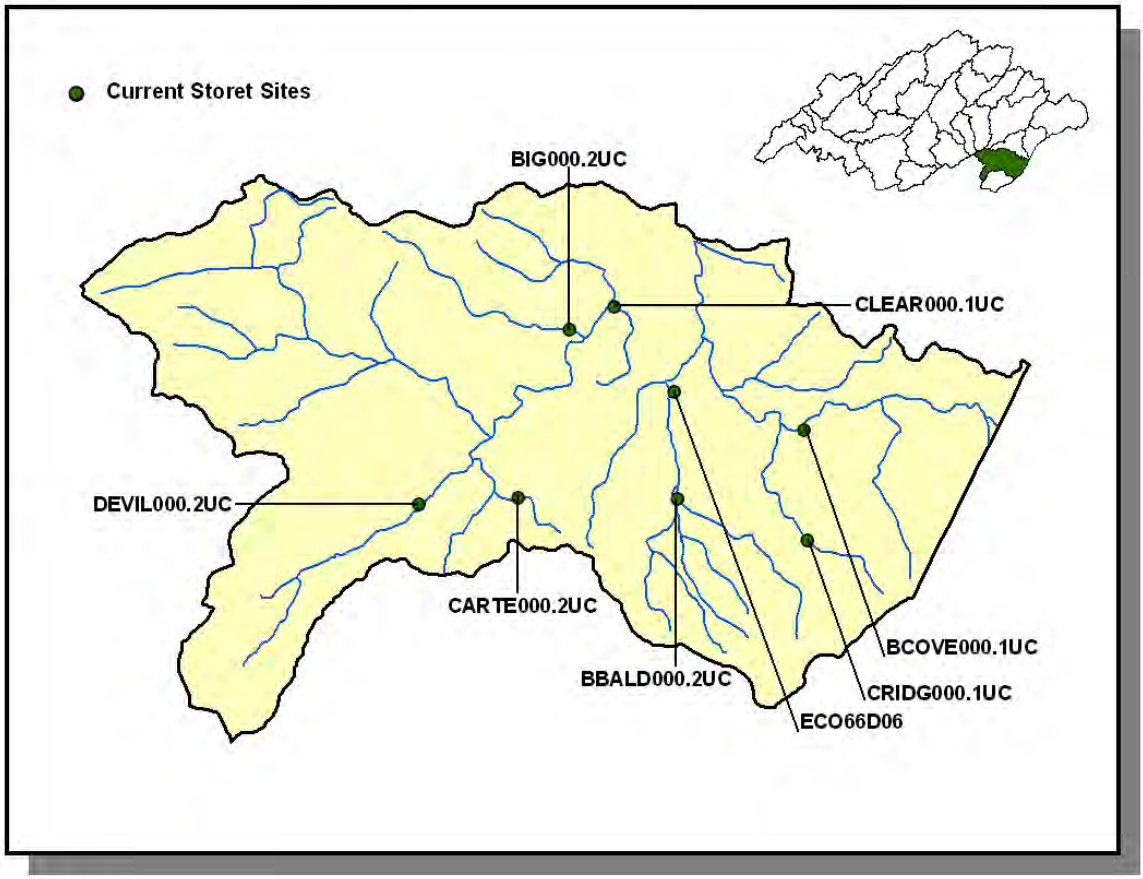


Figure 4-80. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080302. *More information, including site names and locations, is provided in Appendix IV.*

4.2.H.iii. Permitted Activities.

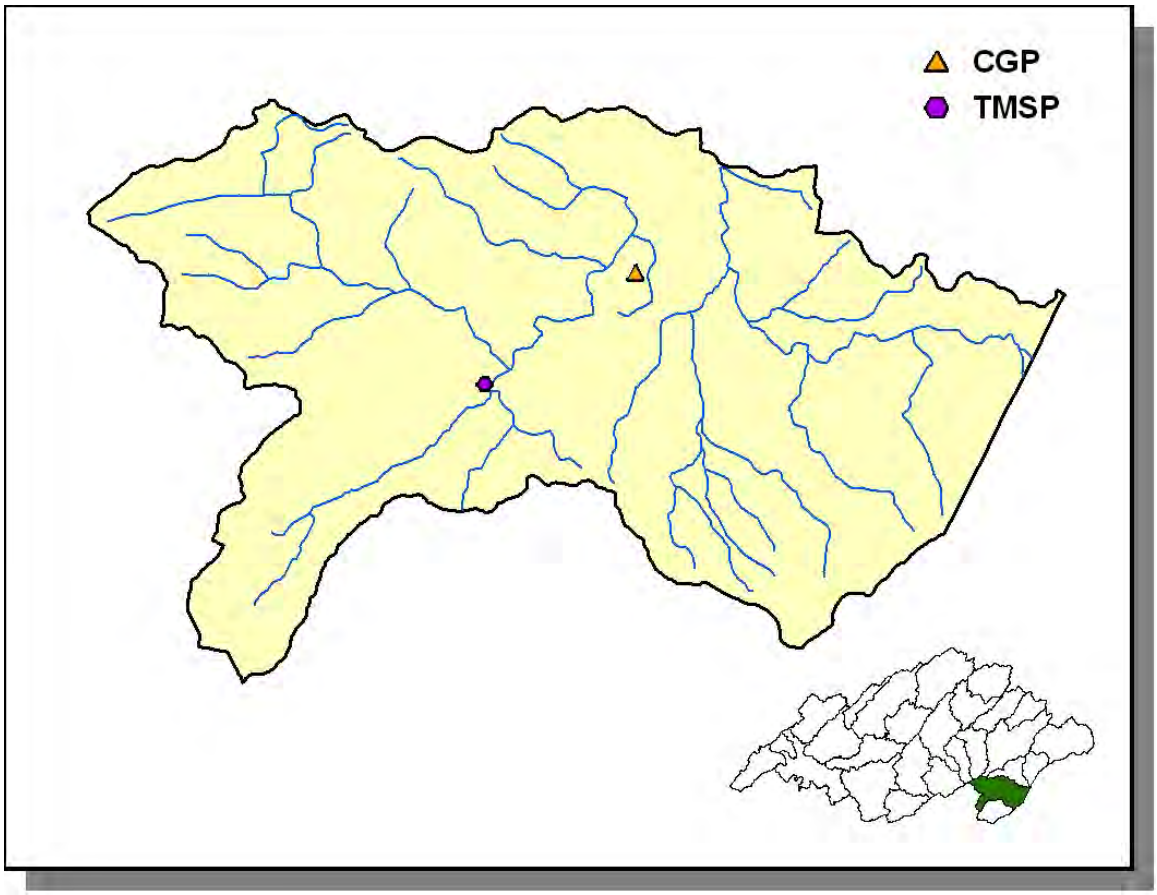


Figure 4-81. Location of Permits Issued in Subwatershed 060101080302. *More information, including the names of facilities, is provided in Appendix IV.*

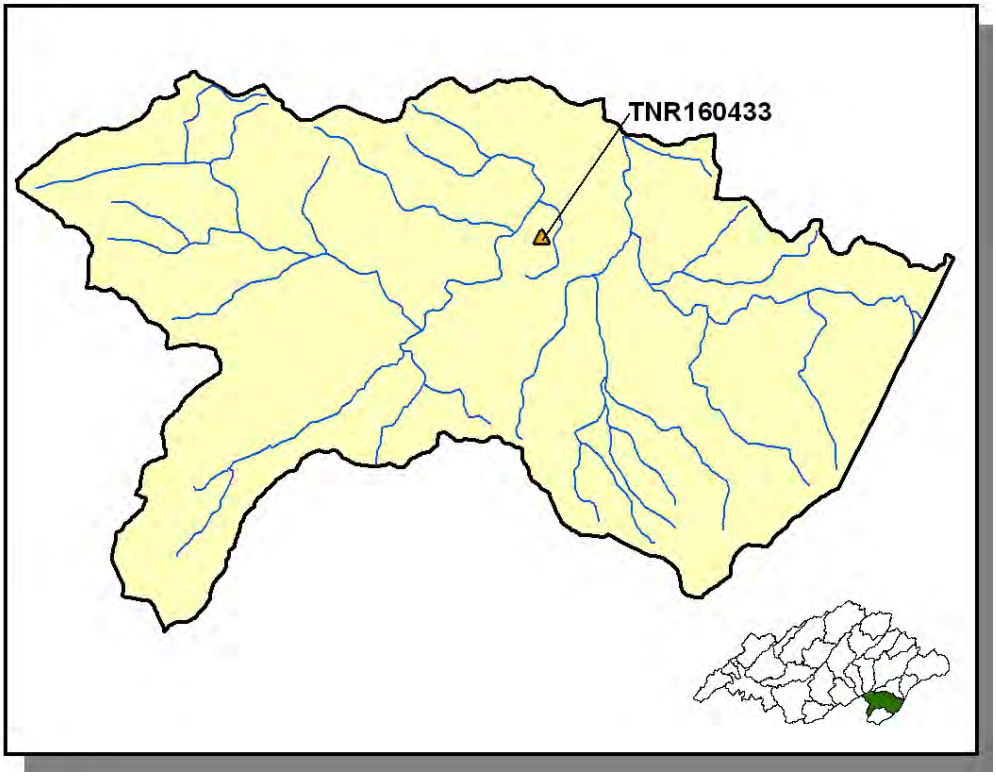


Figure 4-82. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080302. *More information is provided in Appendix IV.*

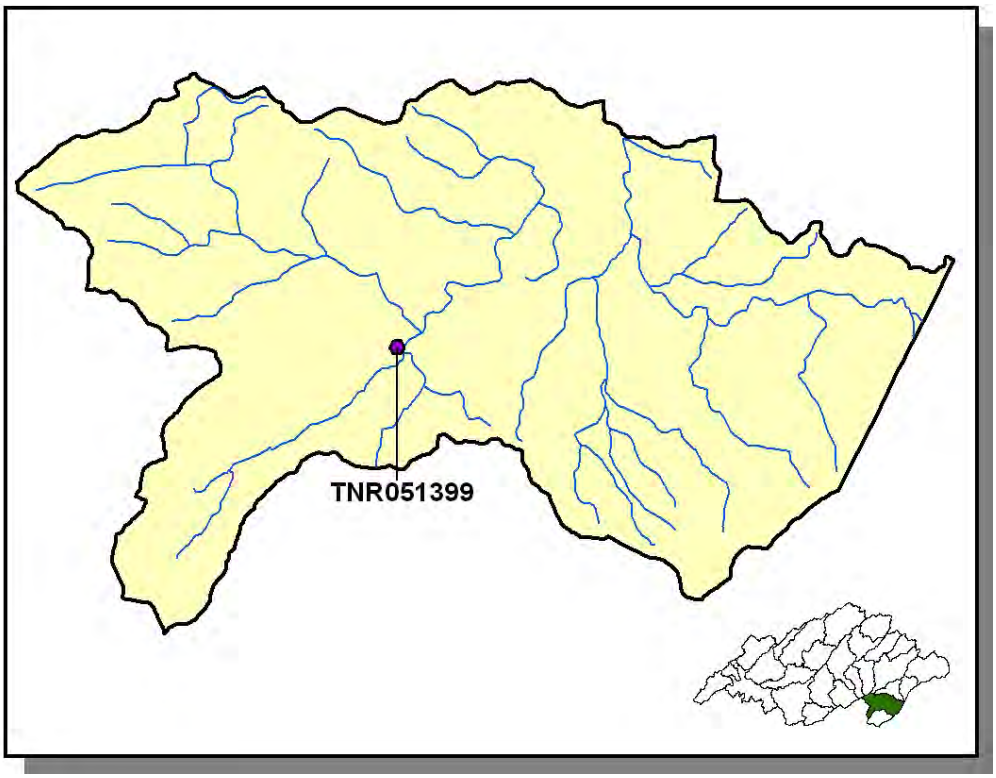


Figure 4-83. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080302. *More information is provided in Appendix IV.*

4.2.H.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Greene	33,962	72,582	7,282	1,190	495	226
Unicoi	657	1410	9	6	66	

Table 4-50. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Greene	180.0	171.8	2.0	10.5
Unicoi	99.3	89.4	3.1	8.5

Table 4-51. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	14.35
Tobacco (Row Crops)	12.19
Other Vegetable and Truck Crop	5.90
Grass (Pastureland)	0.59
Grass Forbs Legumes Mixed (Pastureland)	0.55
Legume Grass (Hayland)	0.34
Farmsteads and Ranch Headquarters	0.17
Grass (Hayland)	0.14
Legume (Hayland)	0.08

Table 4-52. Annual Estimated Total Soil Loss in Subwatershed 060101080302.

4.2.I. 060101080303 (South Indian Creek, Lower).

4.2.I.i. General Description.

Figure 4-84. Location of Subwatershed 060101080303. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

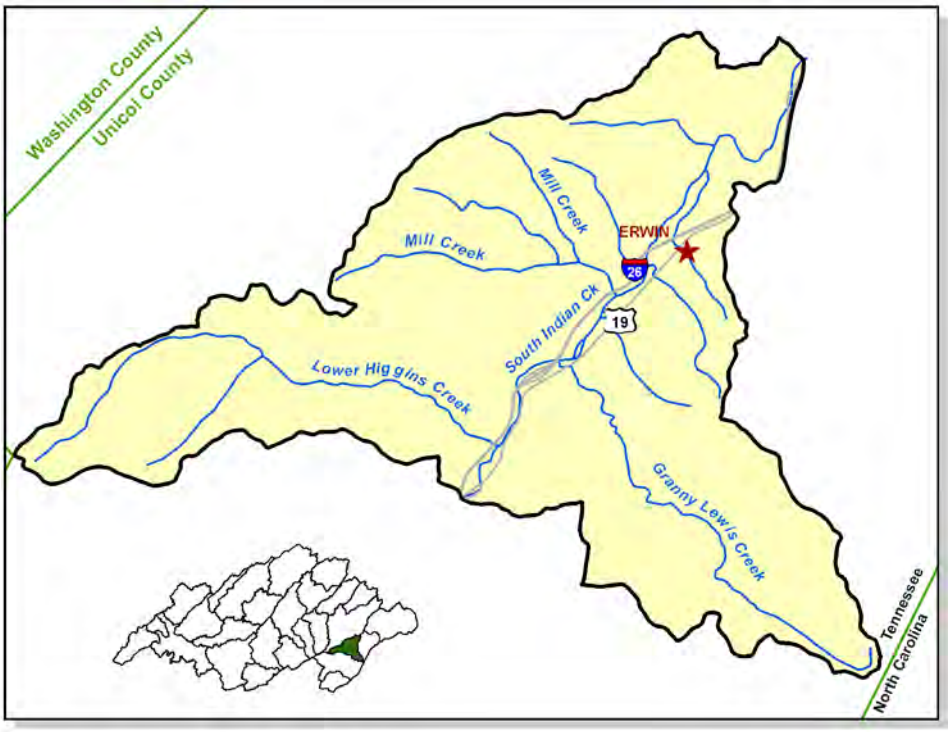


Figure 4-85. Locational Details of Subwatershed 060101080303.

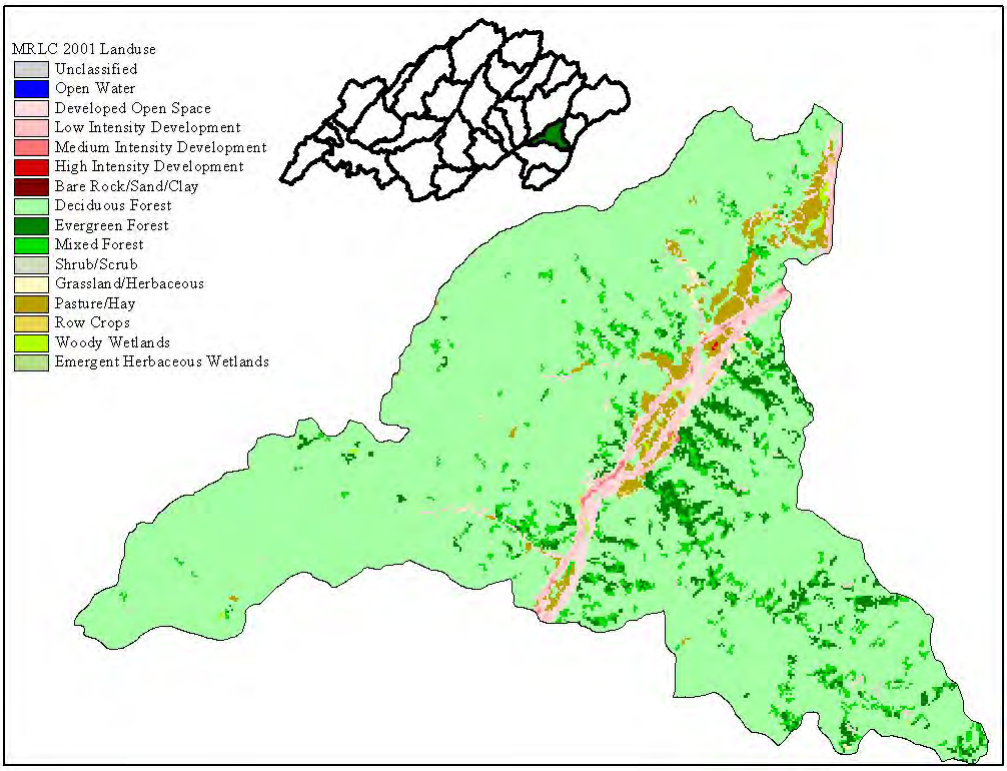


Figure 4-86. Illustration of Land Use Distribution in Subwatershed 060101080303.

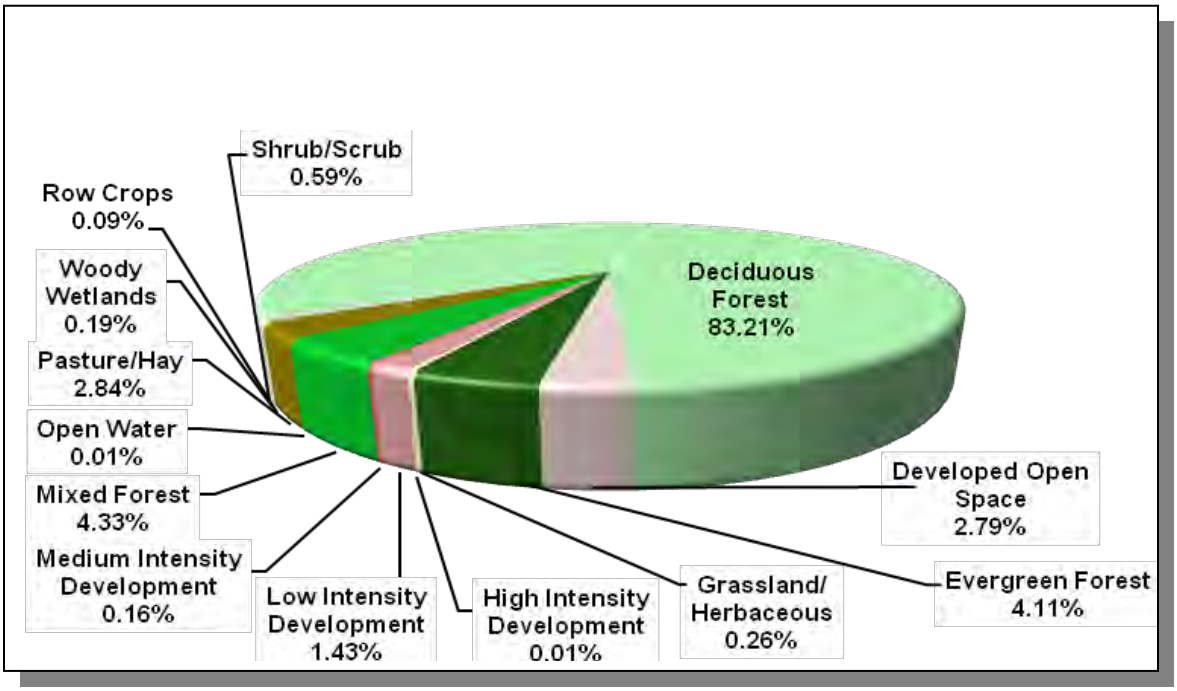


Figure 4-87. Land Use Distribution in Subwatershed 060101080303. *More information is provided in Appendix IV.*

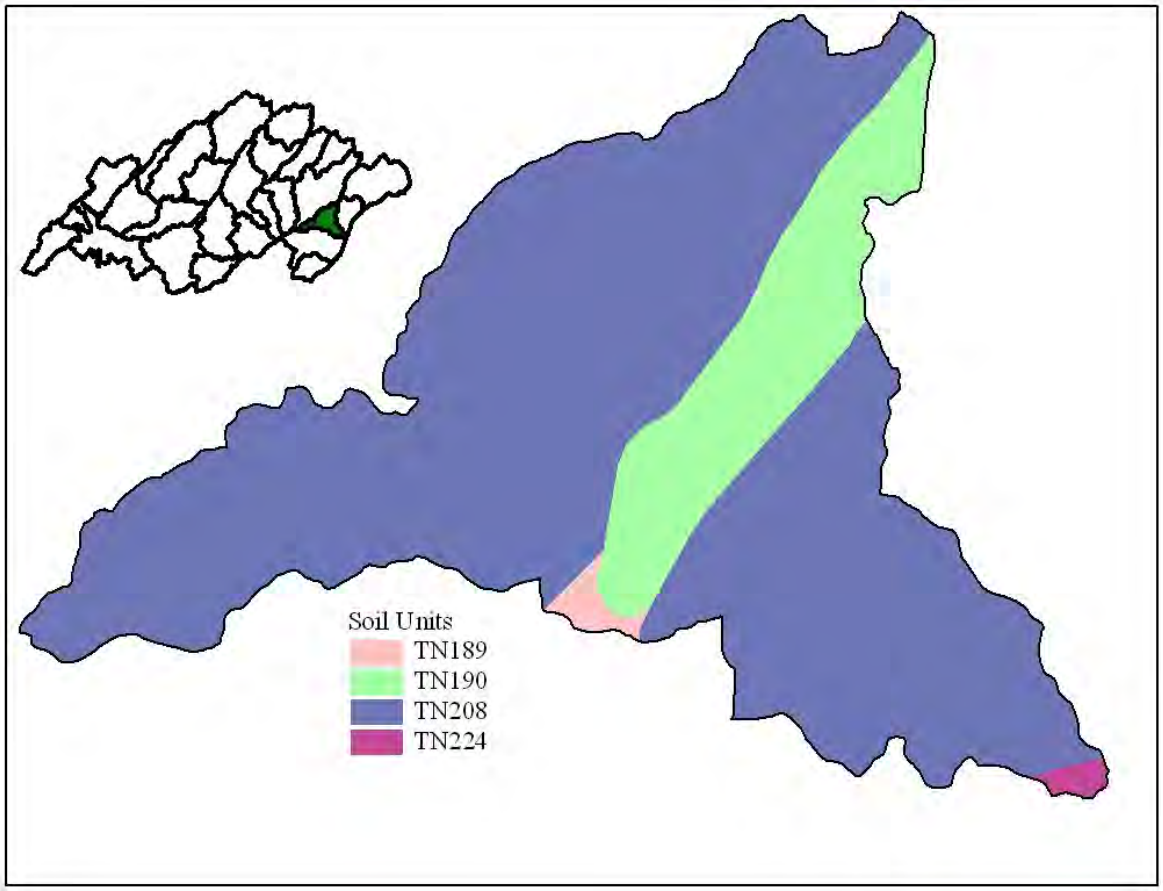


Figure 4-88. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080303.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN189	0.00	B	3.99	5.05	Loam	0.24
TN190	0.00	B	3.43	5.52	Loam	0.29
TN208	0.00	C	4.02	4.84	Loam	0.25
TN224	1.00	B	3.97	5.27	Loam	0.24

Table 4-53. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080303. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Unicoi	16,549	17,221	17,667	9.69	1,604	1,669	1,713	6.80

Table 4-54. Population Estimates in Subwatershed 060101080303.

4.2.I.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080303.

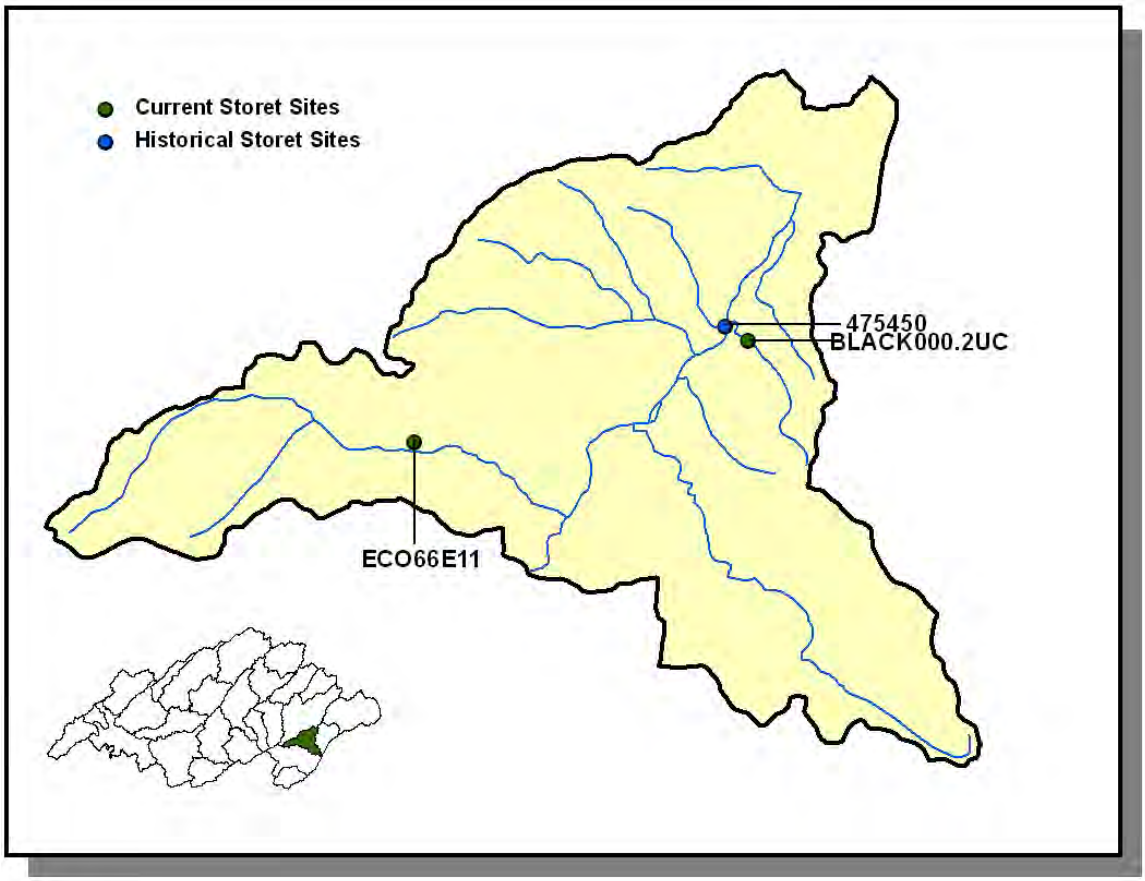


Figure 4-89. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080303. *More information, including site names and locations, is provided in Appendix IV.*

4.2.I.iii. Permitted Activities.

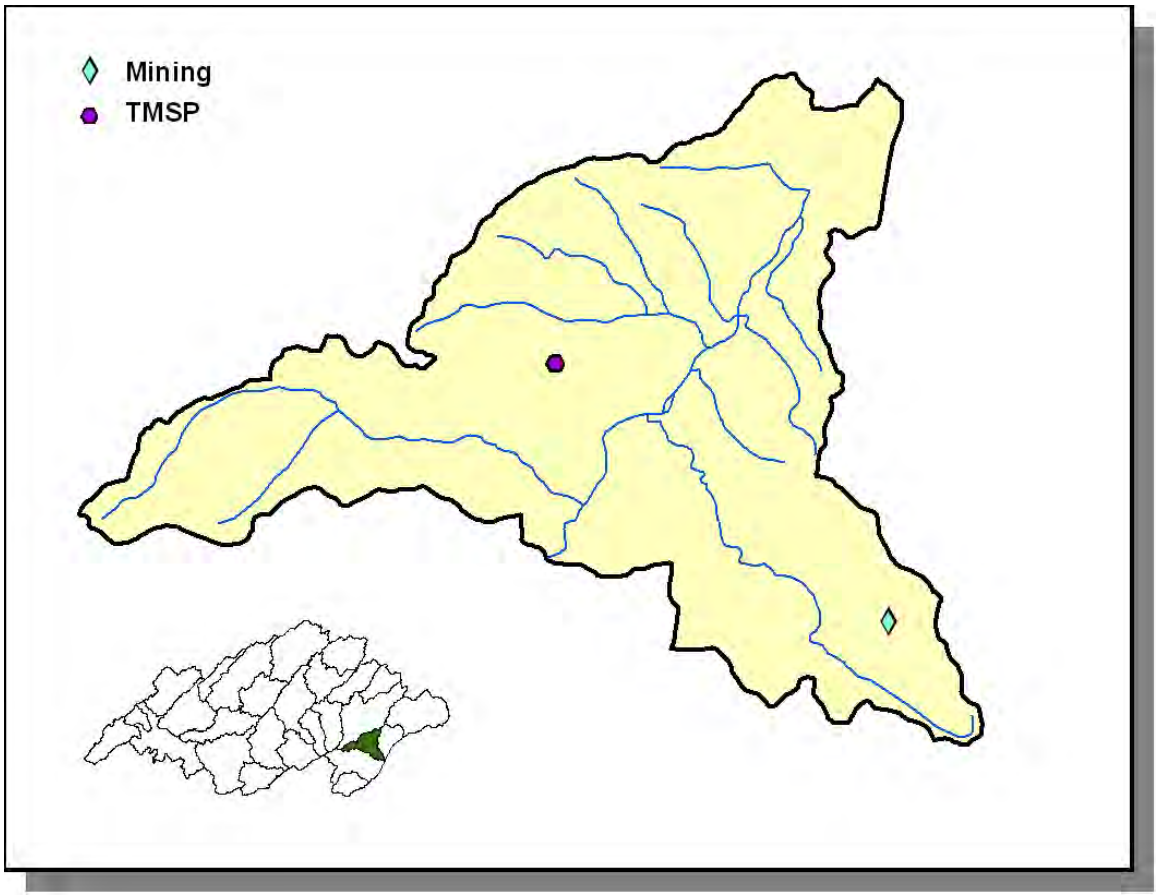


Figure 4-90. Location of Permits Issued in Subwatershed 060101080303. *More information, including the names of facilities, is provided in Appendix IV.*

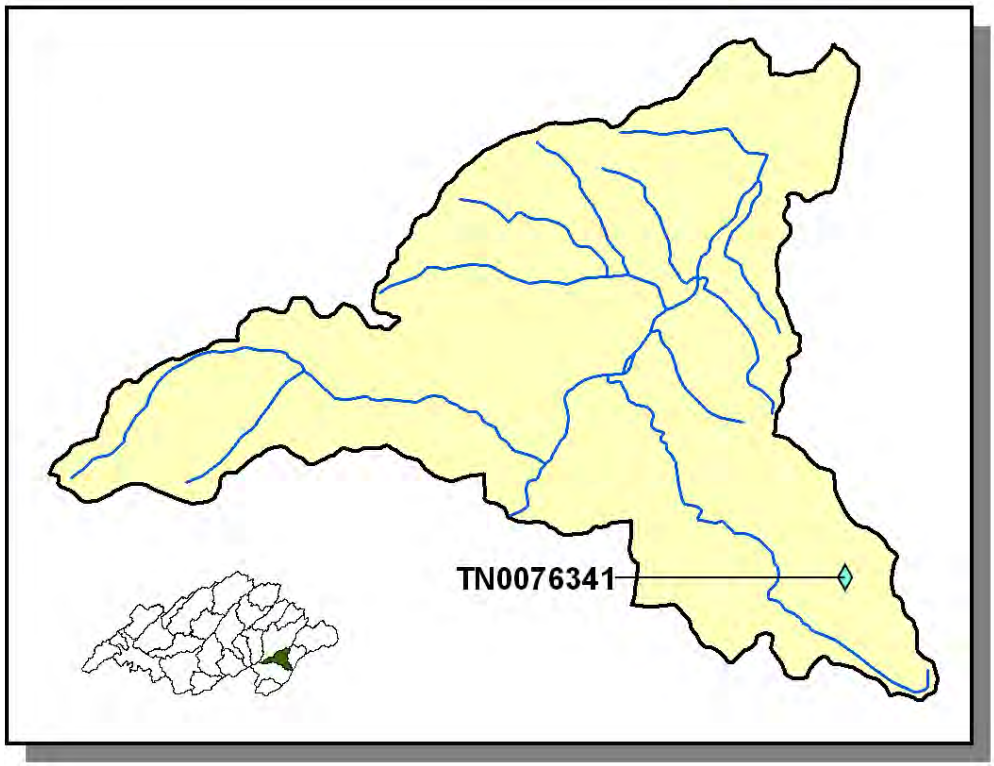


Figure 4-91. Location of permitted MINING facilities in Subwatershed 060101080303. *More information is provided in Appendix IV.*

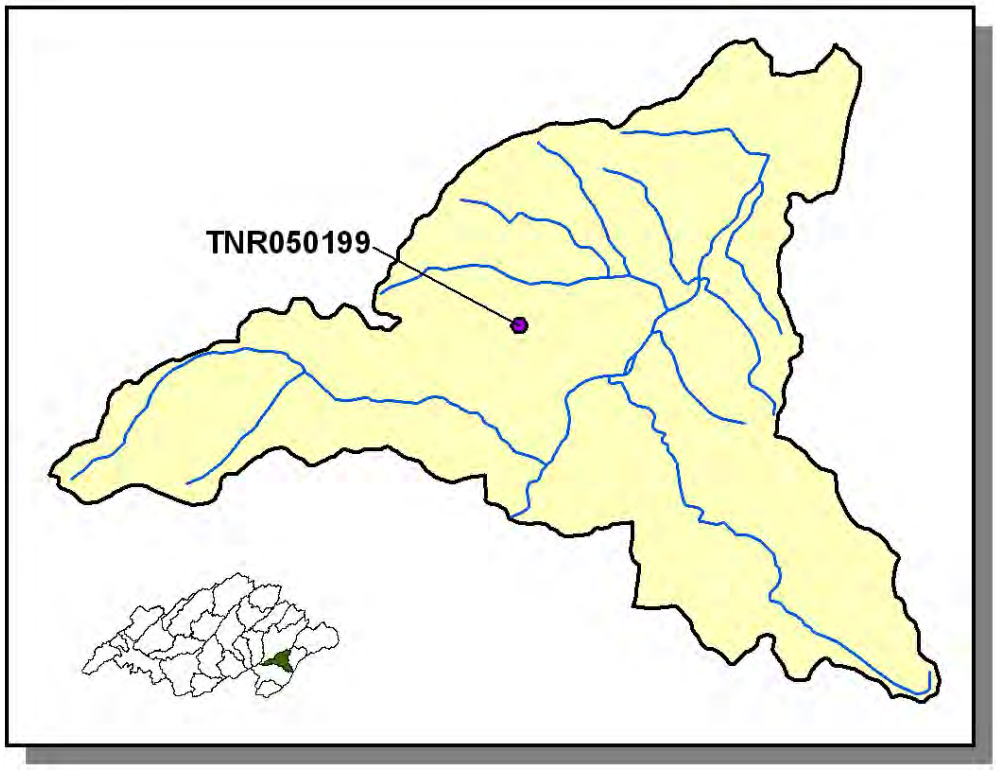


Figure 4-92. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080303. *More information is provided in Appendix IV.*

4.2.I.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Unicoi	657	1,410	9	6	66	0

Table 4-55. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Unicoi	99.3	89.4	3.1	8.5

Table 4-56. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Other Vegetable and Truck Crop	6.10
Grass Forbs Legumes Mixed (Pas	0.36
Grass (Pastureland)	0.34
Legume (Hayland)	0.06
Farmsteads and Ranch Headquart	0.03

Table 4-57. Annual Estimated Total Soil Loss in Subwatershed 060101080303.

4.2.J. 060101080401 (Big Limestone Creek, Upper).

4.2.J.i. General Description.

Figure 4-93. Location of Subwatershed 060101080401. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

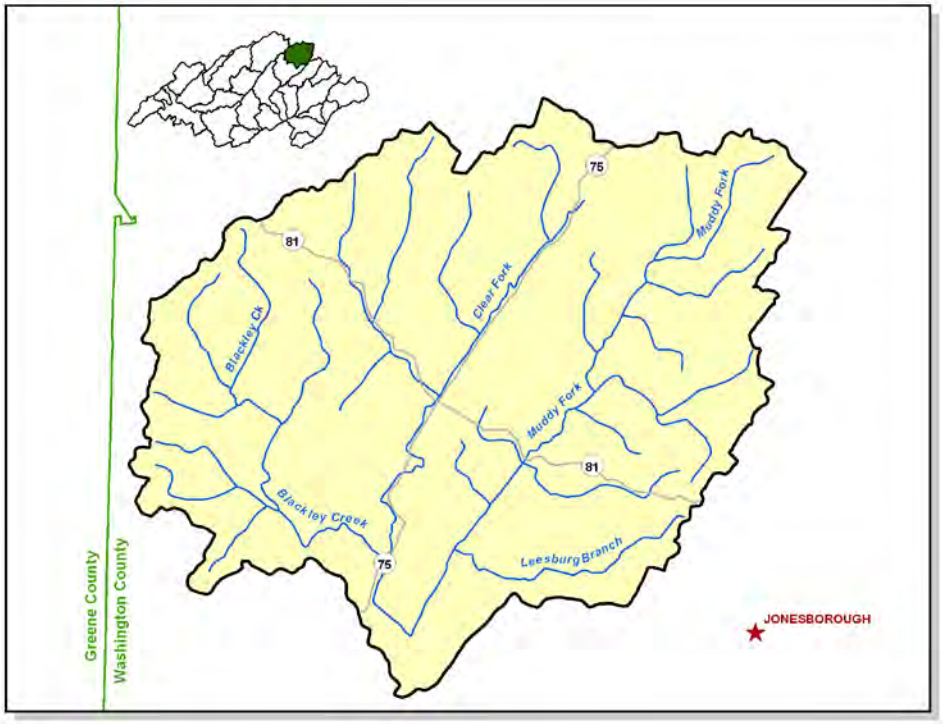


Figure 4-94. Locational Details of Subwatershed 060101080401.

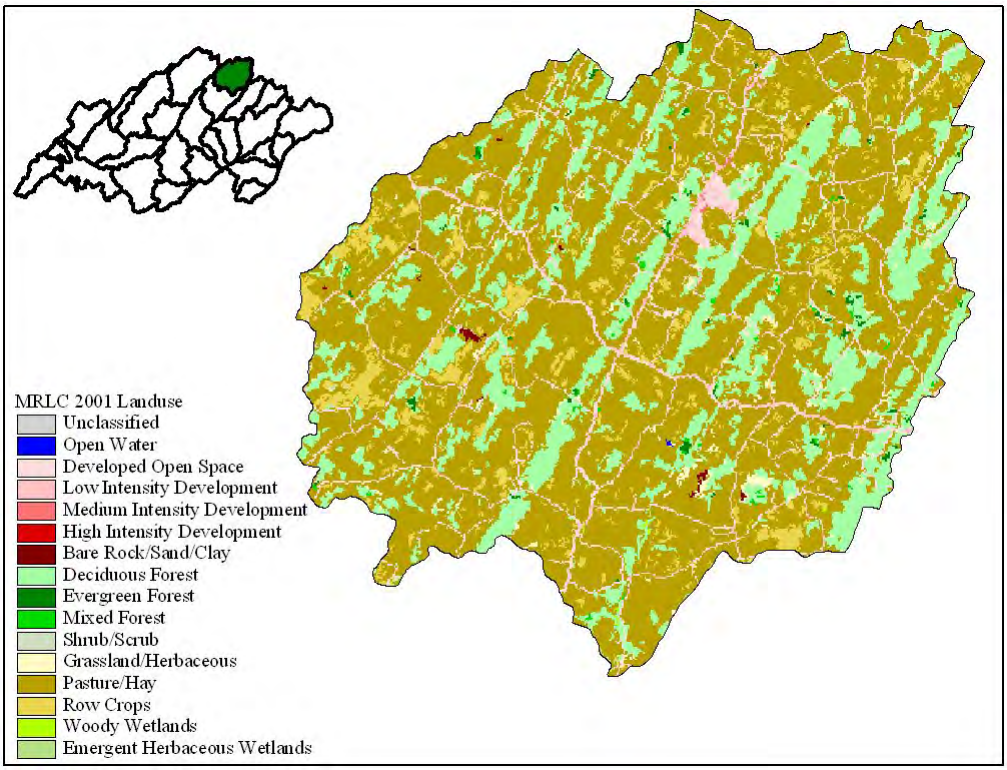


Figure 4-95. Illustration of Land Use Distribution in Subwatershed 060101080401.

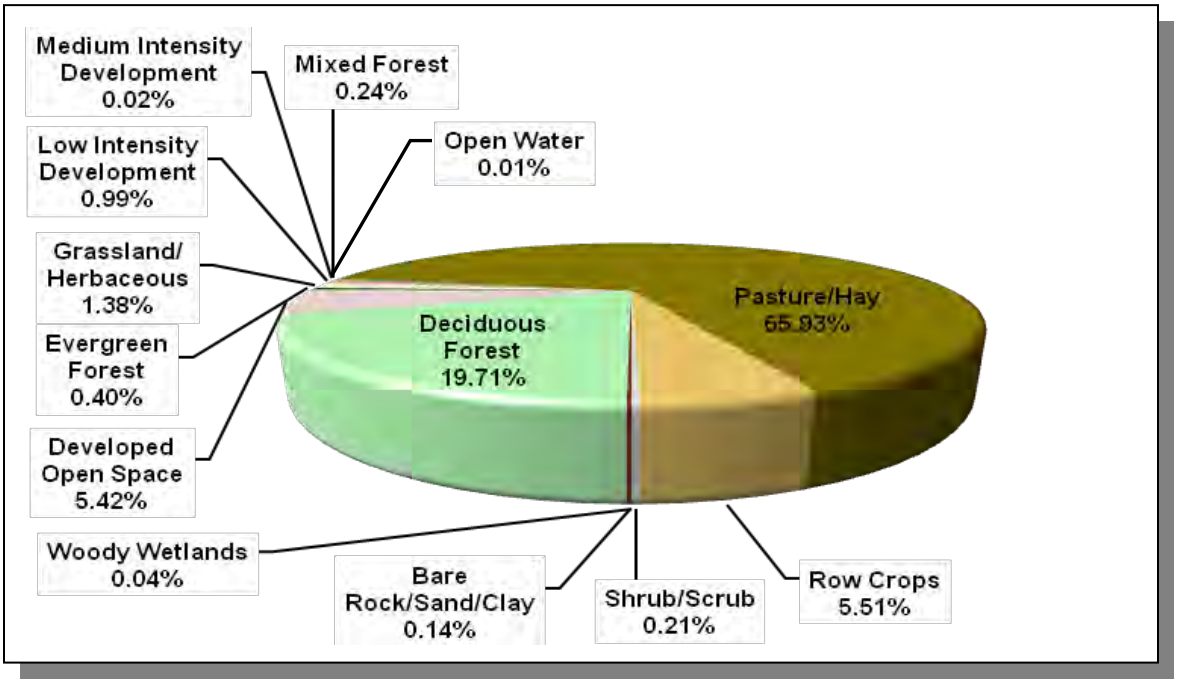


Figure 4-96. Land Use Distribution in Subwatershed 060101080401. *More information is provided in Appendix IV.*

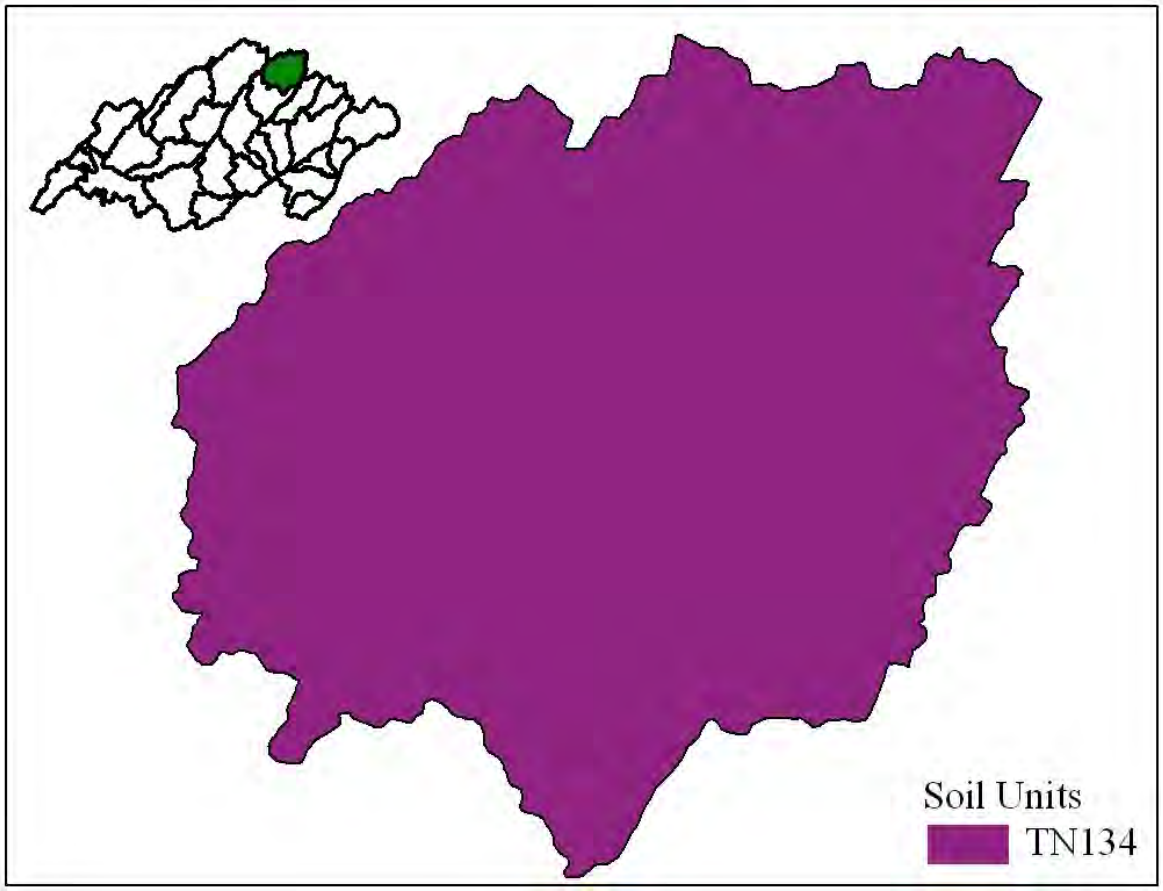


Figure 4-97. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080401.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN134	0.00	B	1.38	5.18	Loam	0.31

Table 4-58. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080401. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Washington	92,315	101,368	107,198	12.15	11,214	12,313	13,022	16.1

Table 4-59. Population Estimates in Subwatershed 060101080401.

4.2.J.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080401.

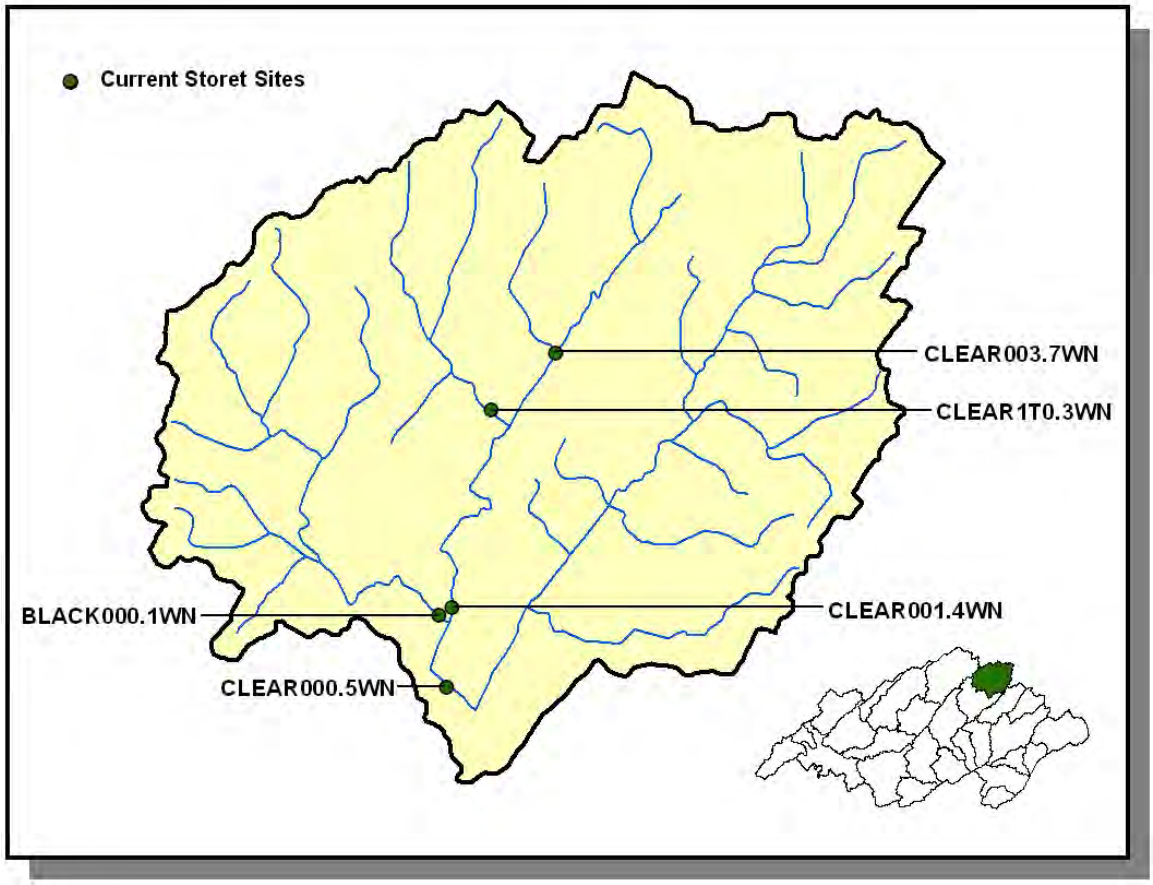


Figure 4-98. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080401. *More information, including site names and locations, is provided in Appendix IV.*

4.2.J.iii. Permitted Activities.

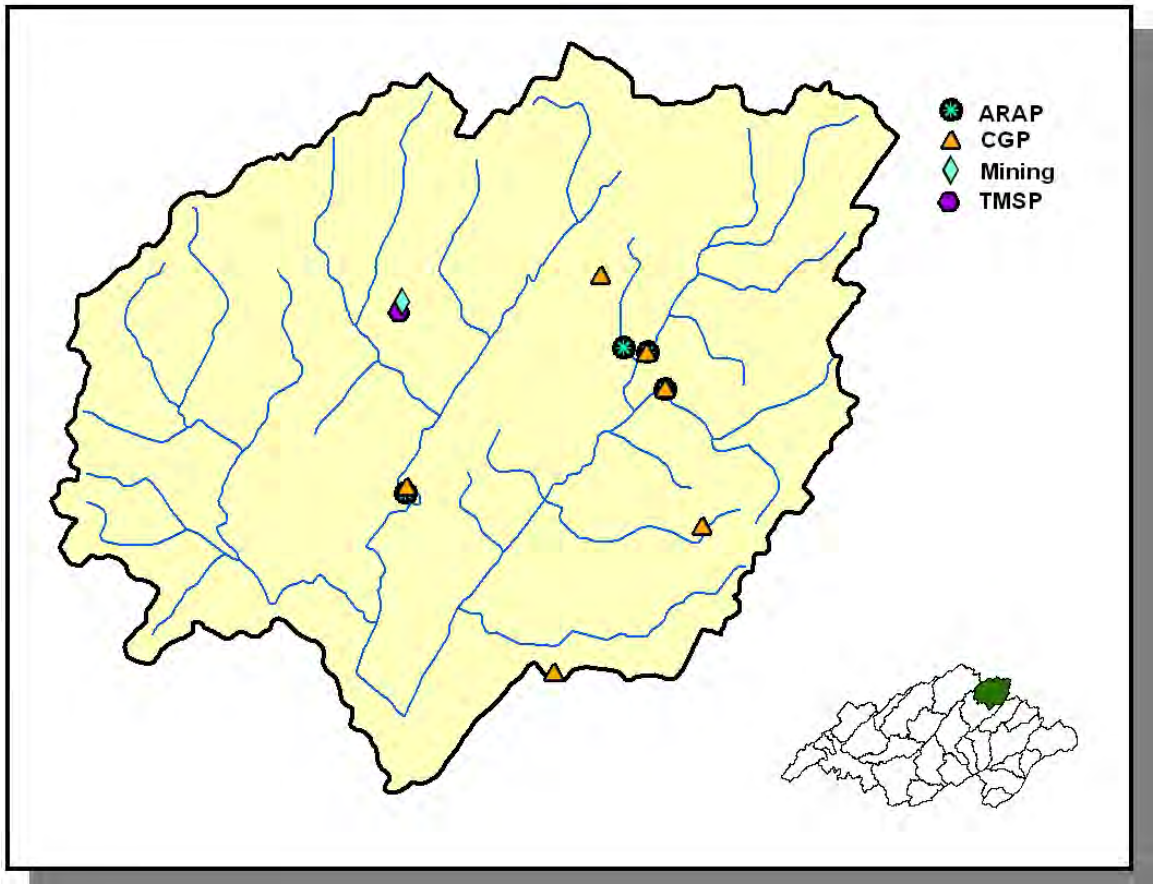


Figure 4-99. Location of Permits Issued in Subwatershed 060101080401. *More information, including the names of facilities, is provided in Appendix IV.*

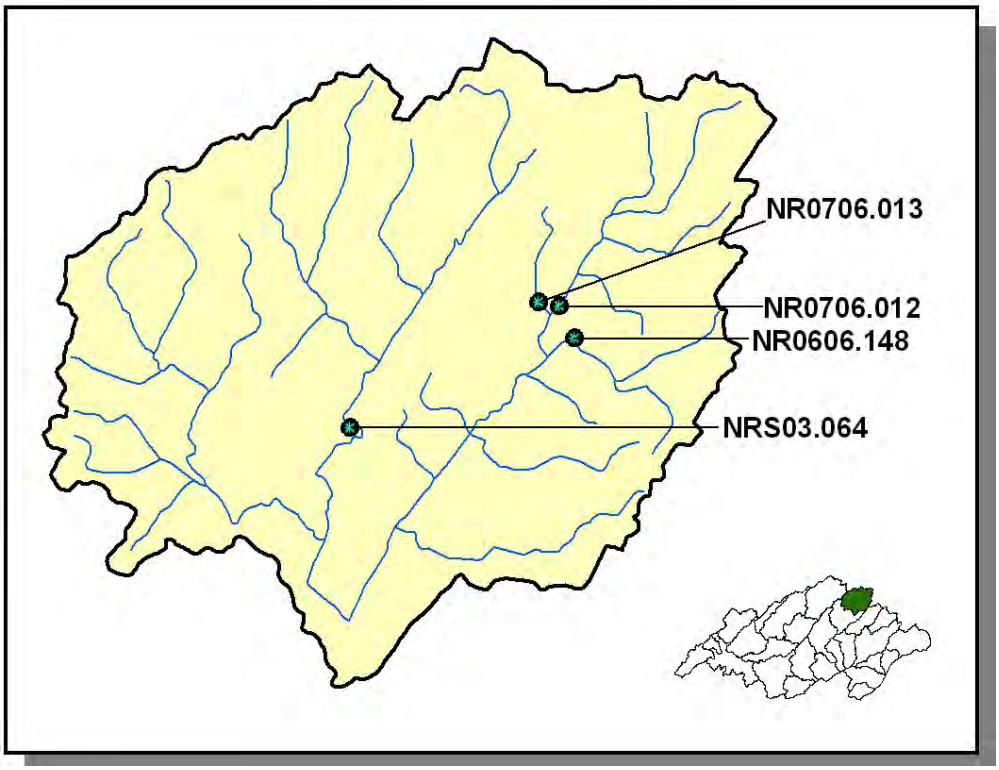


Figure 4-100. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080401. *More information is provided in Appendix IV.*

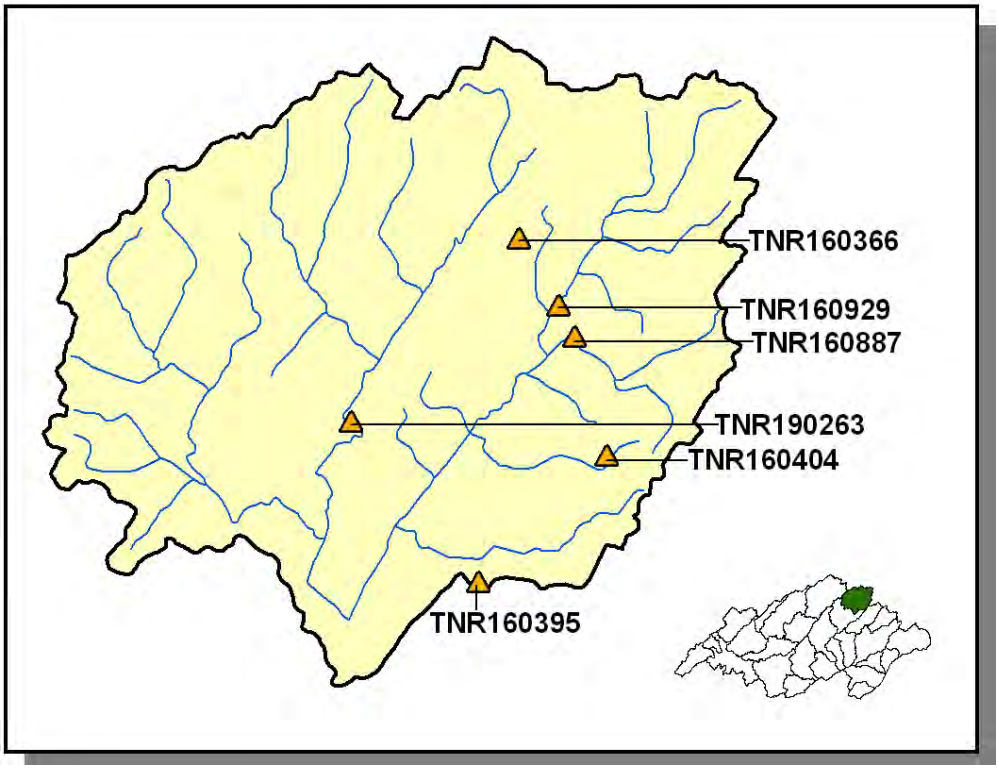


Figure 4-101. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080401. *More information is provided in Appendix IV.*

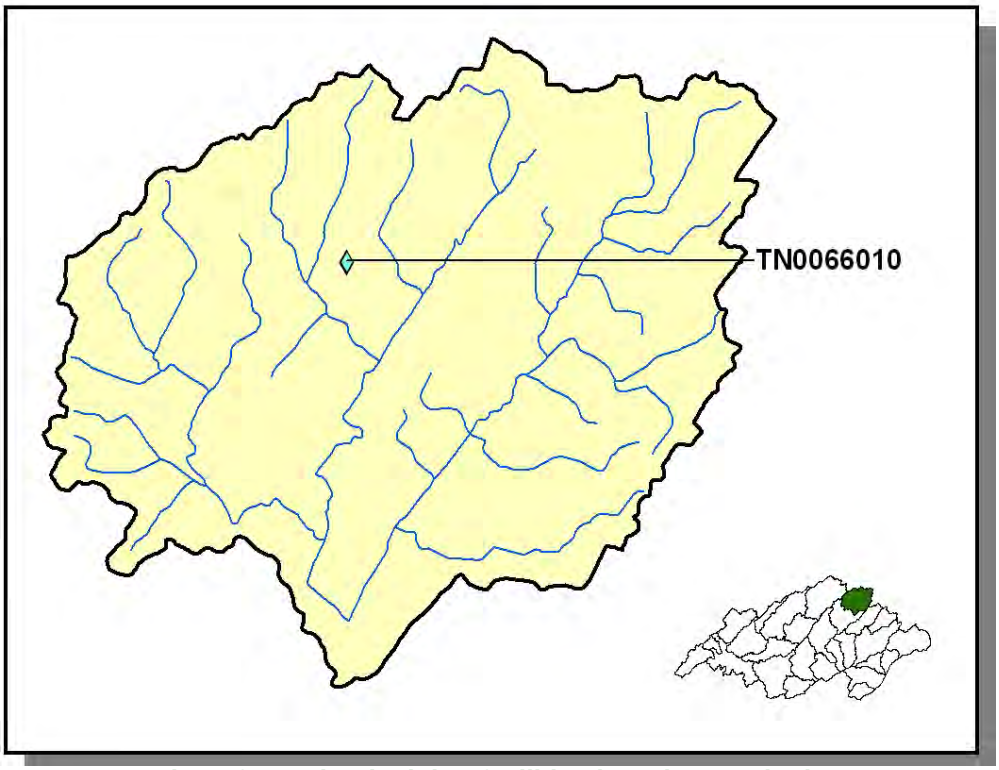


Figure 4-102. Location of permitted Mining facilities in Subwatershed 060101080401. *More information is provided in Appendix IV.*

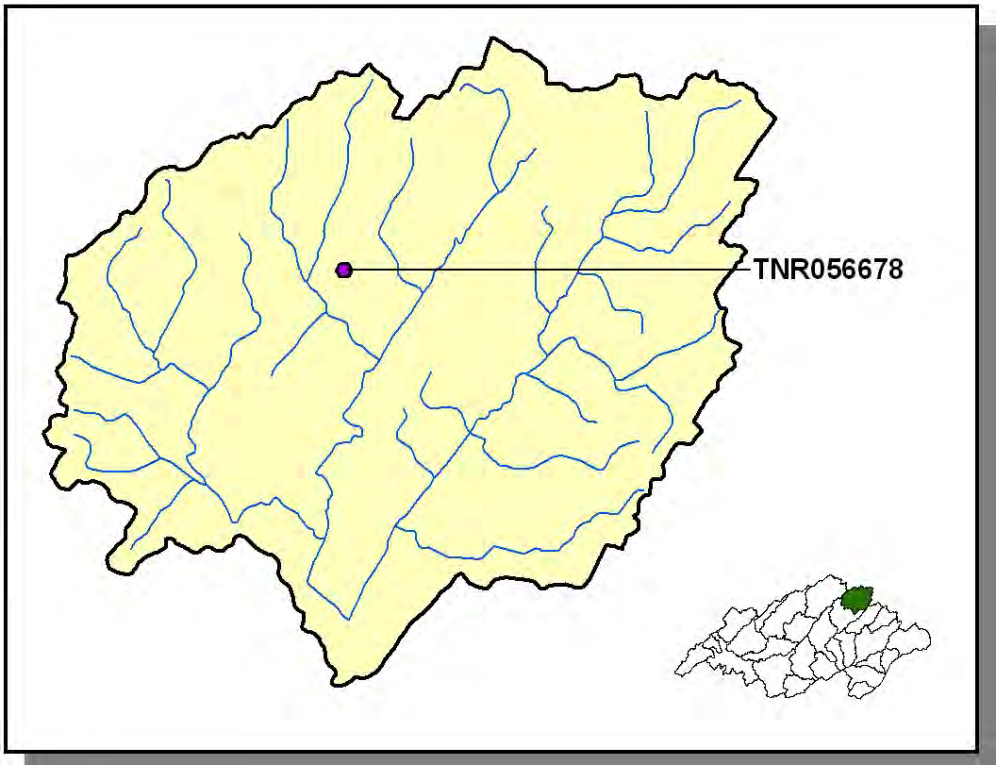


Figure 4-103. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080401. *More information is provided in Appendix IV.*

4.2.J.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Washington	23,073	53,186	5,190	38	262	353

Table 4-60. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	13.57
Tobacco (Row Crops)	6.69
Grass (Hayland)	0.62
Grass (Pastureland)	0.55
Grass Forbs Legumes Mixed (Pastureland)	0.41
Farmsteads and Ranch Headquarters	0.22
Legume Grass (Hayland)	0.20

Table 4-61. Annual Estimated Total Soil Loss in Subwatershed 060101080401.

4.2.K. 060101080402 (Big Limestone Creek, Lower).

4.2.K.i. General Description.

Figure 4-104. Location of Subwatershed 060101080402. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

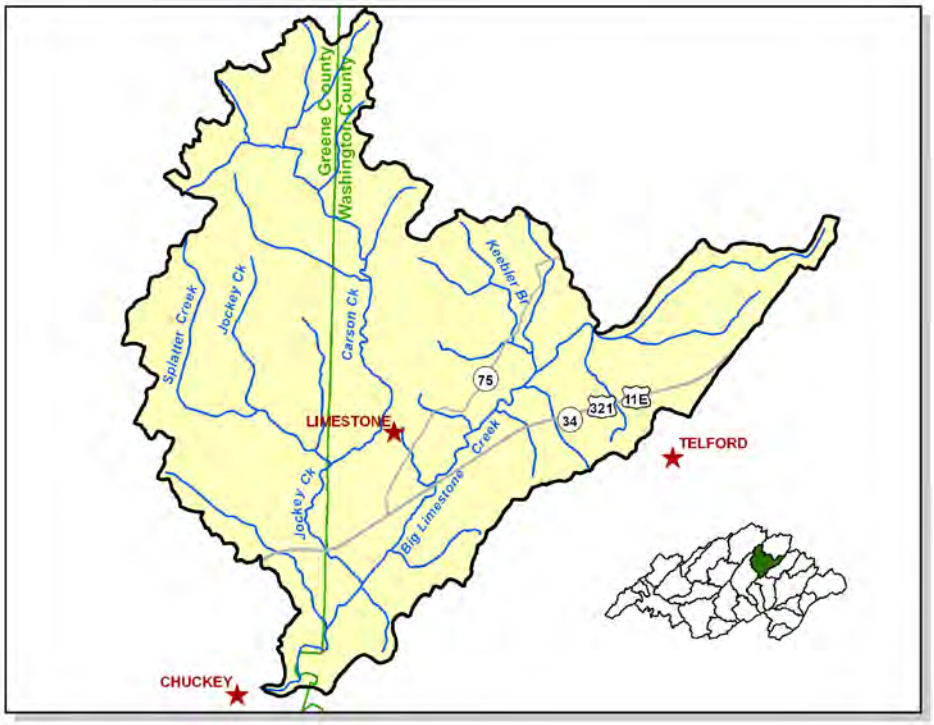


Figure 4-105. Locational Details of Subwatershed 060101080402.

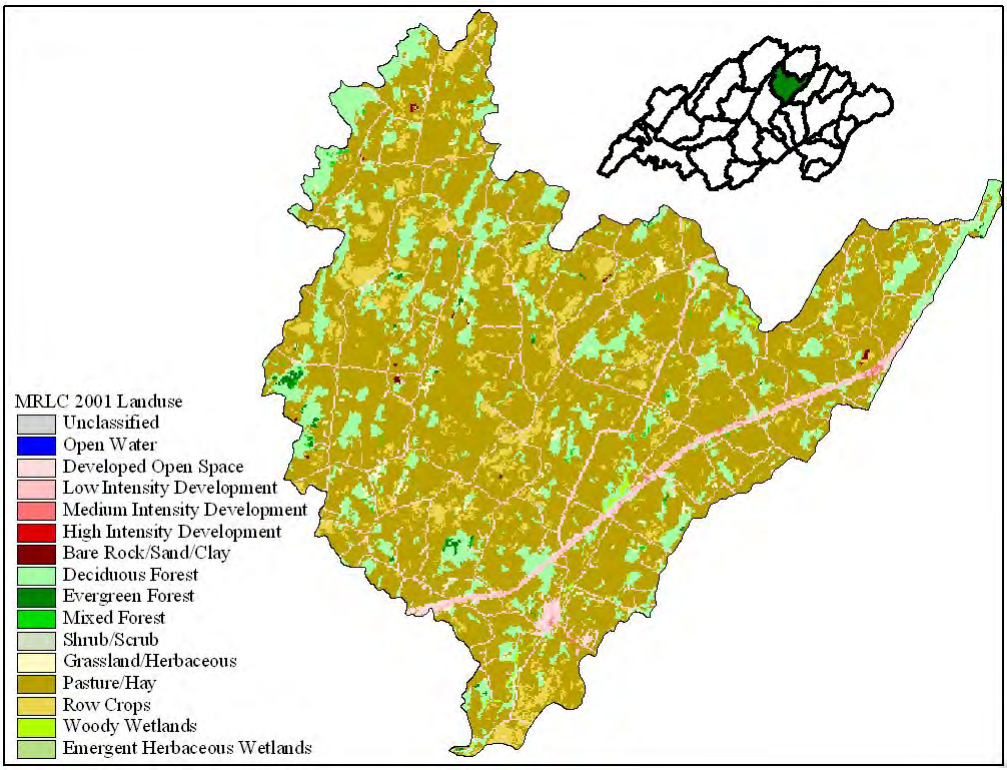


Figure 4-106. Illustration of Land Use Distribution in Subwatershed 060101080402.

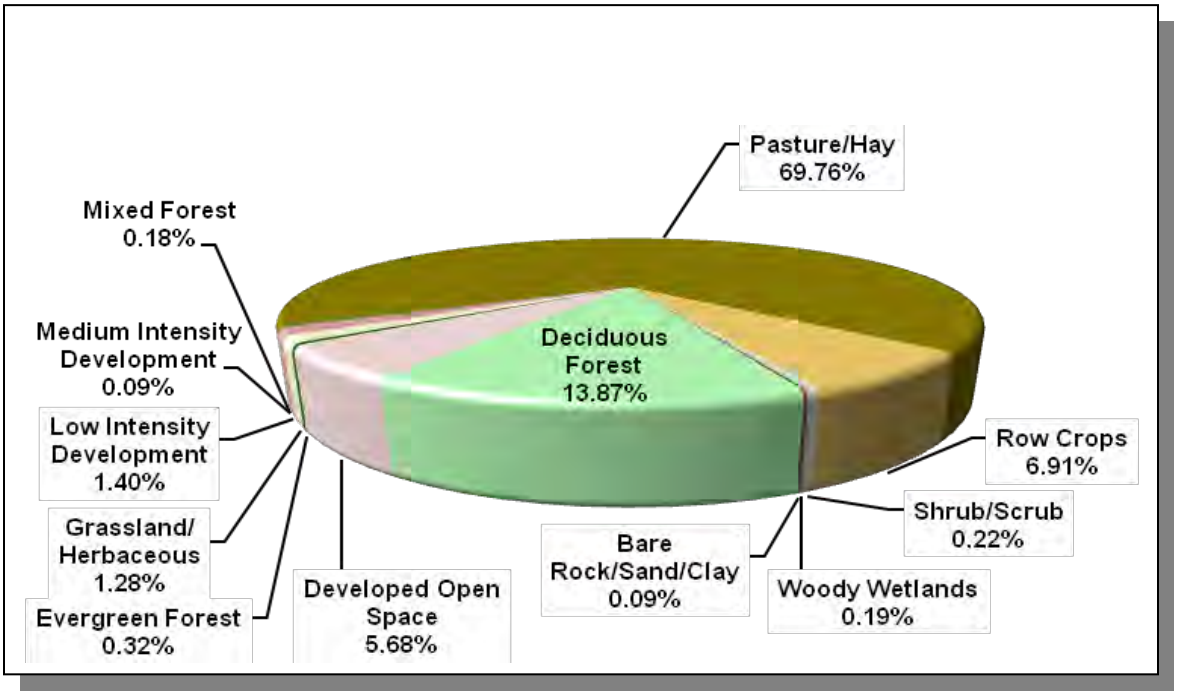


Figure 4-107. Land Use Distribution in Subwatershed 060101080402. *More information is provided in Appendix IV.*

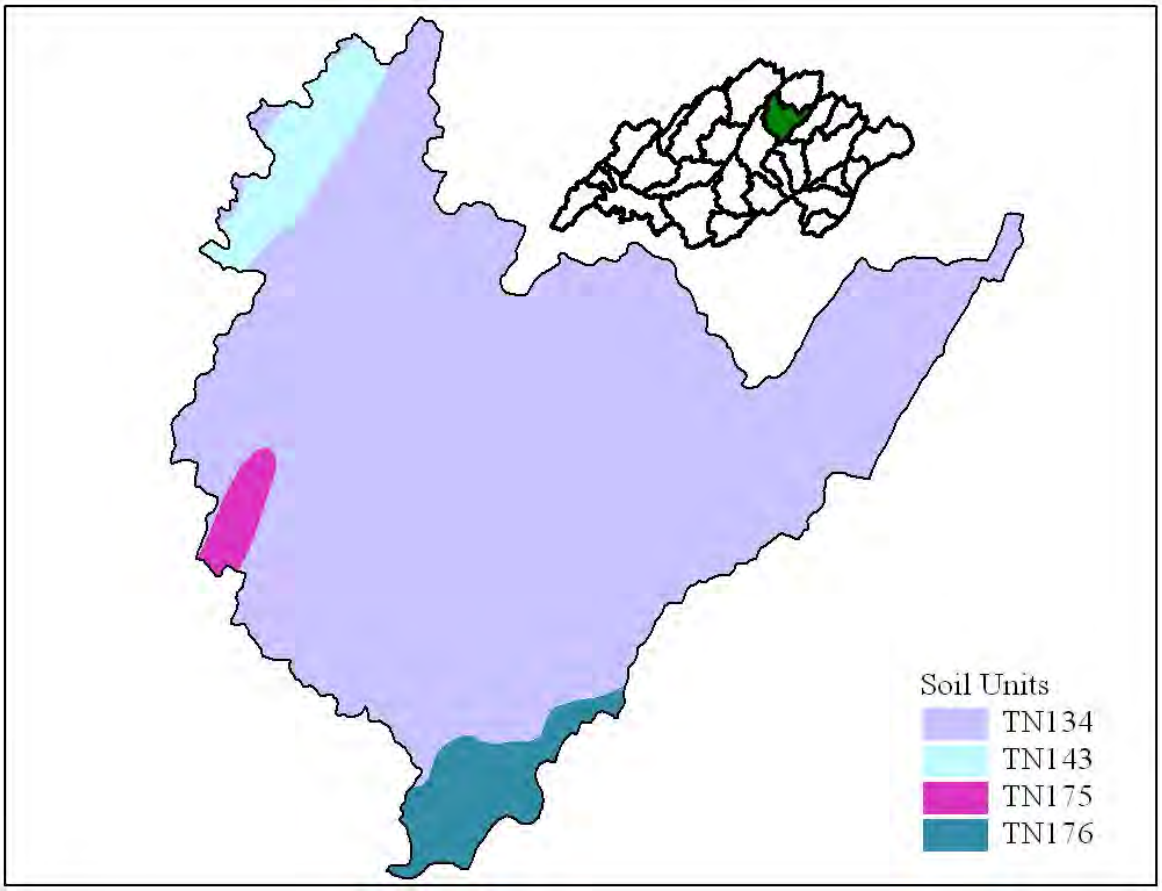


Figure 4-108. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080402.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN134	0.00	B	1.38	5.18	Loam	0.31
TN143	0.00	C	1.22	6.44	Loam	0.32
TN175	0.00	B	1.49	5.23	Loam	0.30
TN176	12.00	B	1.30	5.34	Loam	0.31

Table 4-62. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080402. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Greene	55,853	59,369	62,909	2.31	1,291	1,372	1,454	12.60
Washington	92,315	101,368	107,198	7.56	6,981	7,666	8,107	16.10
Totals	**148,168**	**160,737**	**170,107**		**8,272**	**9,038**	**9,561**	**15.60**

Table 4-63. Population Estimates in Subwatershed 060101080402.

4.2.K.ii. USGS Gaging Stations and STORET Sites.

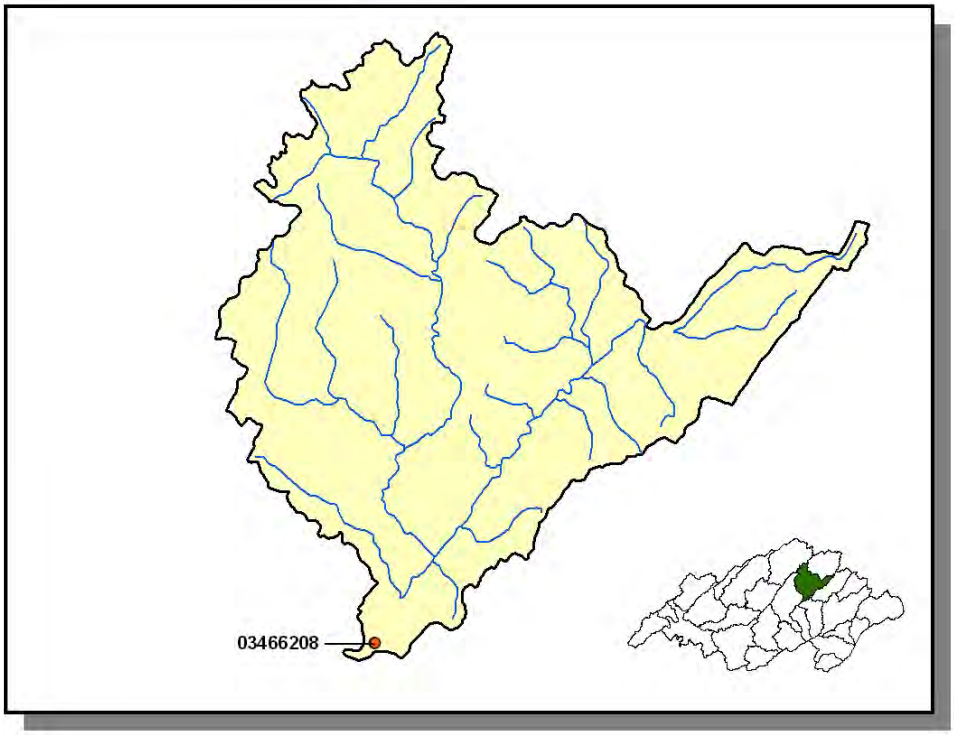


Figure 4-109. Location of USGS Continuous Record Gaging Stations in Subwatershed 060101080402. *More information is provided in Appendix IV.*

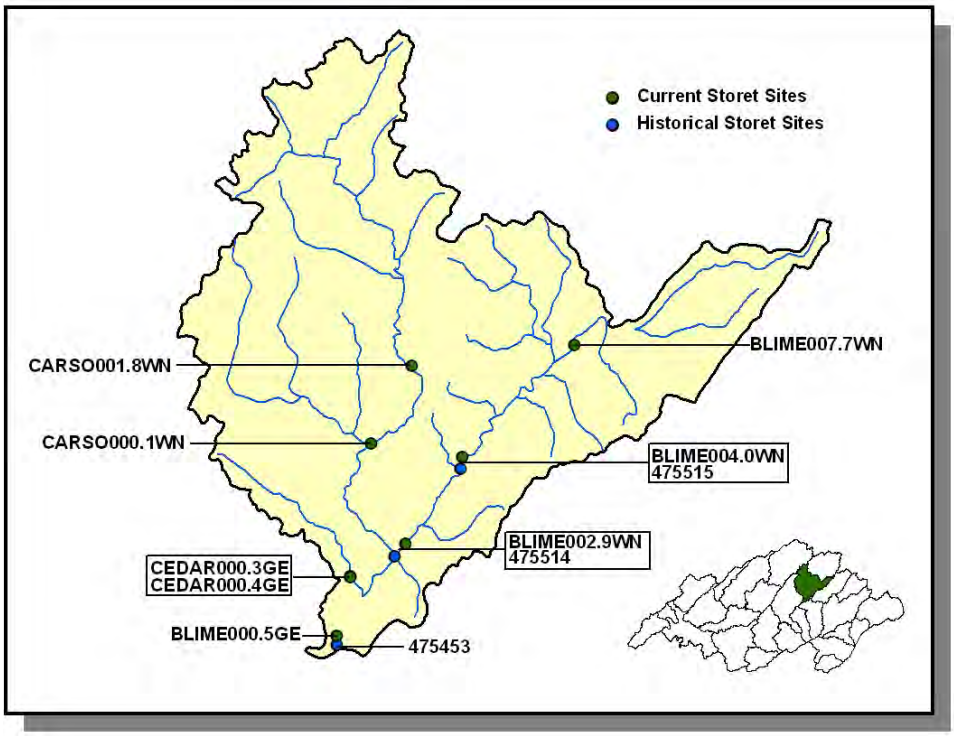


Figure 4-110. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080402. *More information, including site names and locations, is provided in Appendix IV.*

4.2.K.iii. Permitted Activities.

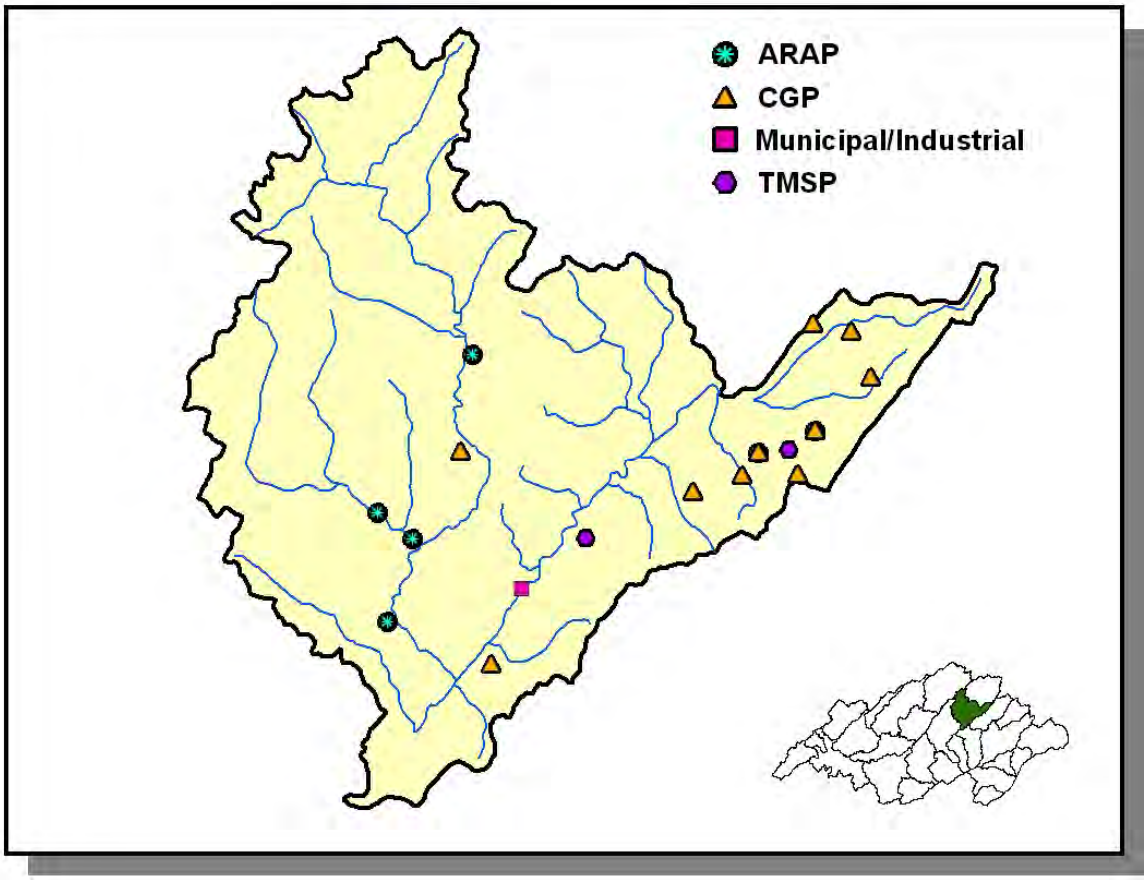


Figure 4-111. Location of Permits Issued in Subwatershed 060101080402. *More information, including the names of facilities, is provided in Appendix IV.*

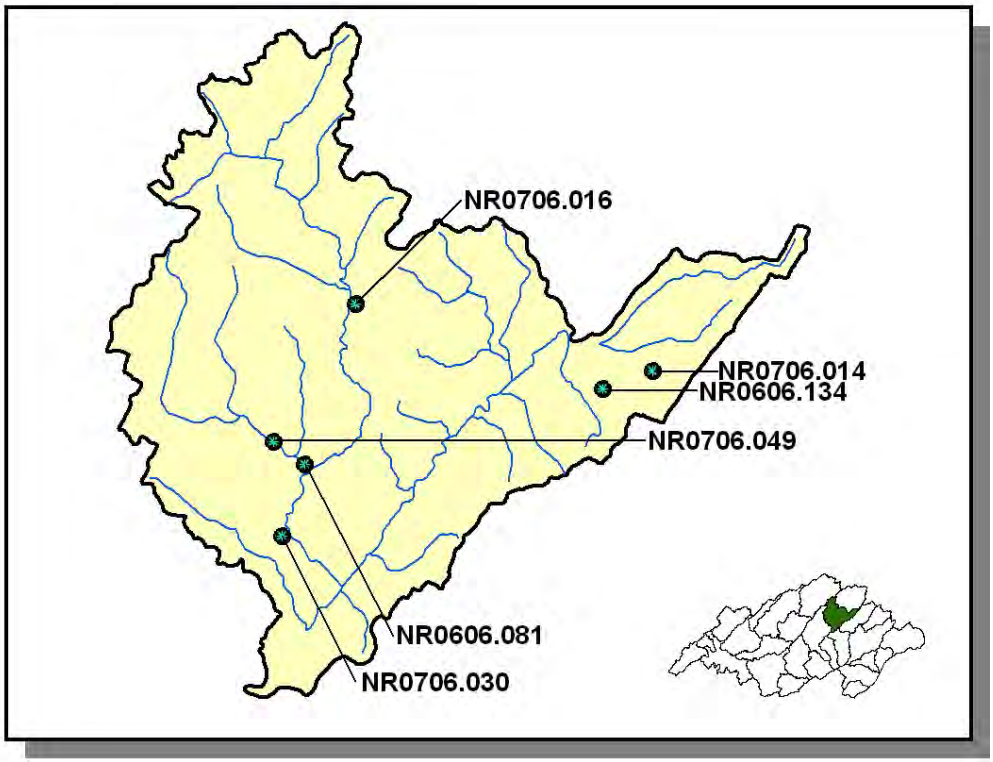


Figure 4-112. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080402. *More information is provided in Appendix IV.*

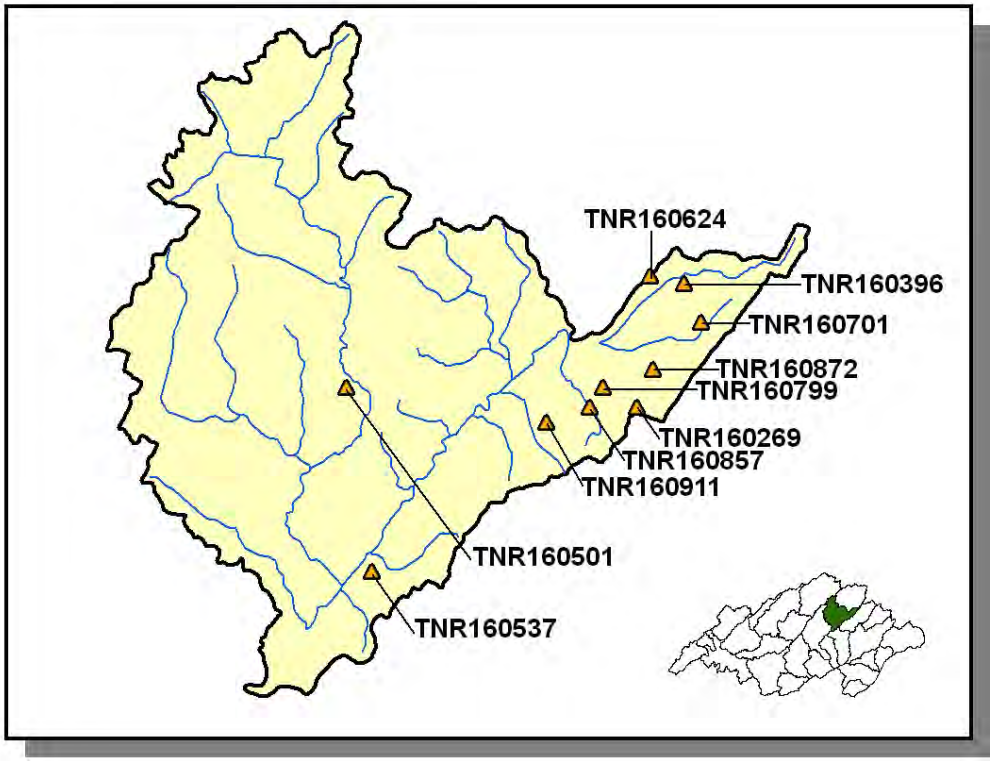


Figure 4-113. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080402. *More information is provided in Appendix IV.*

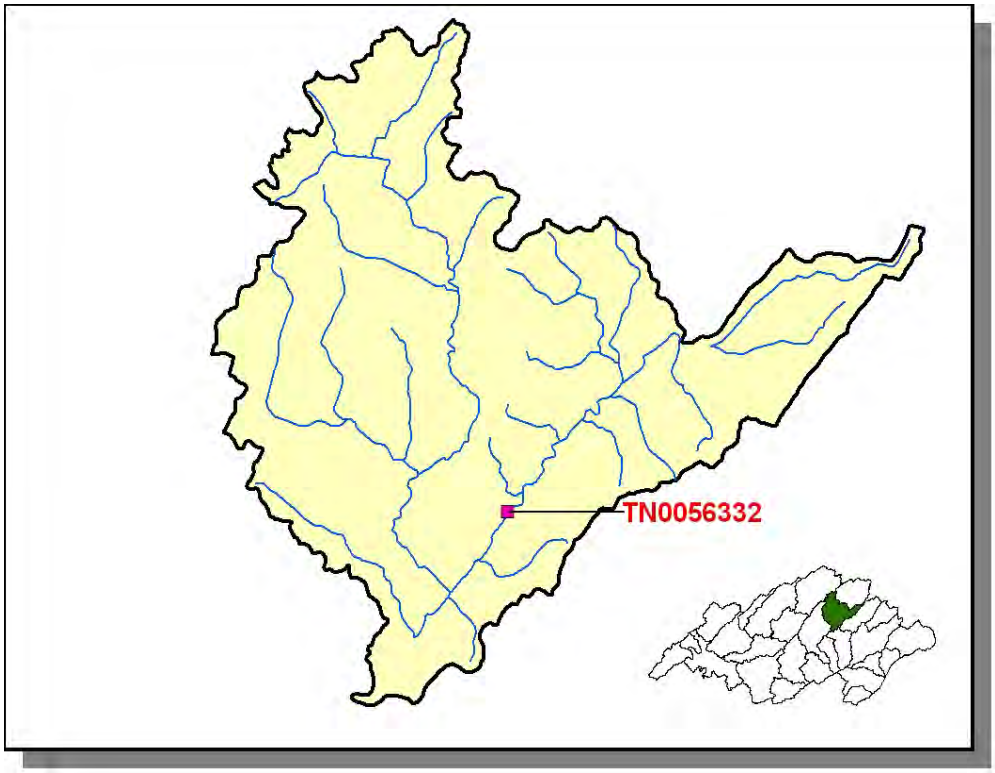


Figure 4-114. Location of Permitted Municipal and Industrial Facilities in Subwatershed 060101080402. *Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the names of facilities, is provided in Appendix IV.*

PERMIT #	7Q10	DISCHARGE FLOW
TN0056332	11.6	0.005

Table 4-64. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080402. *Data are in million gallons per day (MGD).Data were obtained from permit files.*

PERMIT #	BOD_5	DO	E. *coli*	FLOW	TSS	SS	TRC	pH
TN0056332	X	X	X	X	X	X	X	X

Table 4-65. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080402. *BOD_5, Biochemical Oxygen Demand (5-Day); DO, Dissolved Oxygen; TSS, Total Suspended Solids; SS, Settleable Solids; TRC, Total Residual Chlorine.*

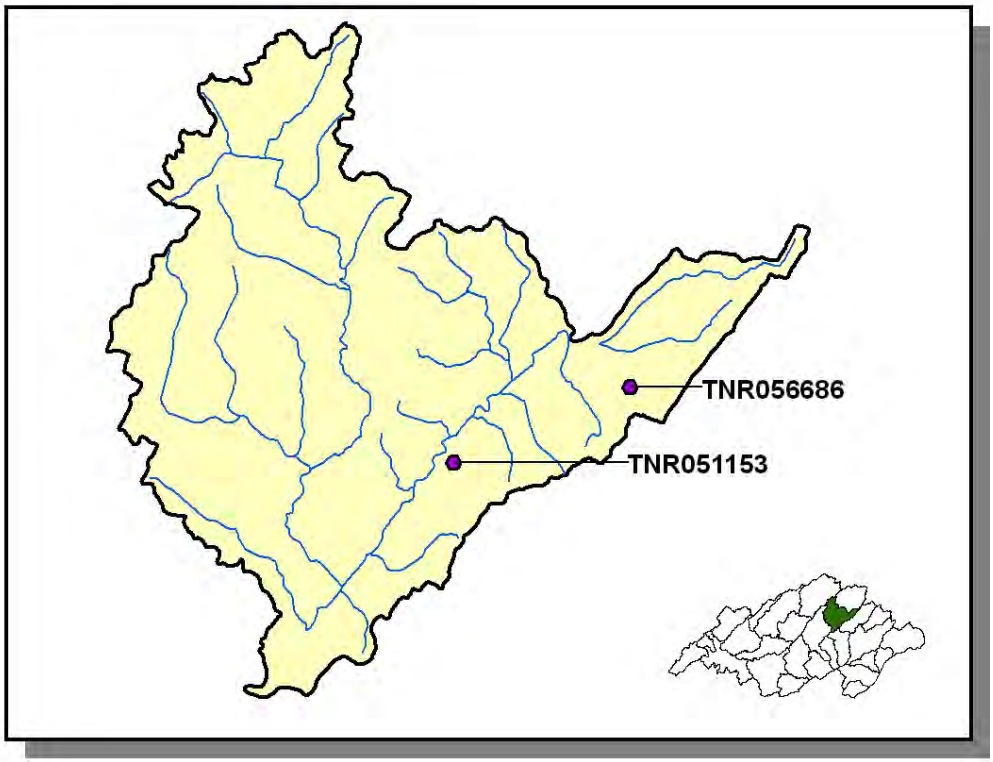


Figure 4-115. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080402. *More information is provided in Appendix IV.*

4.2.K.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Greene	33,962	72,582	7,282	1,190	495	226
Washington	23,073	53,186	5,190	38	262	353

Table 4-66. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Greene	180.0	171.8	2.0	10.5

Table 4-67. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	14.74
Tobacco (Row Crops)	9.87
Other Vegetable and Truck Crop	3.80
Farmsteads and Ranch Headquarters	0.75
Grass (Pastureland)	0.48
Grass (Hayland)	0.44
Grass Forbs Legumes Mixed (Pastureland)	0.41
Legume (Hayland)	0.26
Legume Grass (Hayland)	0.25

Table 4-68. Annual Estimated Total Soil Loss in Subwatershed 060101080402.

4.2.L. 060101080501 (Sink Creek, Nolichucky River).

4.2.L.i. General Description.

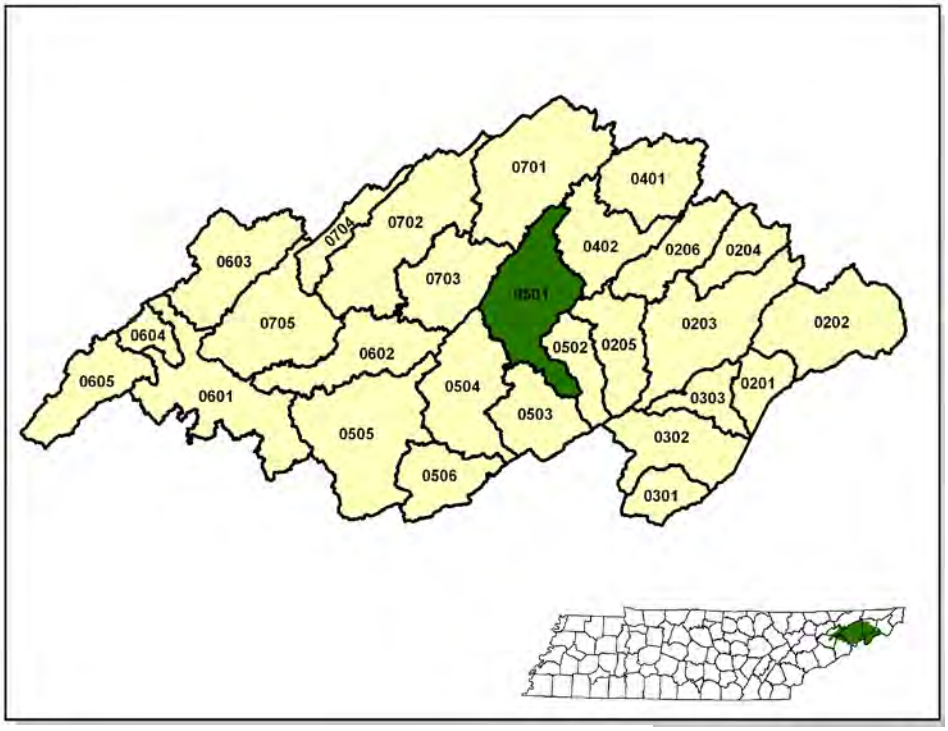


Figure 4-116. Location of Subwatershed 060101080501. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

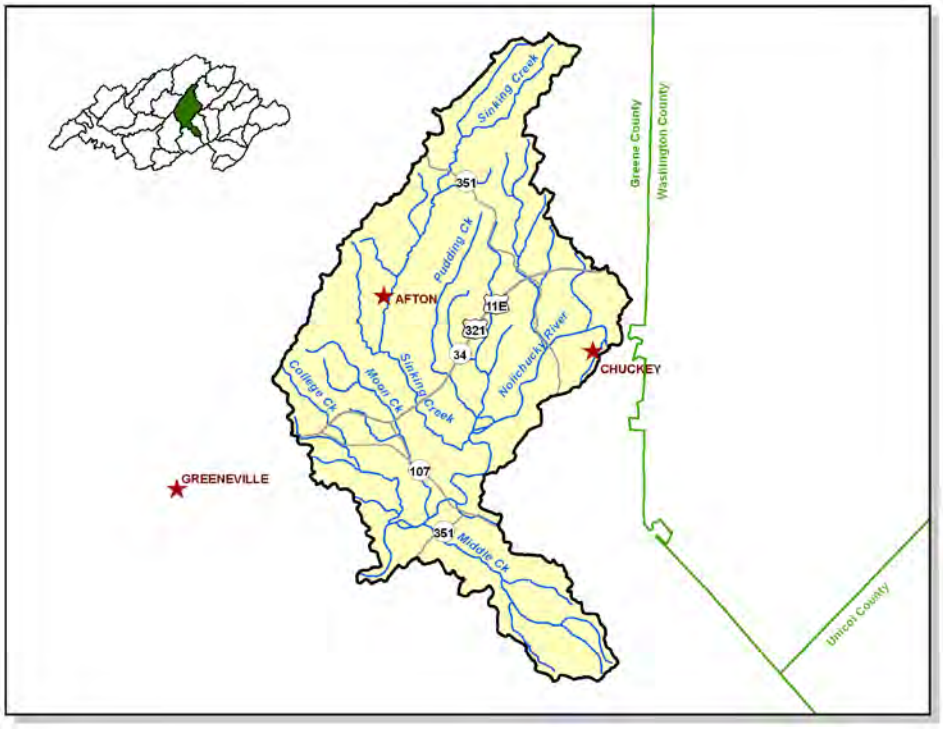


Figure 4-117. Locational Details of Subwatershed 060101080501.

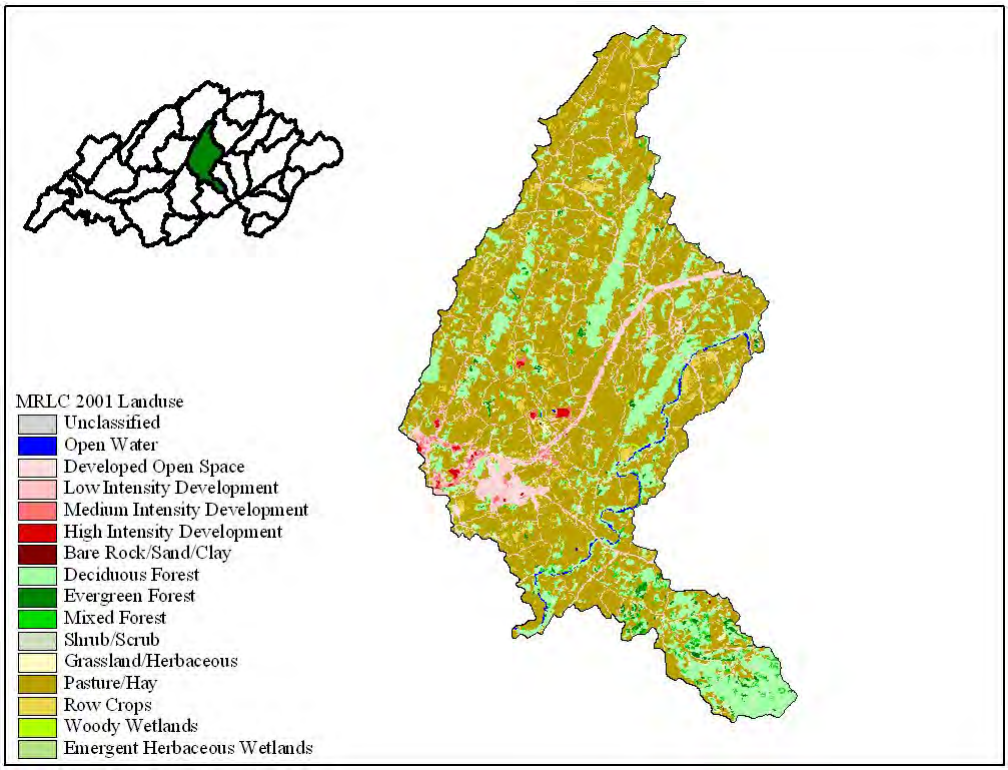


Figure 4-118. Illustration of Land Use Distribution in Subwatershed 060101080501.

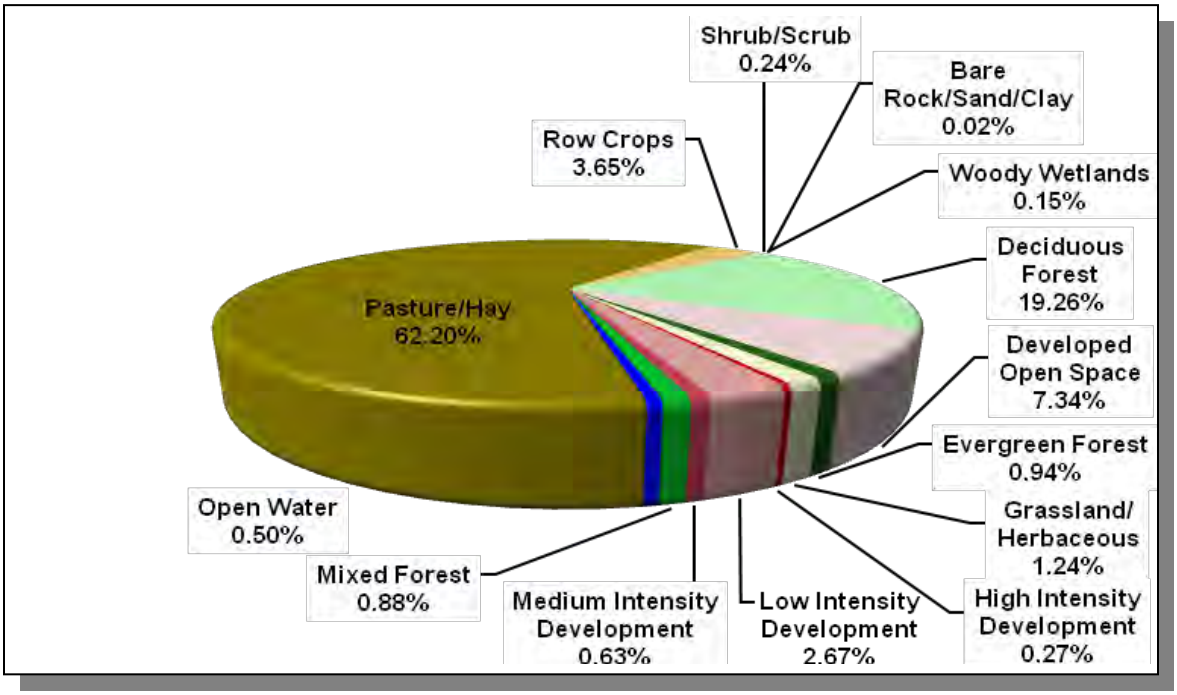


Figure 4-119. Land Use Distribution in Subwatershed 060101080501. *More information is provided in Appendix IV.*

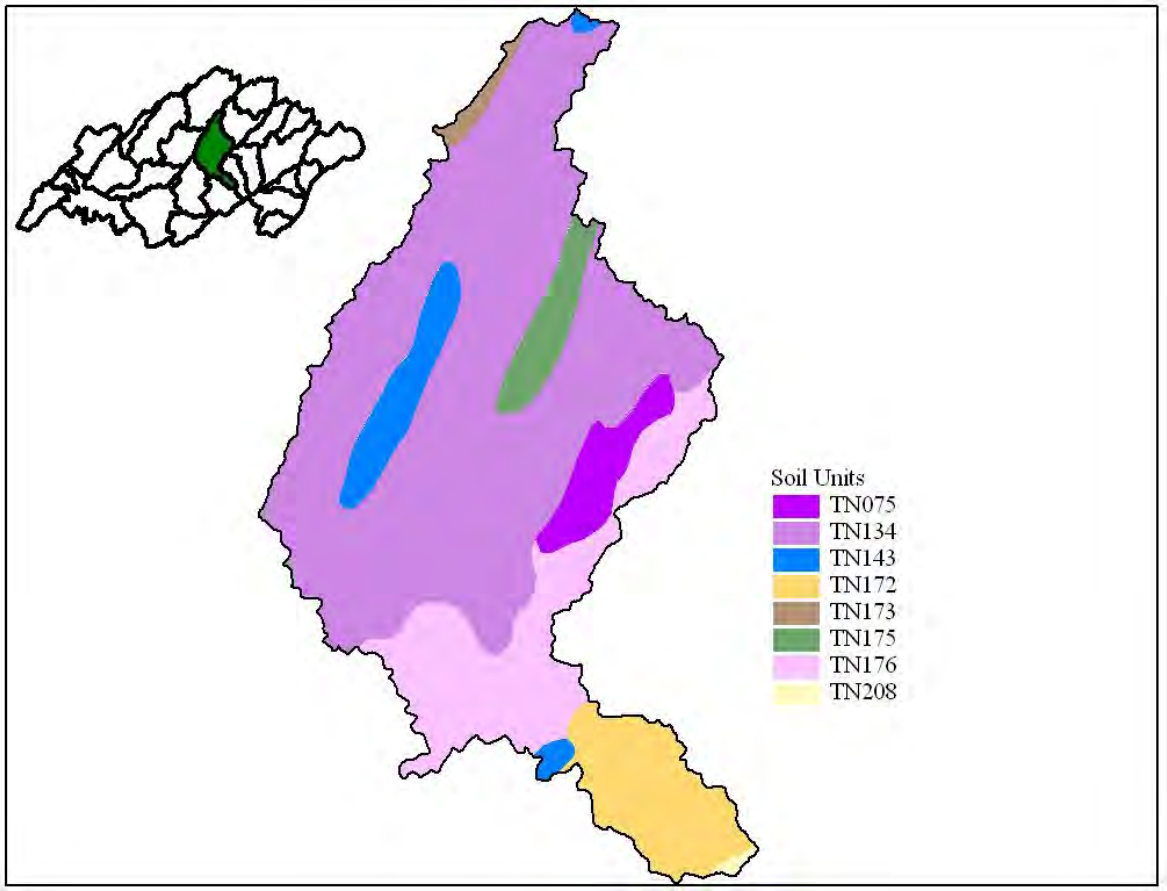


Figure 4-120. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080501.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN075	0.00	B	1.33	5.24	Loam	0.31
TN134	0.00	B	1.38	5.18	Loam	0.31
TN143	0.00	C	1.22	6.44	Loam	0.32
TN172	0.00	B	3.87	5.13	Loam	0.26
TN173	0.00	C	0.56	2.26	Loam	0.14
TN175	0.00	B	1.49	5.23	Loam	0.30
TN176	12.00	B	1.30	5.34	Loam	0.31
TN208	0.00	C	4.02	4.84	Loam	0.25

Table 4-69. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080501. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Greene	55,853	59,369	62,909	8.97	5,009	5,324	5,641	12.60

Table 4-70. Population Estimates in Subwatershed 060101080501.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Greeneville	Greene	13,532	6,058	5,779	279	0

Table 4-71. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 060101080501.

4.2.L.ii. USGS Gaging Stations and STORET Sites.

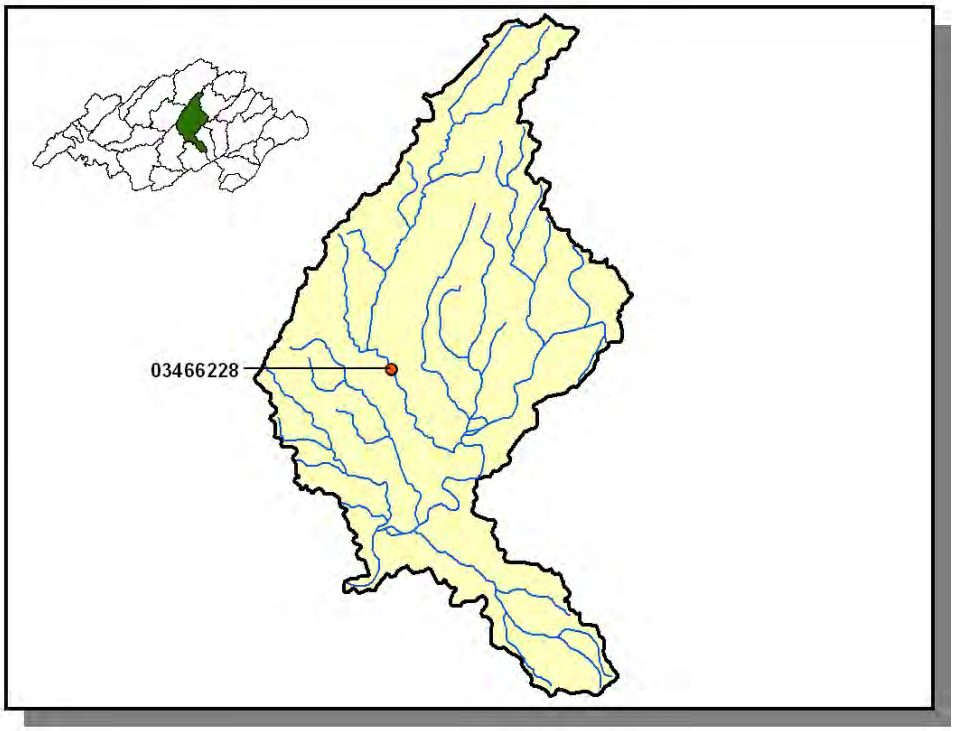


Figure 4-121. Location of USGS Continuous Record Gaging Stations in Subwatershed 060101080501. *More information is provided in Appendix IV.*

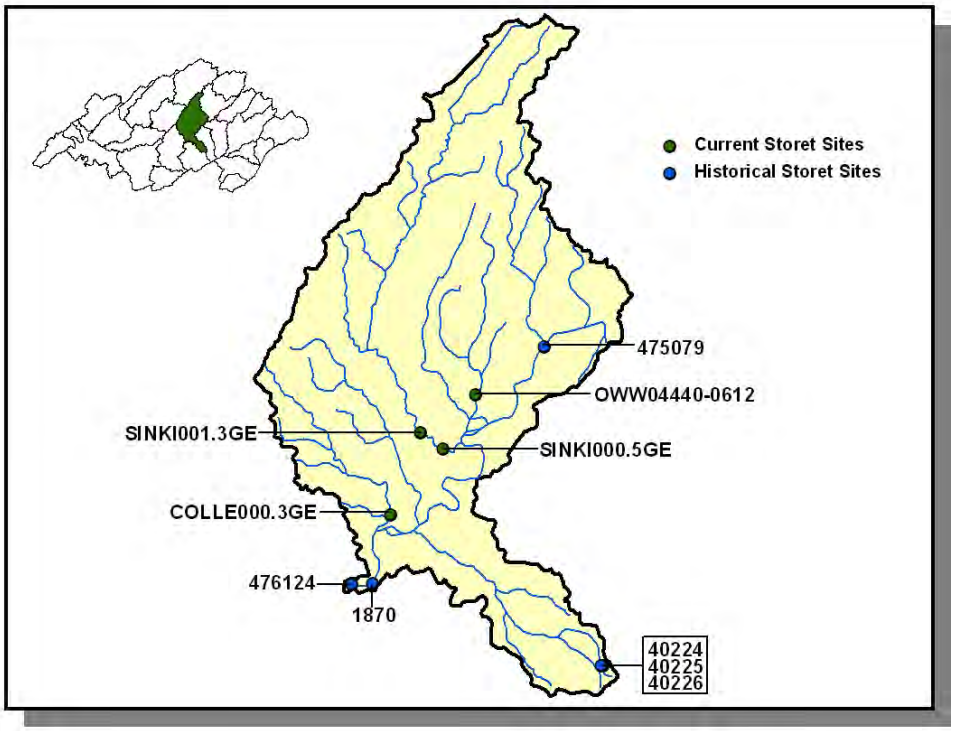


Figure 4-122. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080501. *More information, including site names and locations, is provided in Appendix IV.*

4.2.L.iii. Permitted Activities.

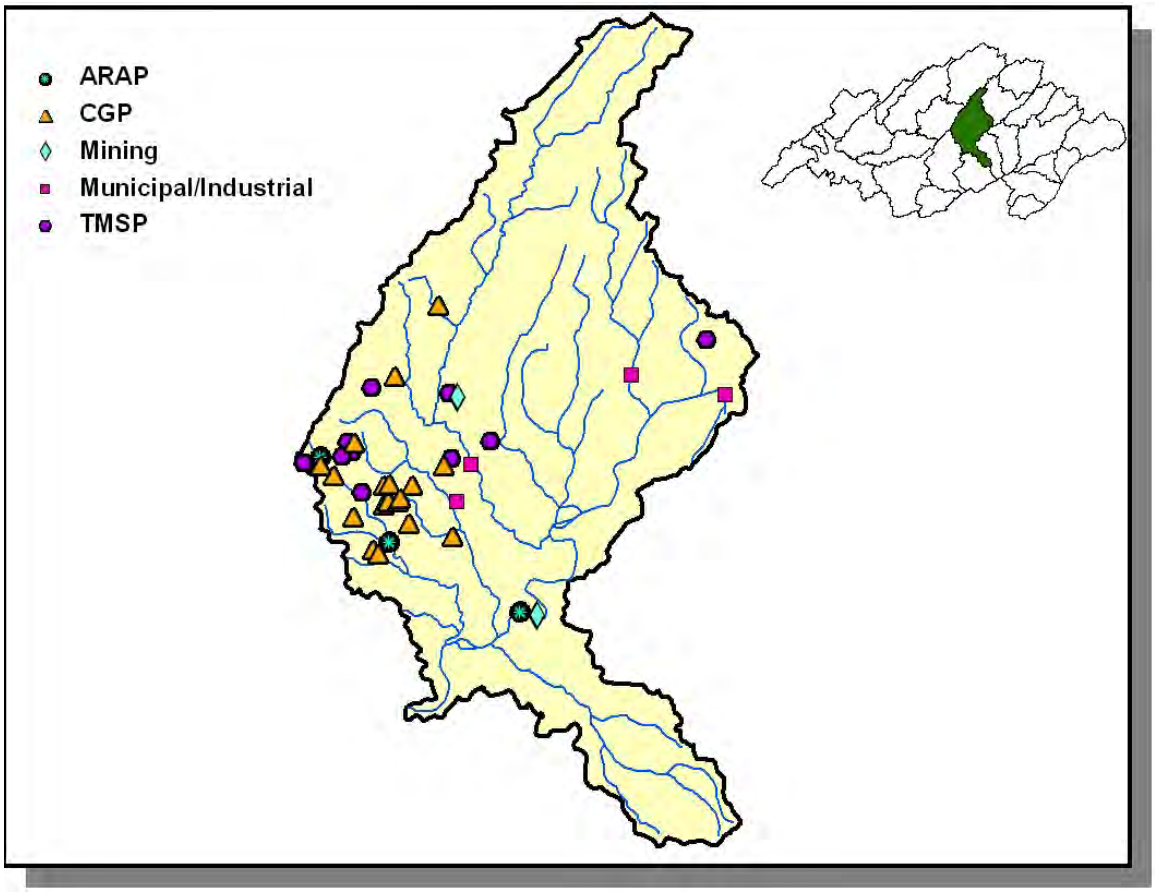


Figure 4-123. Location of Permits Issued in Subwatershed 060101080501. *More information, including the names of facilities, is provided in Appendix IV.*

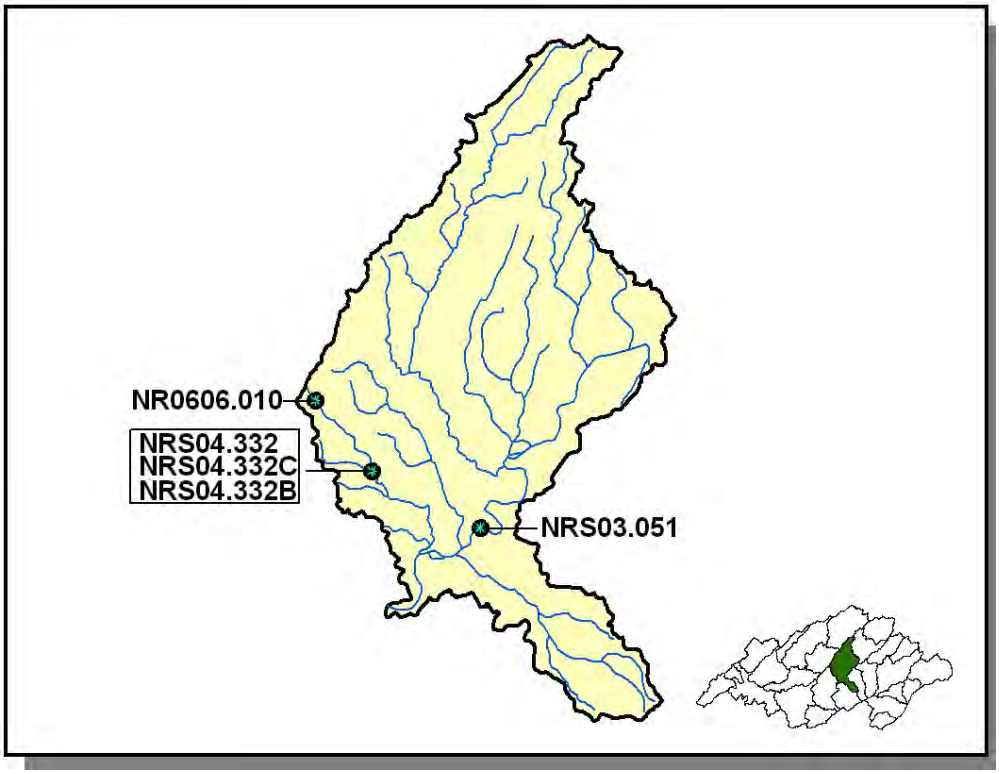


Figure 4-124. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080501. *More information is provided in Appendix IV.*

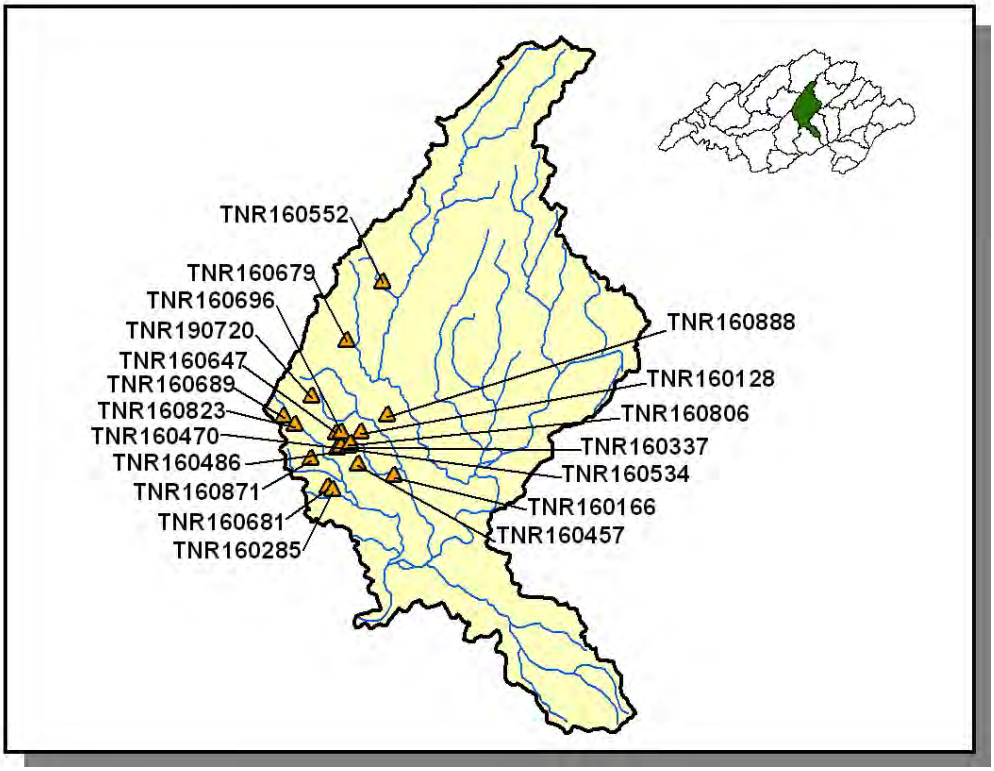


Figure 4-125. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080501. *More information is provided in Appendix IV.*

Figure 4-126. Location of Permitted Mining Facilities in Subwatershed 060101080501. *More information is provided in Appendix IV.*

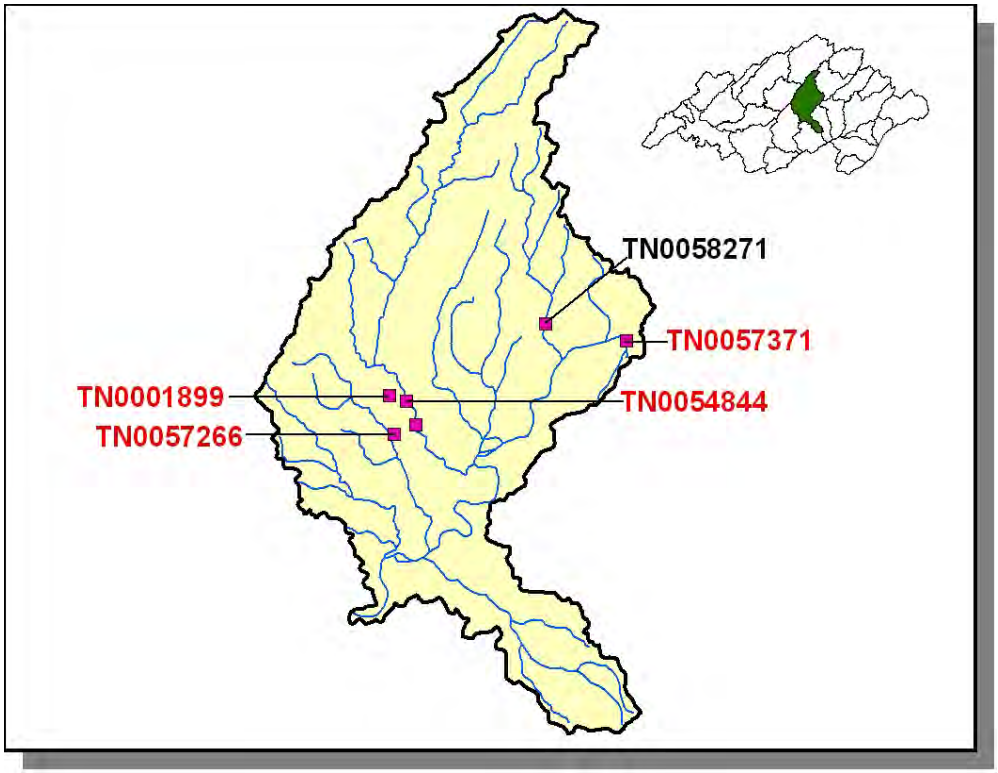


Figure 4-127. Location of Permitted Municipal and Industrial Facilities in Subwatershed 060101080501. *Permit numbers in red indicate that the facility discharges to a facility listed on the 2006 303(d) list. More information, including the names of facilities, is provided in Appendix IV.*

PERMIT #	7Q10	30Q2	DISCHARGE FLOW
TN0001899	0.99	2.15	3.600
TN0054844	2.11		0.024
TN0057266	0.0		0.005
TN0057371	103.4		0.015

Table 4-72. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080501. *Data are in million gallons per day (MGD).Data were obtained from permit files.*

PERMIT #	Ag	Cd	Cu	Cr	Ni	Pb	Zn
TN0001899	X	X	X	X	X	X	X

Table 4-73. Metal Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080501.

PERMIT #	$CBOD_5$	BOD_5	FECAL COLIFORM	E. *coli*	TRC	AMMONIA AS N TOTAL	CYANIDE TOTAL (CN-)
TN0001899							X
TN0054844		X		X	X	X	
TN0057266	X		X		X	X	
TN0057371		X	X		X		

Table 4-74. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080501. *$CBOD_5$, Carbonaceous Biochemical Oxygen Demand (5-Day); BOD_5, Biochemical Oxygen Demand (5-Day); TRC, Total Residual Chlorine.*

PERMIT #	WET	FLOW	DO	SS	TSS	TEMPERATURE	pH
TN0001899	X	X				X	X
TN0054844		X	X	X	X		X
TN0057266			X	X	X		X
TN0057371			X	X	X		X

Table 4-75. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080501. *WET, Whole Effluent Toxicity; DO, Dissolved Oxygen; SS, Settleable Solids; TSS, Total Suspended Solids.*

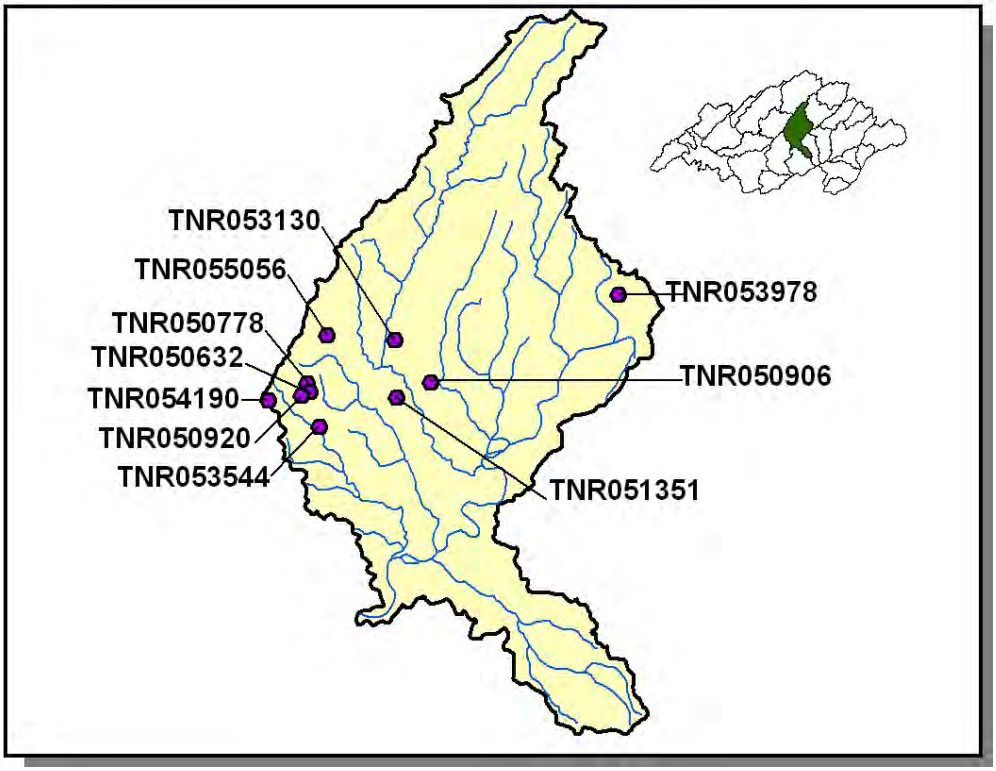


Figure 4-128. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080501. *More information is provided in Appendix IV.*

4.2.L.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Greene	33,962	72,582	7,282	1,190	495	226

Table 4-76. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Greene	180.0	171.8	2.0	10.5

Table 4-77. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	16.75
Tobacco (Row Crops)	15.36
Other Vegetable and Truck Crop	3.80
Farmsteads and Ranch Headquarters	1.67
Grass Forbs Legumes Mixed (Pastureland)	0.40
Grass (Pastureland)	0.35
Legume Grass (Hayland)	0.34
Legume (Hayland)	0.26
Grass (Hayland)	0.14
Corn (Row Crops)	16.75

Table 4-78. Annual Estimated Total Soil Loss in Subwatershed 060101080501.

4.2.M. 060101080502 (Horse Creek).

4.2.M.i. General Description.

Figure 4-129. Location of Subwatershed 060101080502. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

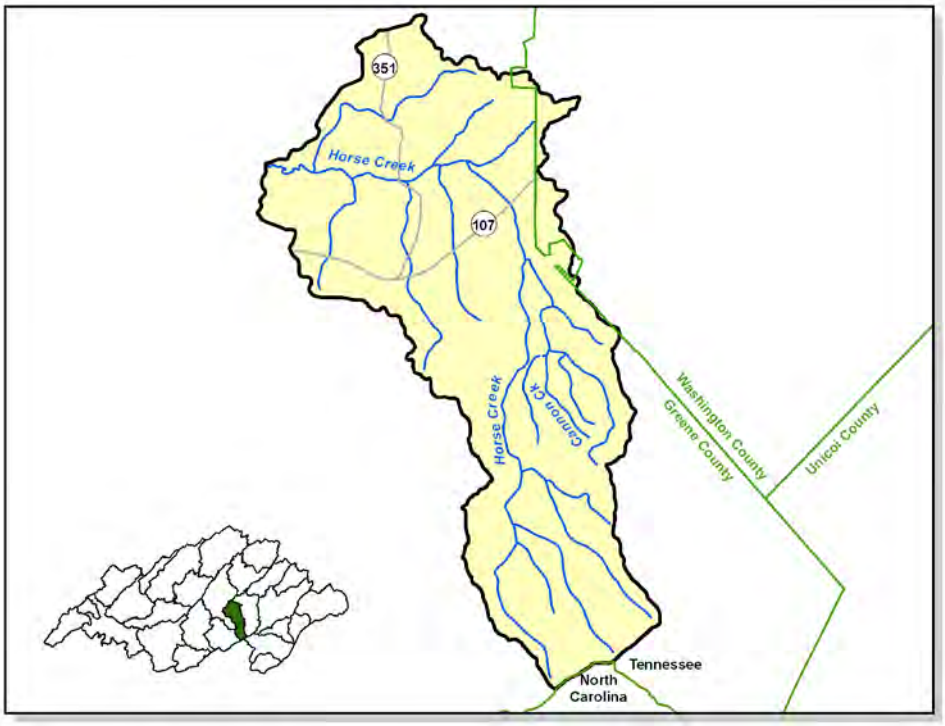


Figure 4-130. Locational Details of Subwatershed 060101080502.

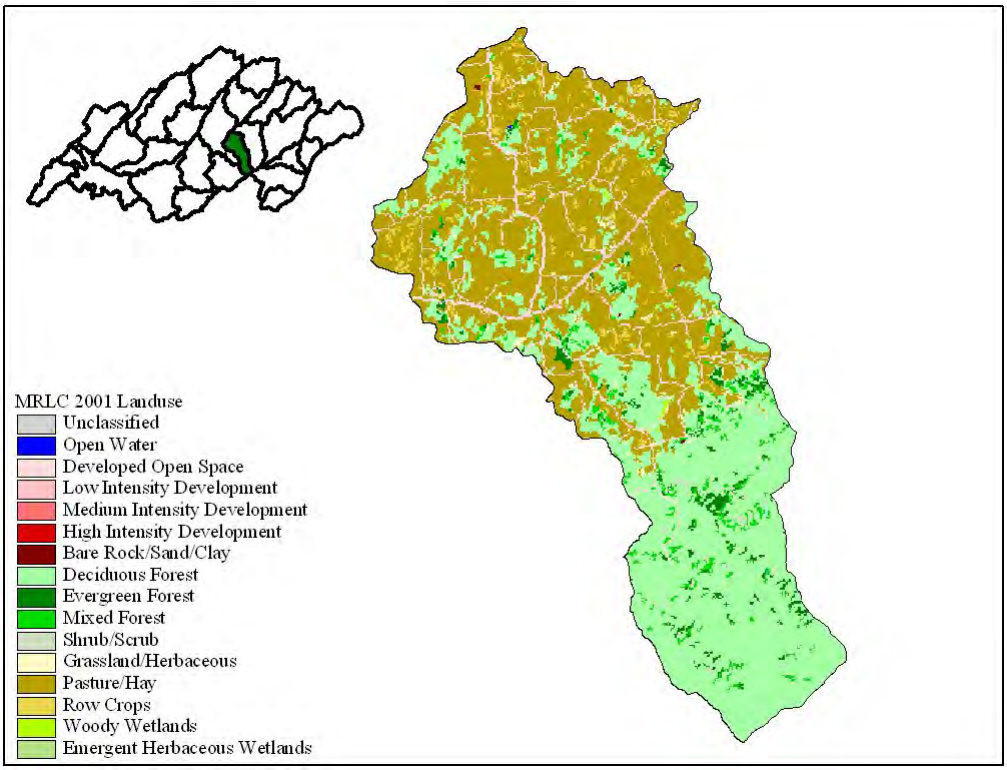


Figure 4-131. Illustration of Land Use Distribution in Subwatershed 060101080502.

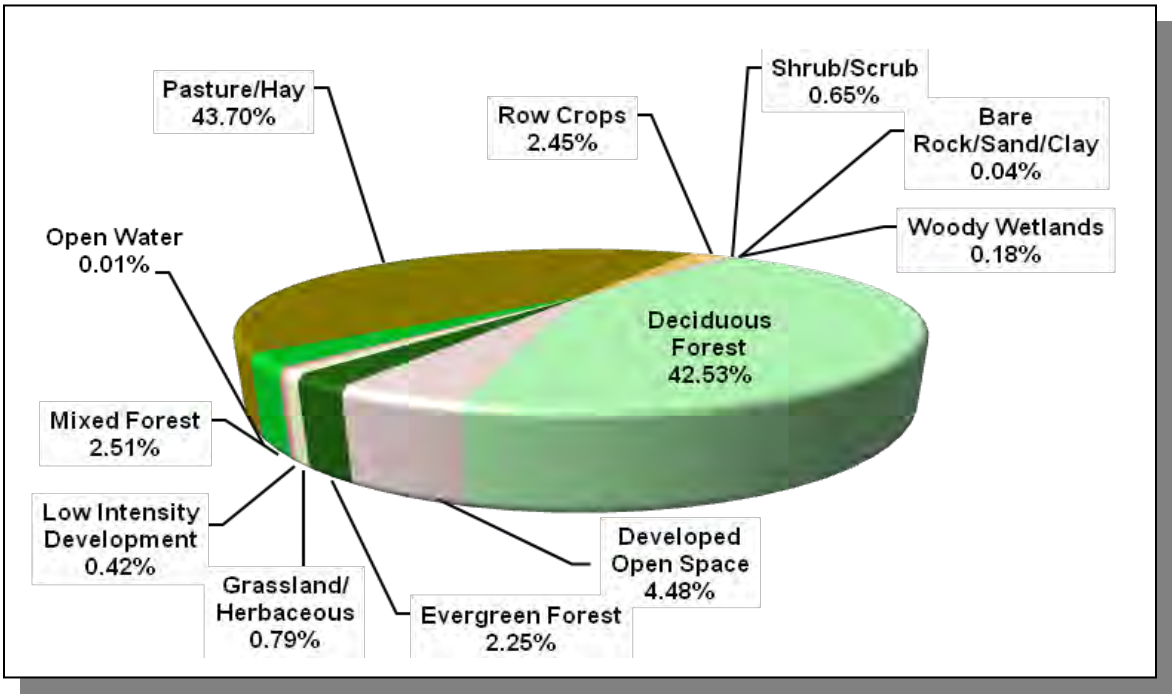


Figure 4-132. Land Use Distribution in Subwatershed 060101080502. *More information is provided in Appendix IV.*

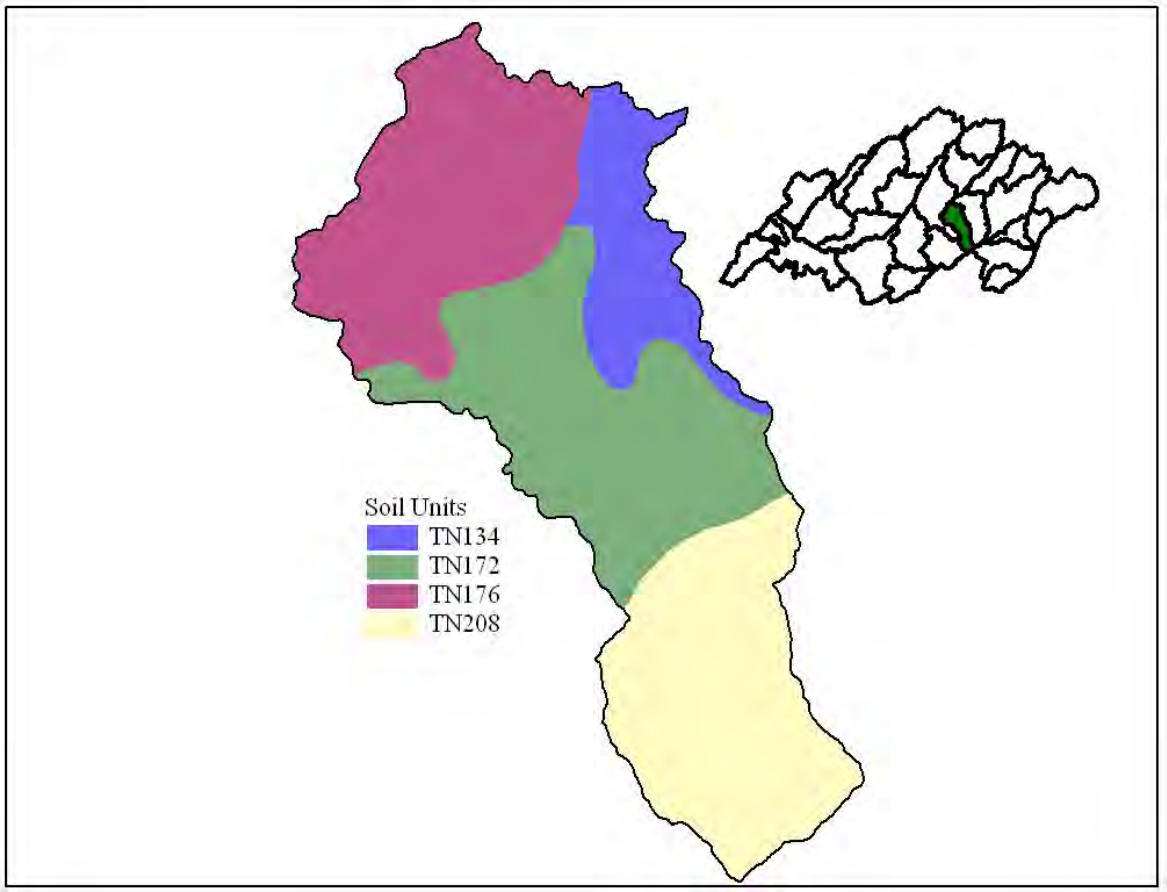


Figure 4-133. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080502.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN134	0.00	B	1.38	5.18	Loam	0.31
TN172	0.00	B	3.87	5.13	Loam	0.26
TN176	12.00	B	1.30	5.34	Loam	0.31
TN208	0.00	C	4.02	4.84	Loam	0.25

Table 4-79. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080502. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Greene	55,853	59,369	62,909	3.33	1,861	1,978	2,096	12.60
Washington	92,315	101,368	107,198	0.31	288	316	334	16.00
Totals	**148,168**	**160,737**	**170,107**		**2,149**	**2,294**	**2,430**	**13.10**

Table 4-80. Population Estimates in Subwatershed 060101080502.

4.2.M.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080502.

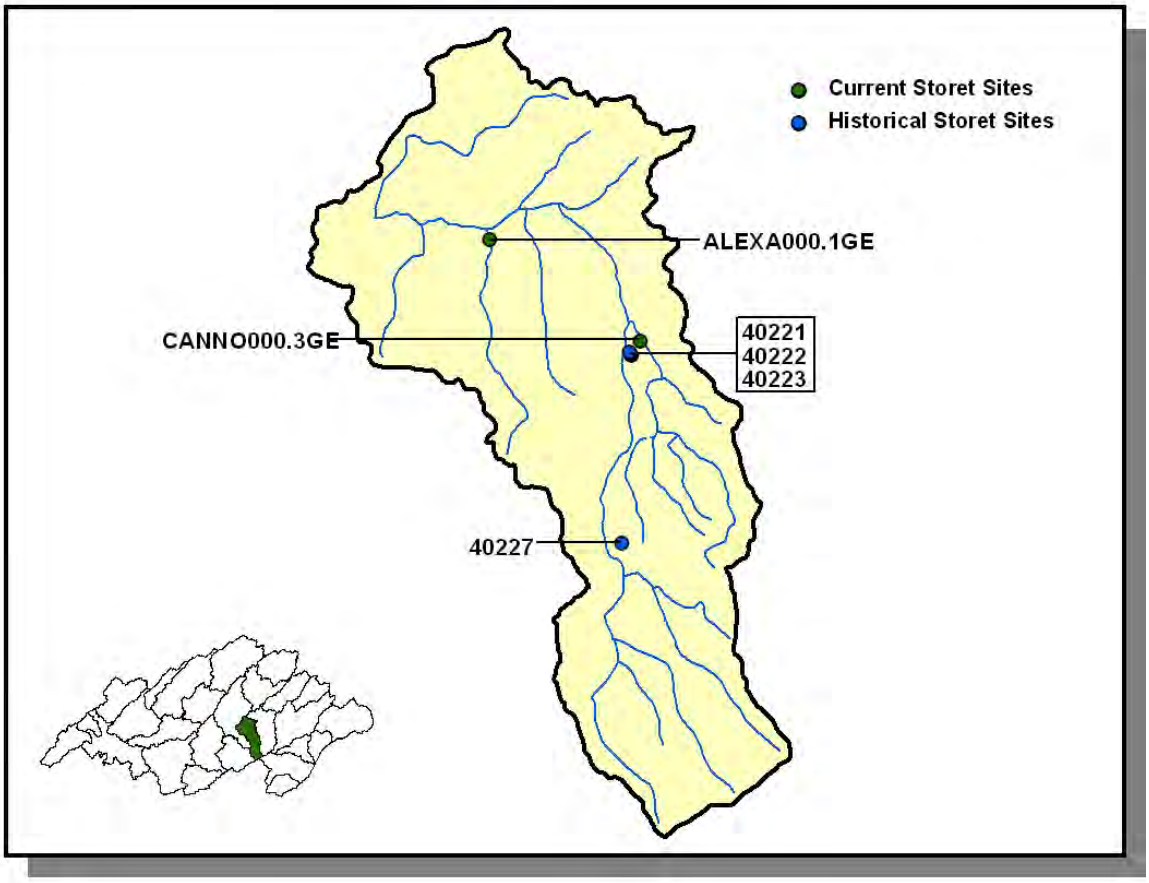


Figure 4-134. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080502. *More information, including site names and locations, is provided in Appendix IV.*

4.2.M.iii. Permitted Activities.

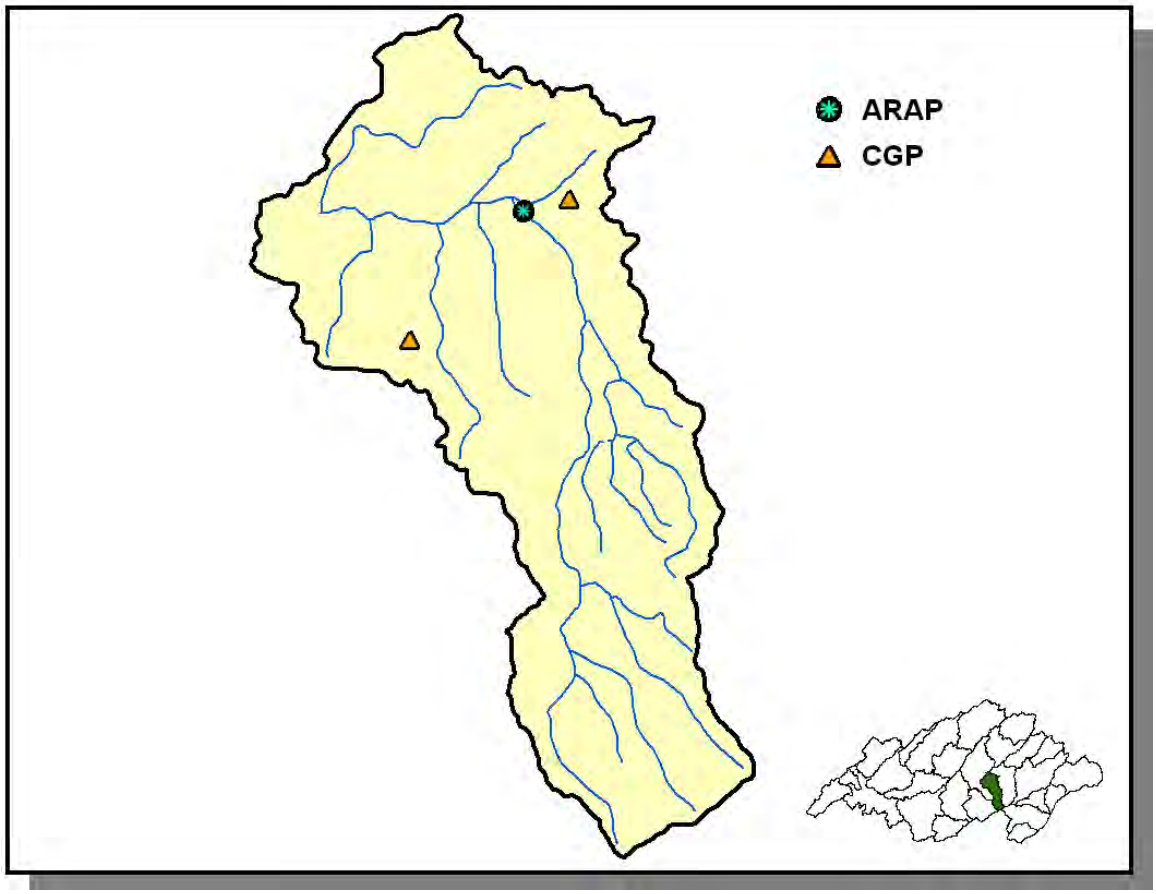


Figure 4-135. Location of Permits Issued in Subwatershed 060101080502. *More information, including the names of facilities, is provided in Appendix IV.*

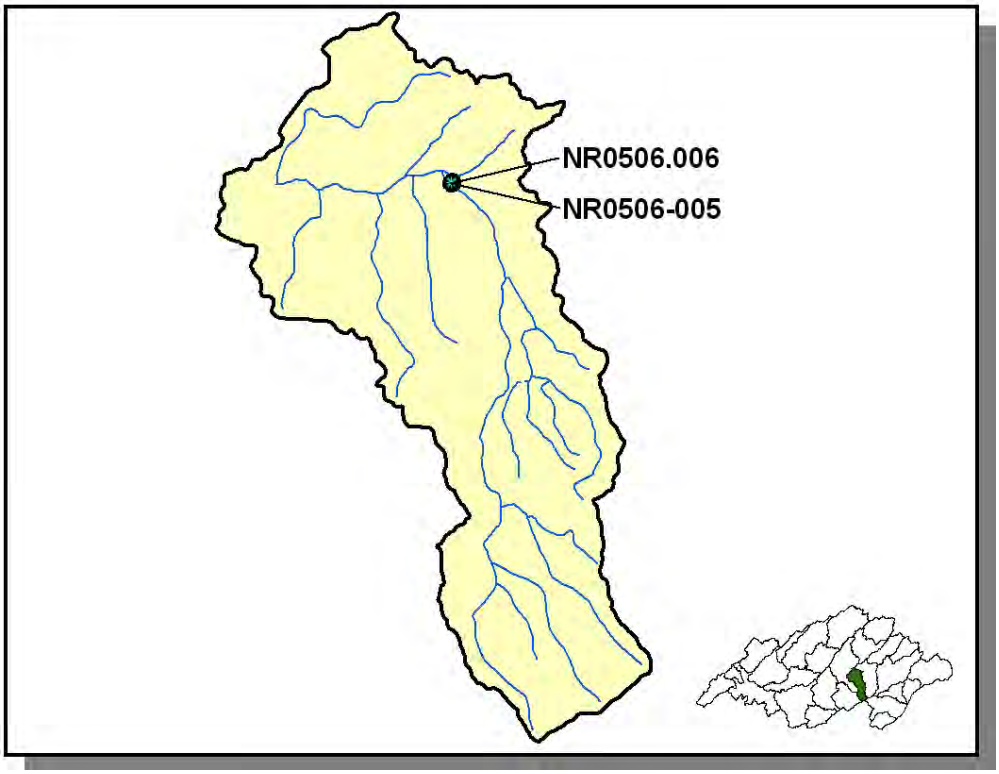


Figure 4-136. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080502. *More information is provided in Appendix IV.*

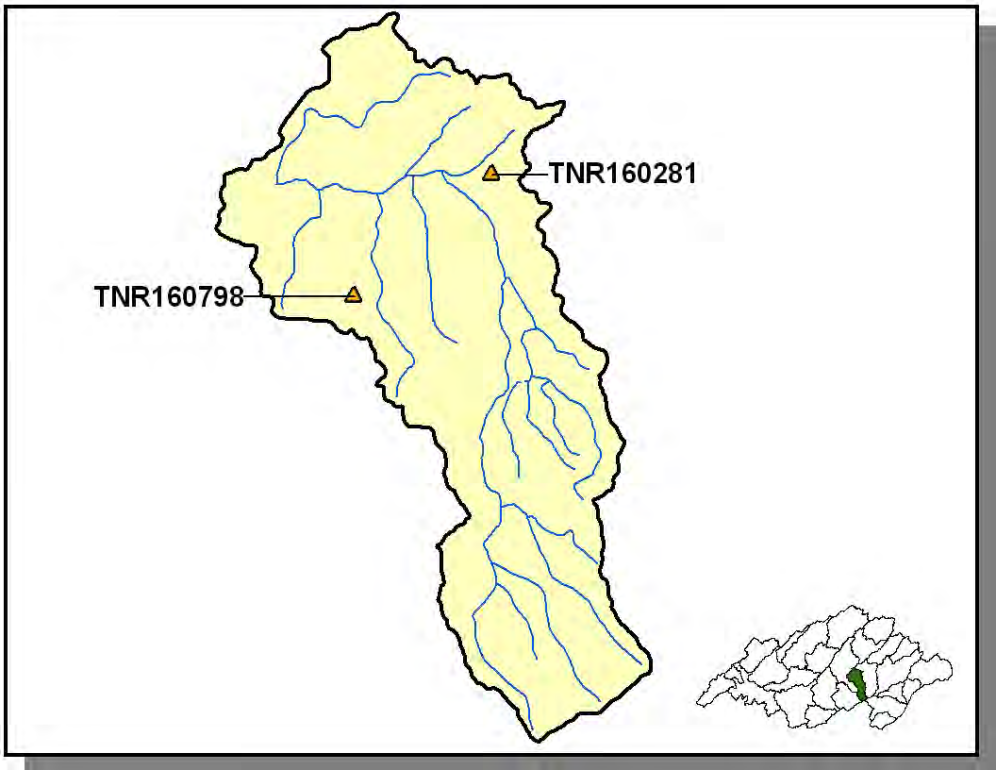


Figure 4-137. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080502. *More information is provided in Appendix IV.*

4.2.M.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Greene	33,962	72,582	7,282	1,190	495	226
Washington	23,073	53,186	5,190	38	262	353

Table 4-81. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Greene	180.0	171.8	2.0	10.5

Table 4-82. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	16.60
Tobacco (Row Crops)	14.95
Other Vegetable and Truck Crop	3.80
Farmsteads and Ranch Headquarters	1.60
Grass Forbs Legumes Mixed (Pastureland)	0.40
Grass (Pastureland)	0.36
Legume Grass (Hayland)	0.33
Legume (Hayland)	0.26
Grass (Hayland)	0.16

Table 4-83. Annual Estimated Total Soil Loss in Subwatershed 060101080502.

4.2.N. 060101080503 (Camp Creek).

4.2.N.i. General Description.

Figure 4-138. Location of Subwatershed 060101080503. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

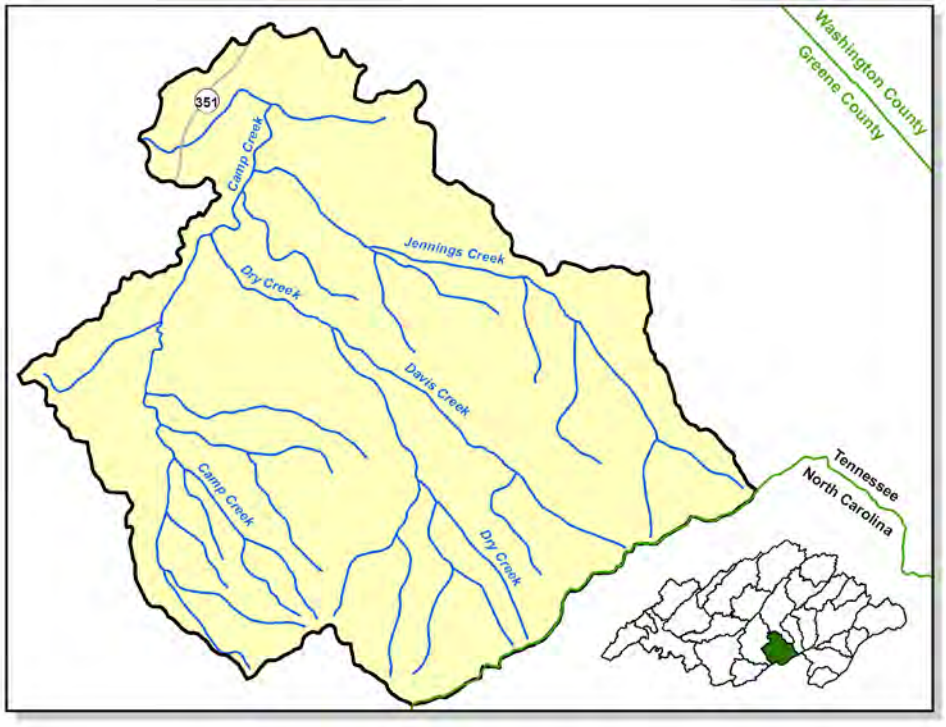


Figure 4-139. Locational Details of Subwatershed 060101080503.

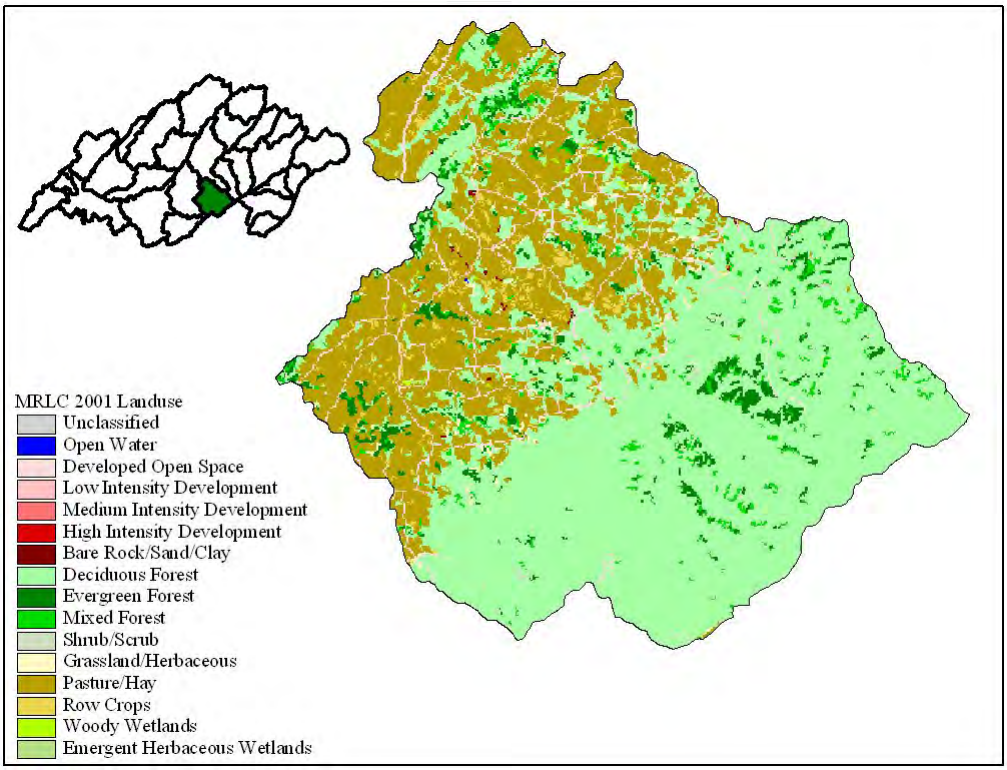


Figure 4-140. Illustration of Land Use Distribution in Subwatershed 060101080503.

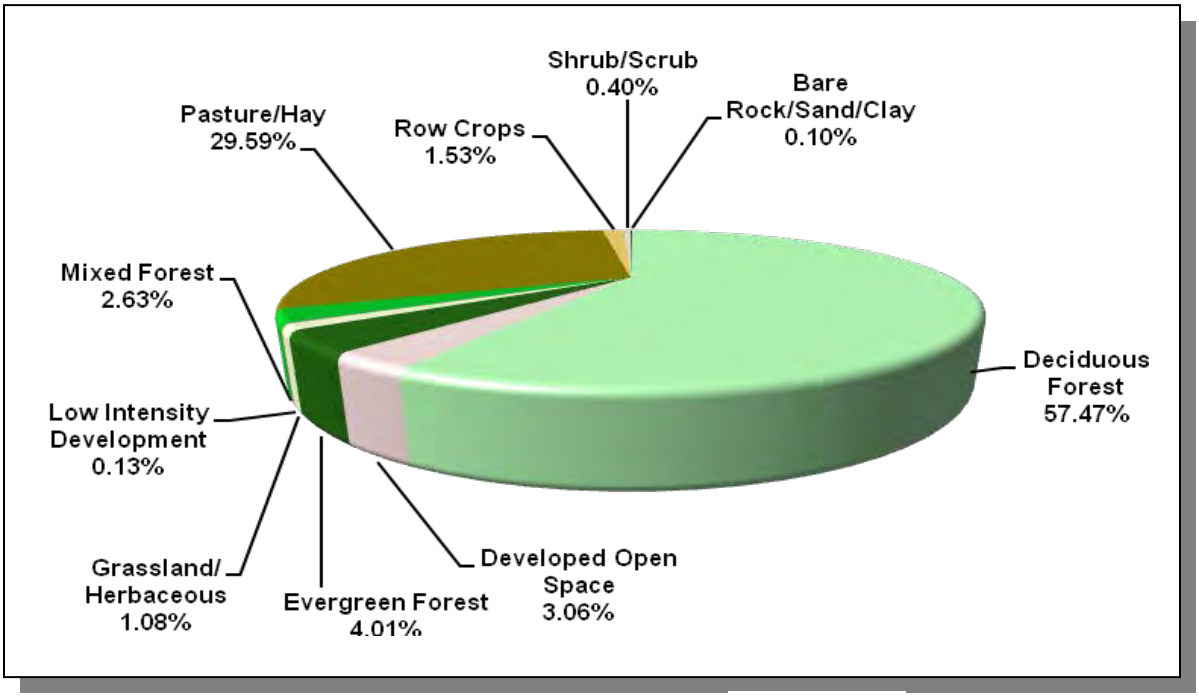


Figure 4-141. Land Use Distribution in Subwatershed 060101080503. *More information is provided in Appendix IV.*

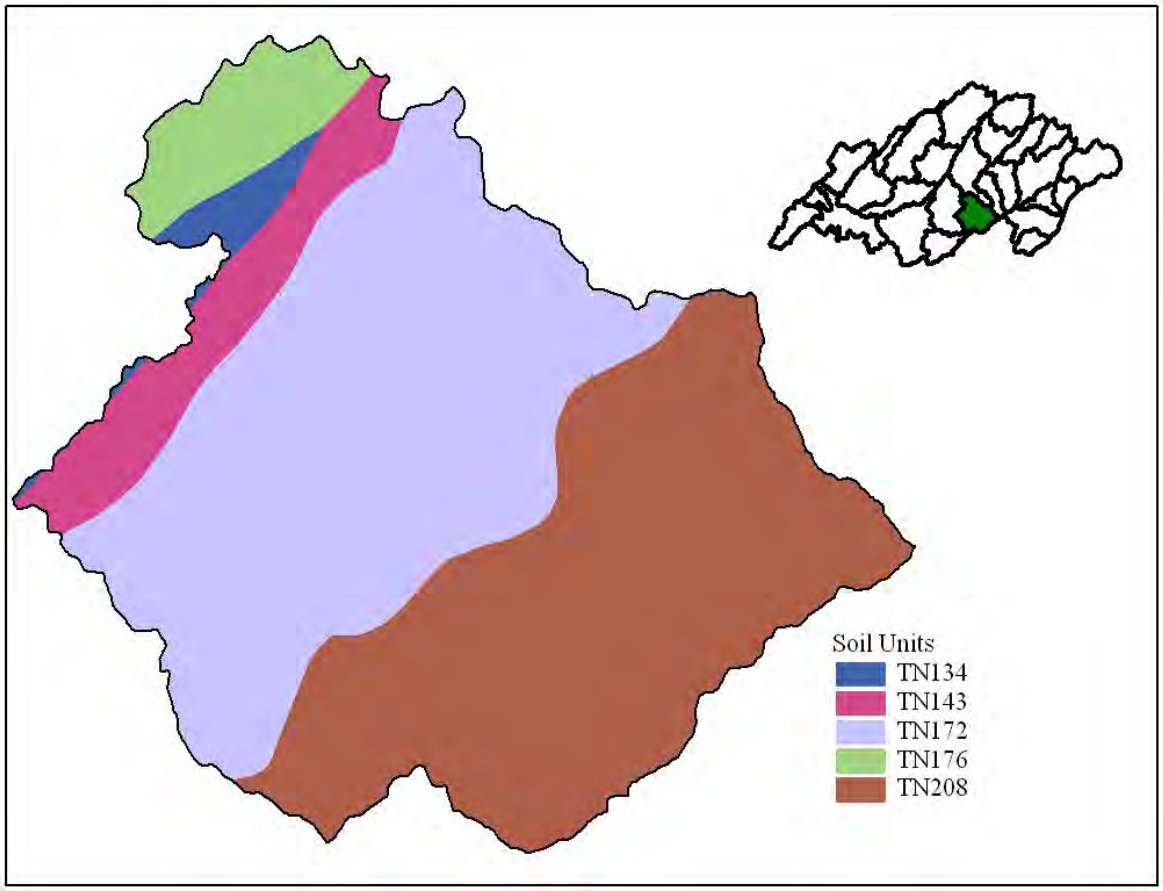


Figure 4-142. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080503.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN134	0.00	B	1.38	5.18	Loam	0.31
TN143	0.00	C	1.22	6.44	Loam	0.32
TN172	0.00	B	3.87	5.13	Loam	0.26
TN176	12.00	B	1.30	5.34	Loam	0.31
TN208	0.00	C	4.02	4.84	Loam	0.25

Table 4-84. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080503. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Greene	55,853	59,369	62,909	5.37	2,999	3,188	3,378	12.6

Table 4-85. Population Estimates in Subwatershed 060101080503.

4.2.N.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080503.

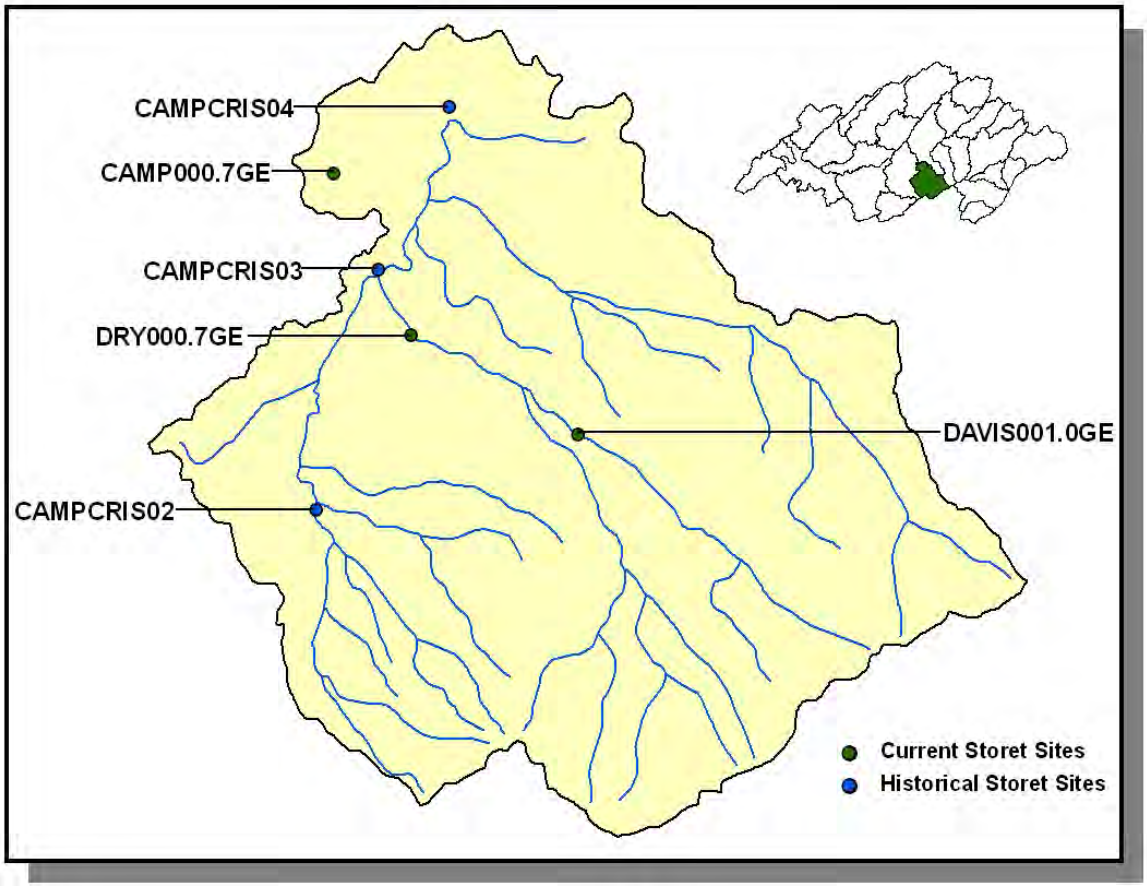


Figure 4-143. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080503. *More information, including site names and locations, is provided in Appendix IV.*

4.2.N.iii. Permitted Activities.

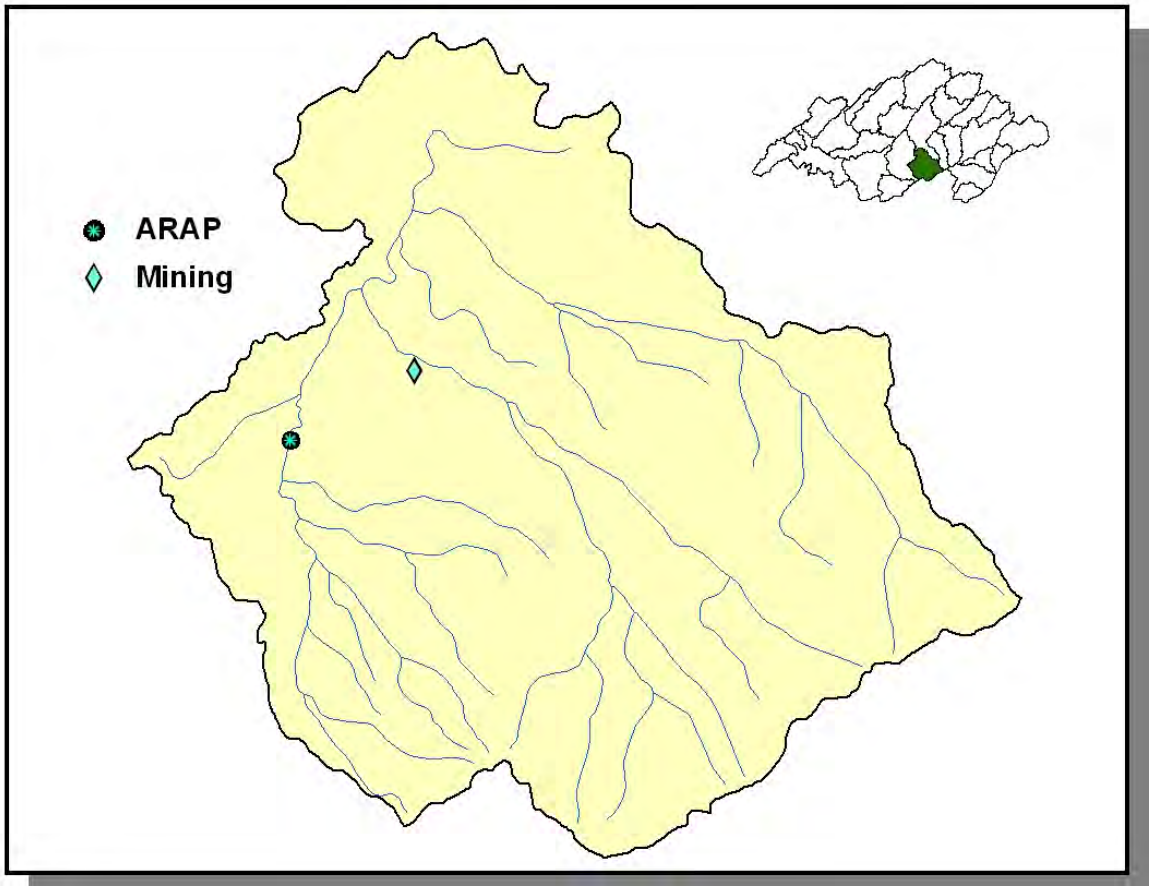


Figure 4-144. Location of Permits Issued in Subwatershed 060101080503. *More information, including the names of facilities, is provided in Appendix IV.*

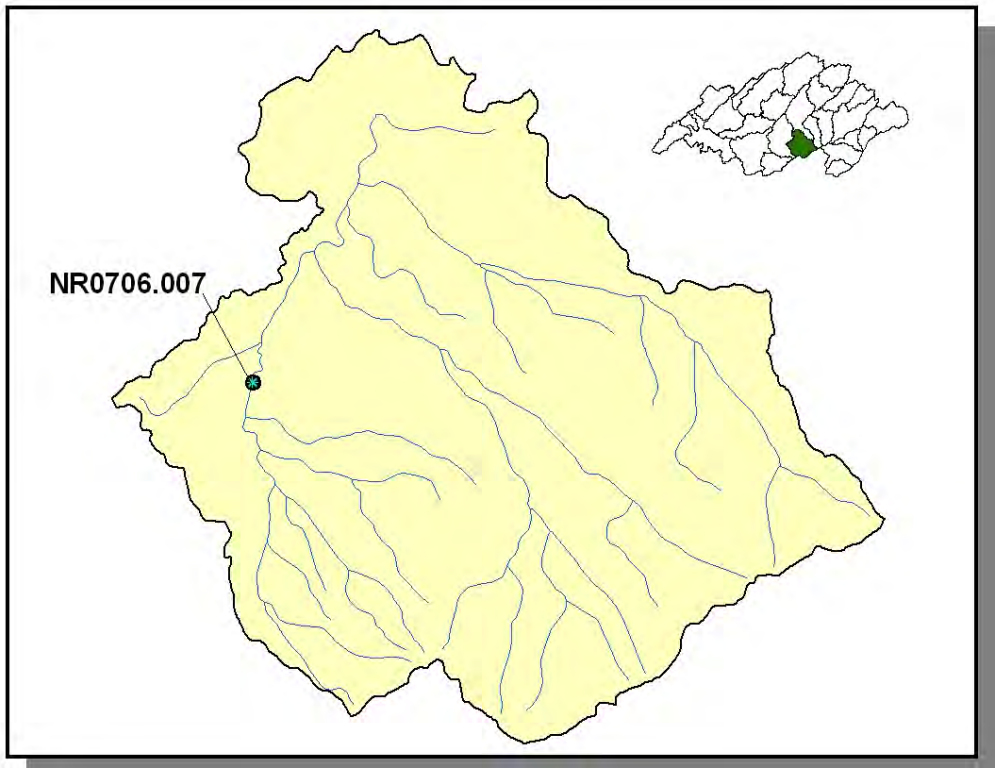


Figure 4-145. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080503. *More information is provided in Appendix IV.*

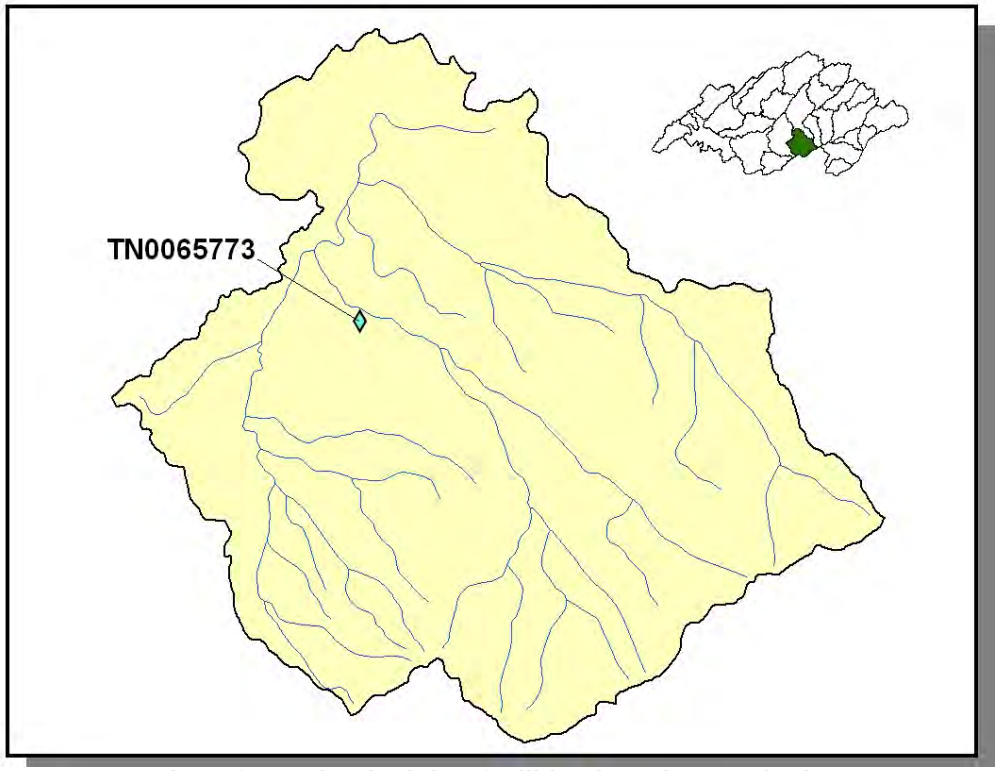


Figure 4-146. Location of permitted Mining facilities in Subwatershed 060101080503. *More information is provided in Appendix IV.*

4.2.N.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Greene	33,962	72,582	7,282	1,190	495	226

Table 4-86. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Greene	180.0	171.8	2.0	10.5

Table 4-87. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	16.75
Tobacco (Row Crops)	15.36
Other Vegetable and Truck Crop	3.80
Farmsteads and Ranch Headquarters	1.67
Grass Forbs Legumes Mixed (Pastureland)	0.40
Grass (Pastureland)	0.35
Legume Grass (Hayland)	0.34
Legume (Hayland)	0.26
Grass (Hayland)	0.14

Table 4-88. Annual Estimated Total Soil Loss in Subwatershed 060101080503.

4.2.O. 060101080504 (Richland Creek, Nolichucky River).

4.2.O.i. General Description.

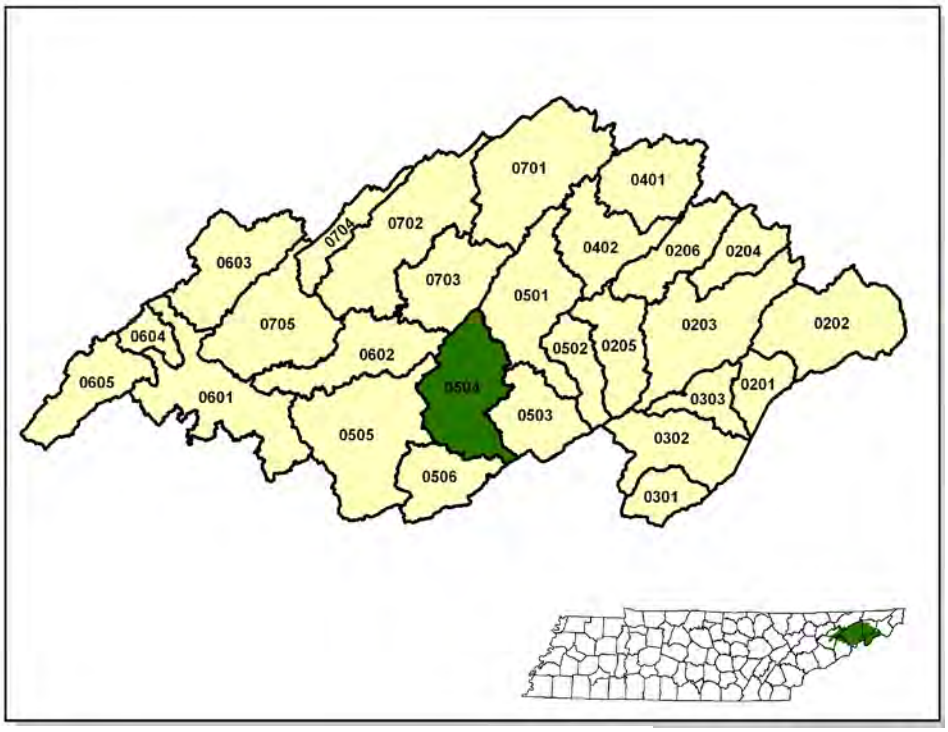


Figure 4-147. Location of Subwatershed 060101080504. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

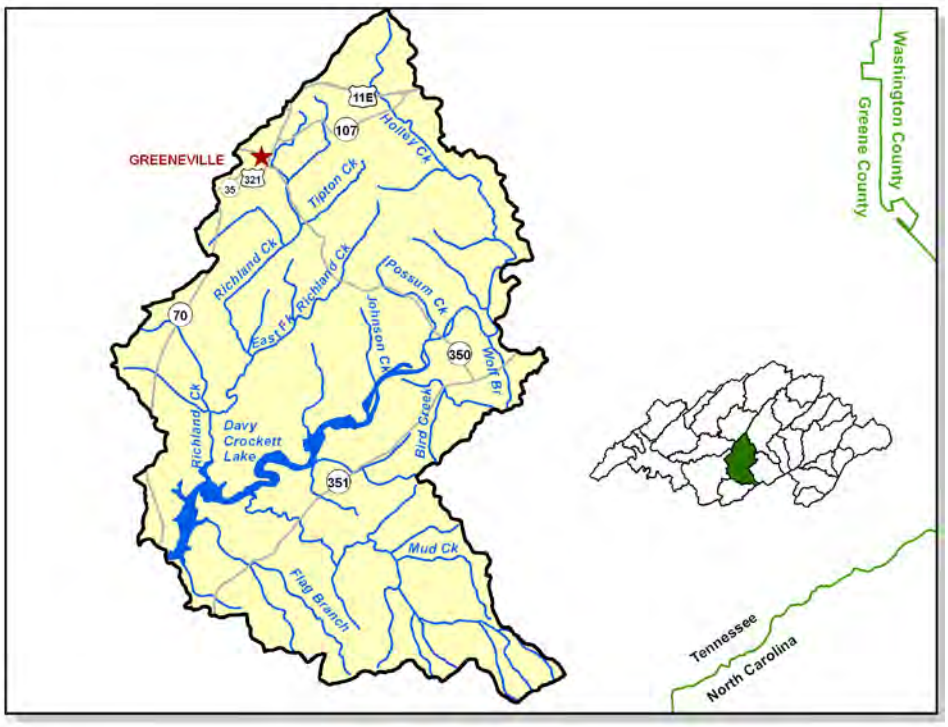


Figure 4-148. Locational Details of Subwatershed 060101080504.

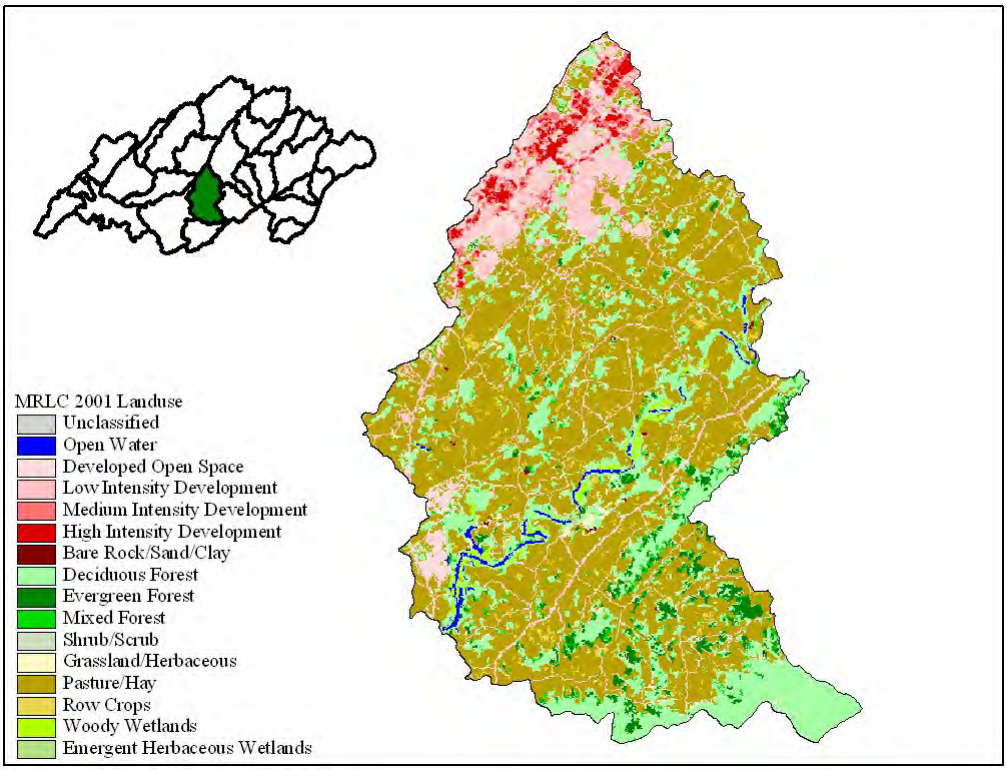


Figure 4-149. Illustration of Land Use Distribution in Subwatershed 060101080504.

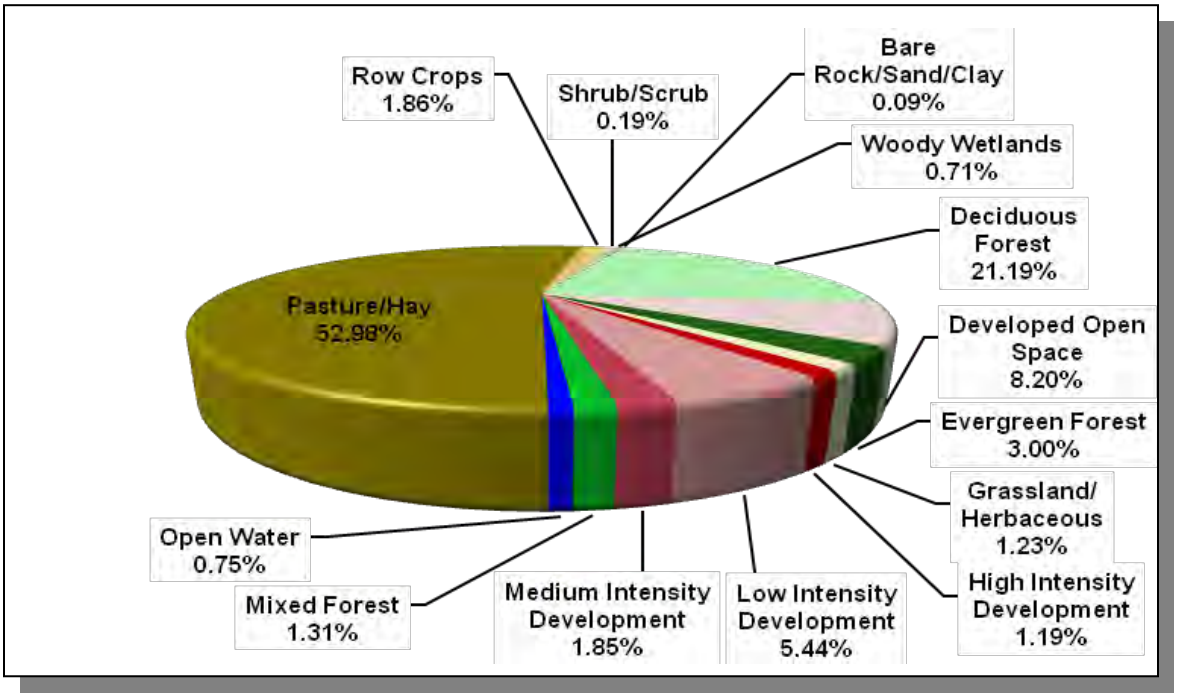


Figure 4-150. Land Use Distribution in Subwatershed 060101080504. *More information is provided in Appendix IV.*

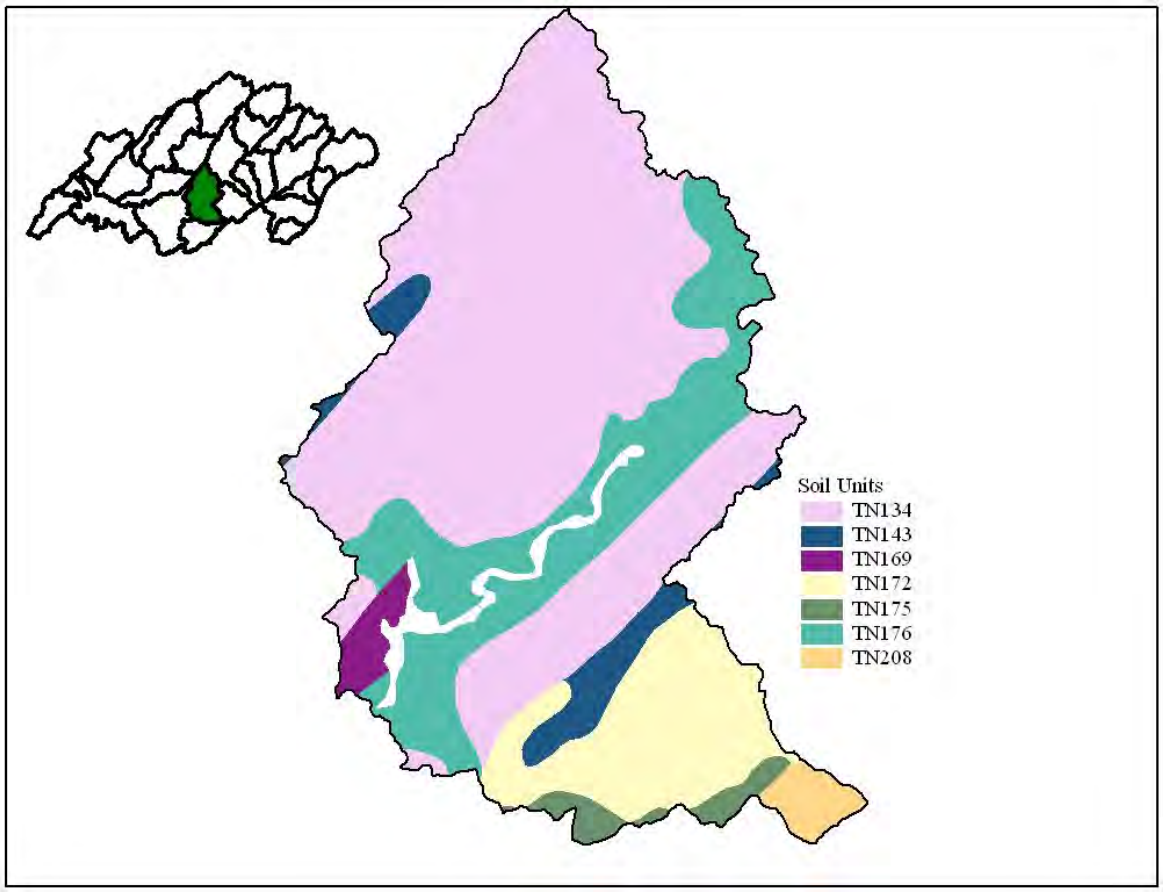


Figure 4-151. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080504.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN134	0.00	B	1.38	5.18	Loam	0.31
TN143	0.00	C	1.22	6.44	Loam	0.32
TN169	0.00	C	3.29	4.75	Loam	0.40
TN172	0.00	B	3.87	5.13	Loam	0.26
TN175	0.00	B	1.49	5.23	Loam	0.30
TN176	12.00	B	1.30	5.34	Loam	0.31
TN208	0.00	C	4.02	4.84	Loam	0.25

Table 4-89. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080504. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Greene	55,853	59,369	62,909	8.34	4,656	4,950	5,245	12.7

Table 4-90. Population Estimates in Subwatershed 060101080504.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Greeneville	Greene	13,532	6,058	5,779	279	0

Table 4-91. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 060101080504.

4.2.O.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080504.

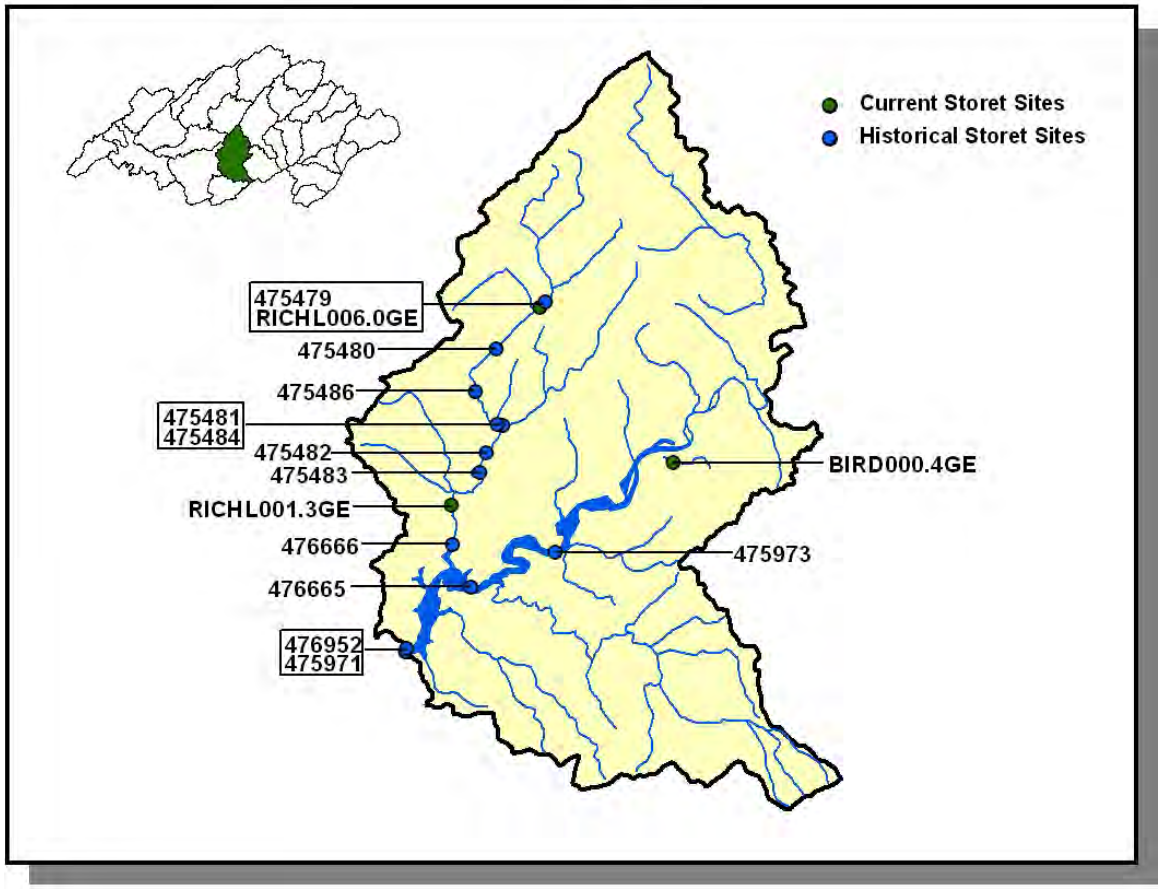


Figure 4-152. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080504. *More information, including site names and locations, is provided in Appendix IV.*

4.2.O.iii. Permitted Activities.

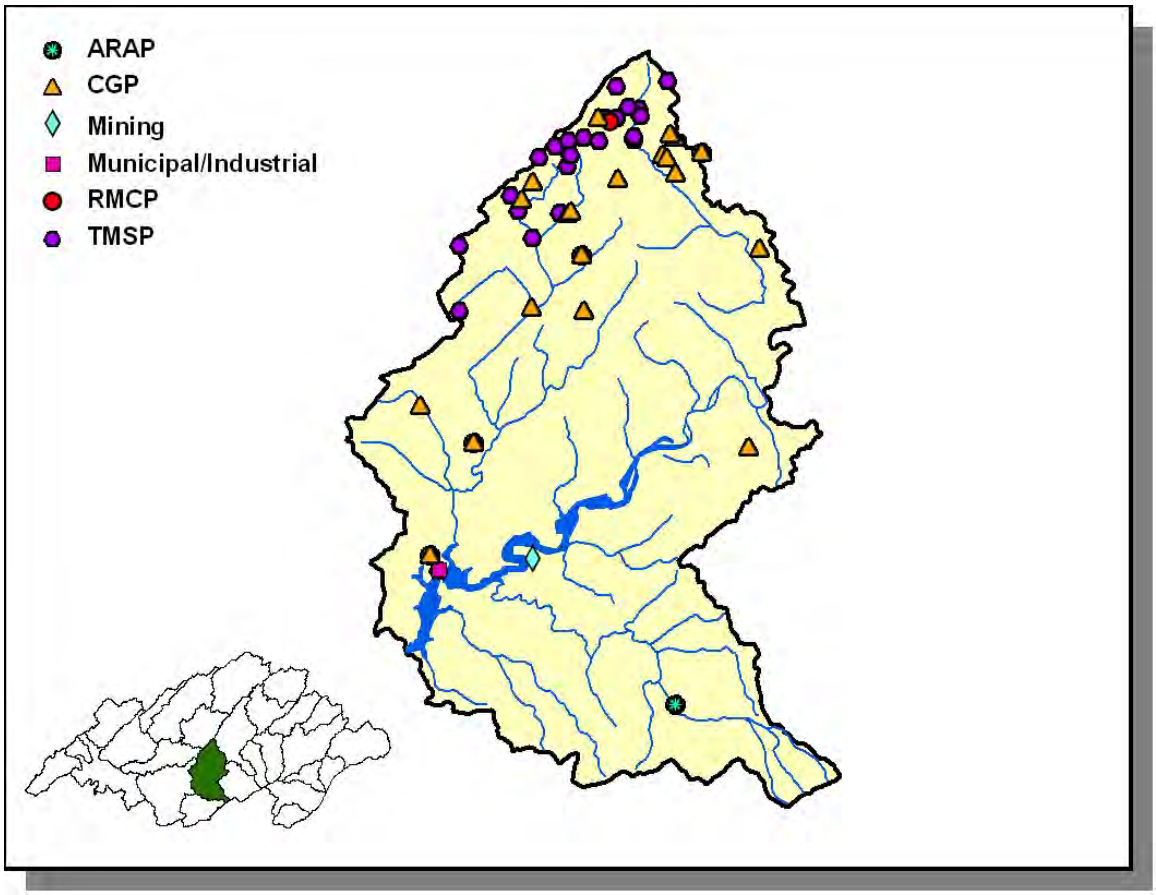


Figure 4-153. Location of Permits Issued in Subwatershed 060101080504. *More information, including the names of facilities, is provided in Appendix IV.*

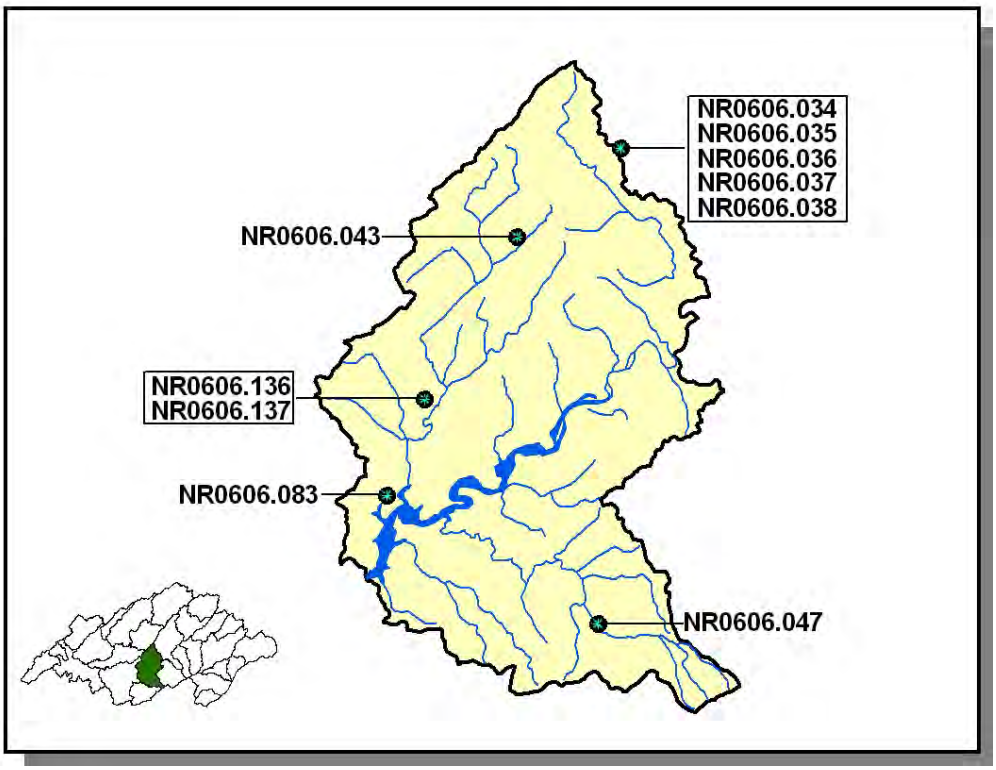


Figure 4-154. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080504. *More information is provided in Appendix IV.*

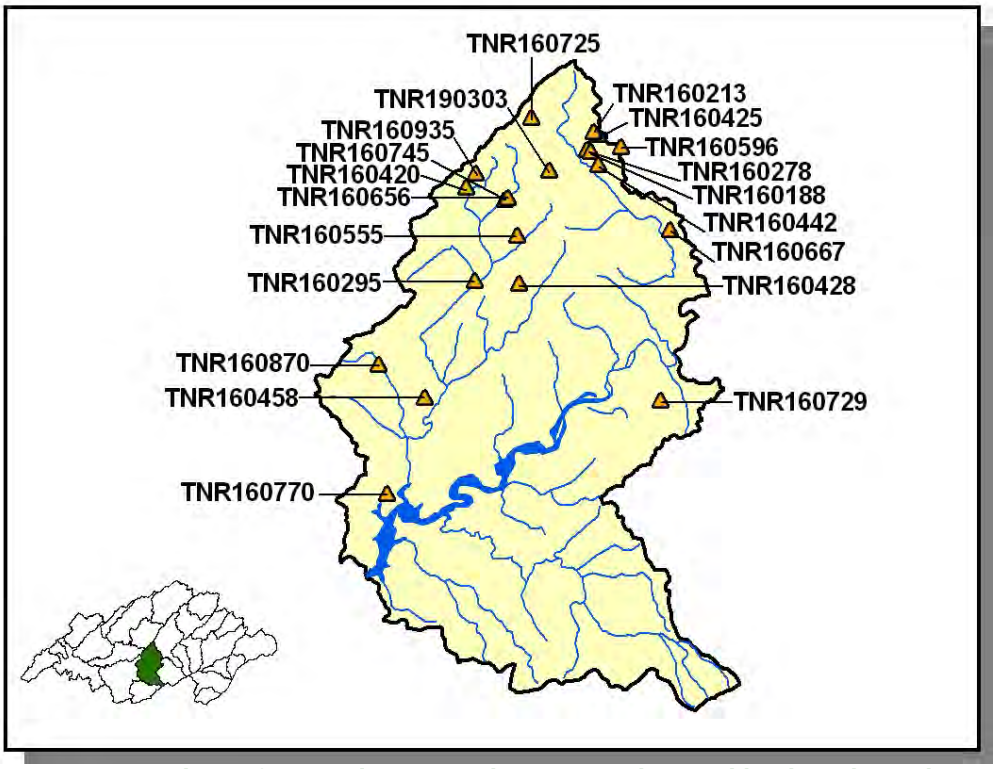


Figure 4-155. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080504. *More information is provided in Appendix IV.*

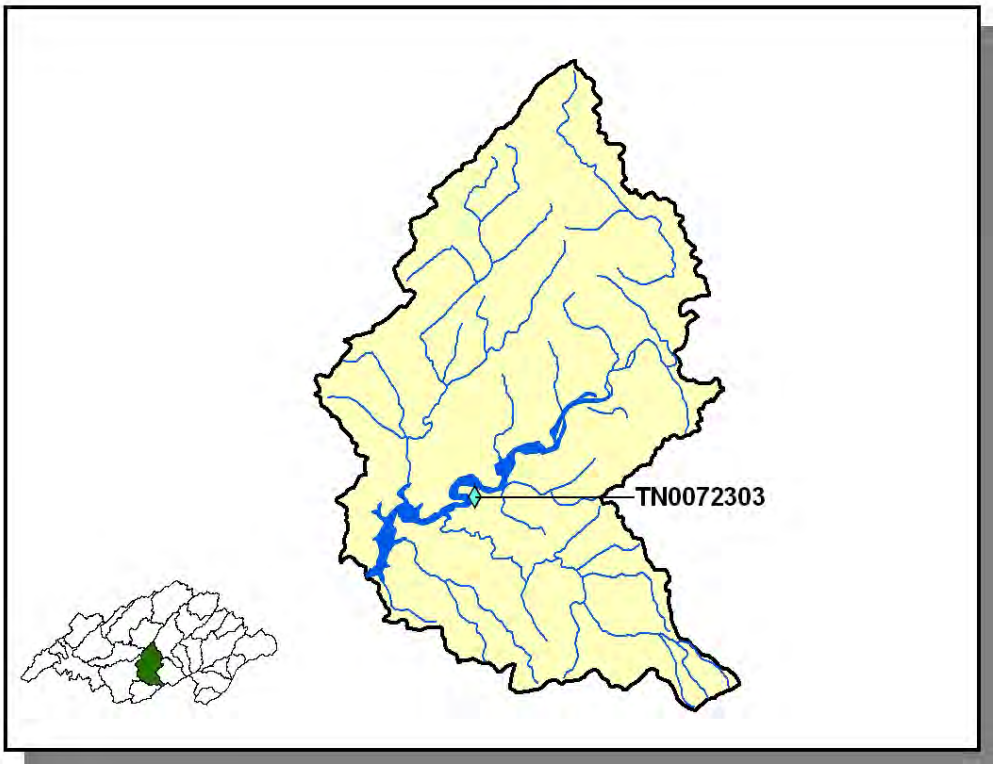


Figure 4-156. Location of permitted Mining Facilities in Subwatershed 060101080504. *More information is provided in Appendix IV.*

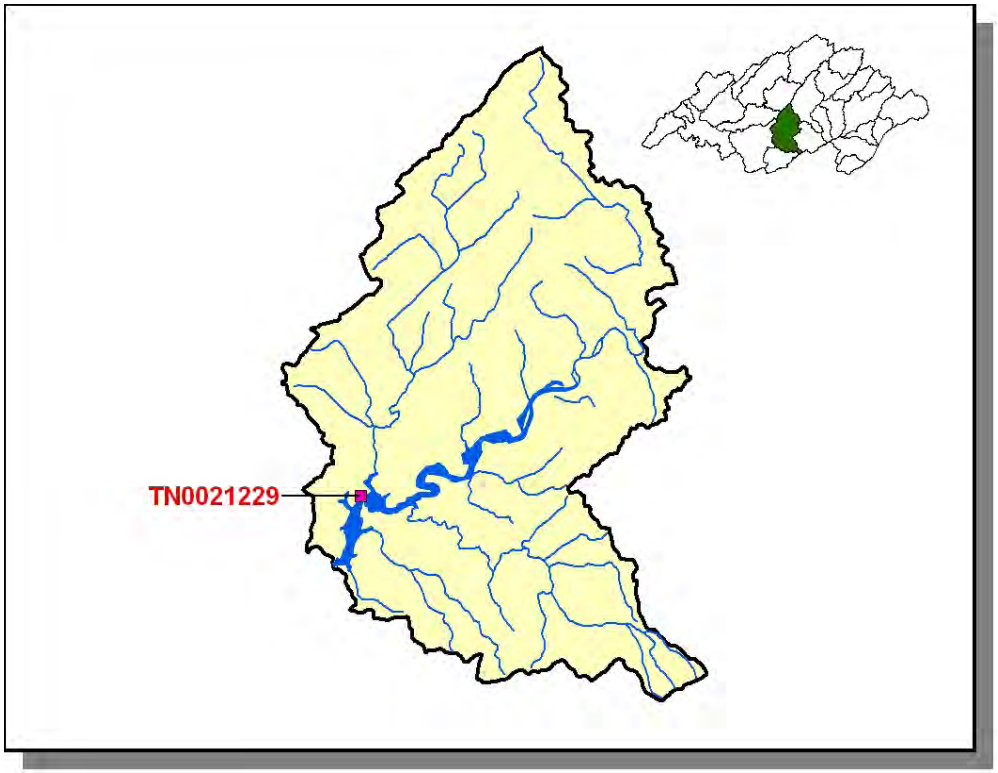


Figure 4-157. Location of Permitted Municipal and Industrial Facilities in Subwatershed 060101080504. *Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the names of facilities, is provided in Appendix IV.*

PERMIT #	7Q10	DISCHARGE FLOW
TN0021229	184.0	7.0

Table 4-92. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080504. *Data are in million gallons per day (MGD).Data were obtained from permit files.*

ERMIT #	BOD_5	BOD % REMOVAL	E. *coli*	TRC
TN0021229	X	X	X	X

Table 4-93. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080504*. BOD_5, Biochemical Oxygen Demand (5-Day); TRC, Total Residual Chlorine.*

PERMIT #	WET	FLOW	DO	SS	TSS	TSS % REMOVAL	pH
TN0021229	X	X	X	X	X	X	X

Table 4-94. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080504. *WET, Whole Effluent Toxicity; DO, Dissolved Oxygen; SS, Settleable Solids; TSS, Total Suspended Solids.*

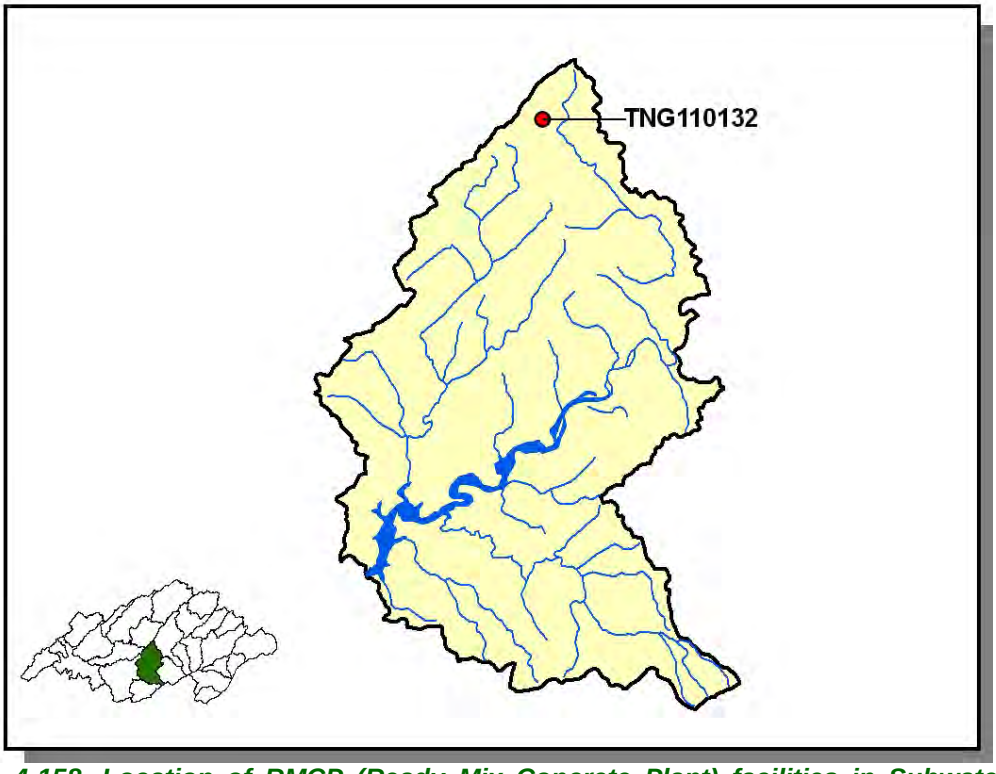


Figure 4-158. Location of RMCP (Ready Mix Concrete Plant) facilities in Subwatershed 060101080504. *More information, including the names of facilities, is provided in Appendix IV.*

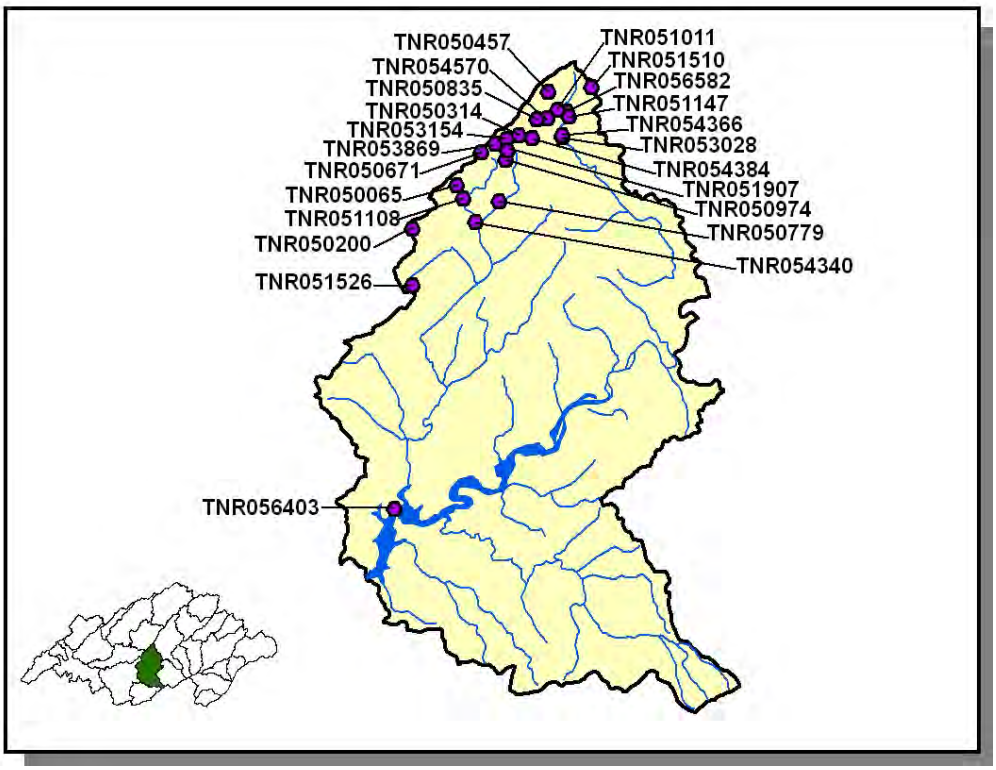


Figure 4-159. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080504. *More information is provided in Appendix IV.*

4.2.O.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Greene	33,962	72,582	7,282	1,190	495	226

Table 4-95. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Greene	180.0	171.8	2.0	10.5

Table 4-96. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	16.75
Tobacco (Row Crops)	15.36
Other Vegetable and Truck Crop	3.80
Farmsteads and Ranch Headquarters	1.67
Grass Forbs Legumes Mixed (Pastureland)	0.40
Grass (Pastureland)	0.35
Legume Grass (Hayland)	0.34
Legume (Hayland)	0.26
Grass (Hayland)	0.14

Table 4-97. Annual Estimated Total Soil Loss in Subwatershed 060101080504.

4.2.P. 060101080505 (Pigeon Creek, Nolichucky River).

4.2.P.i. General Description.

Figure 4-160. Location of Subwatershed 060101080505. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

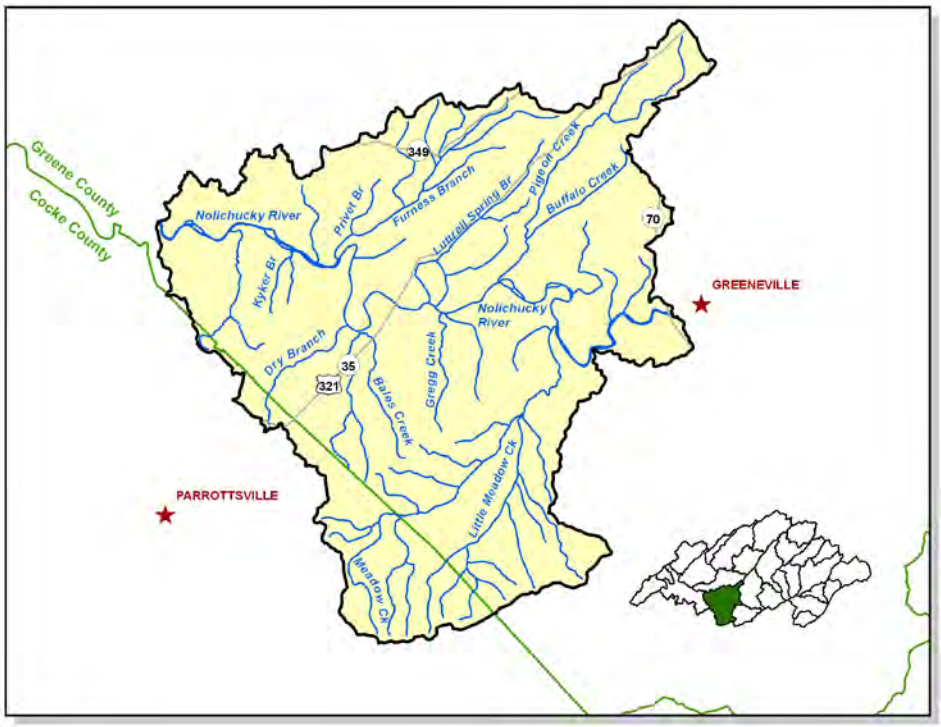


Figure 4-161. Locational Details of Subwatershed 060101080505.

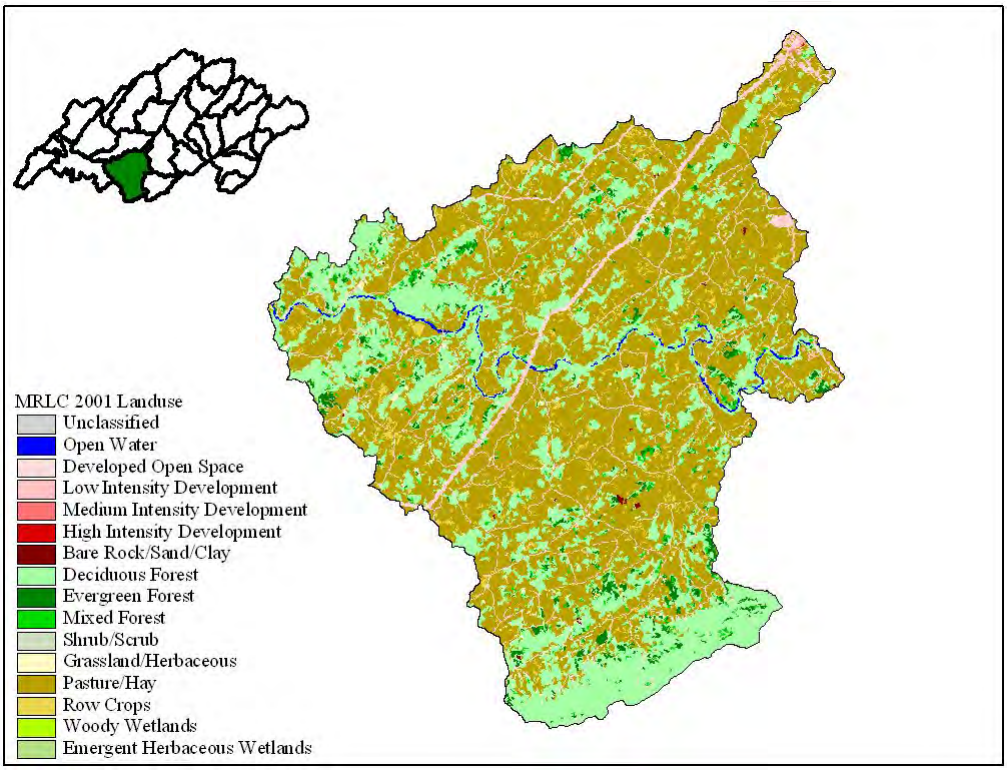


Figure 4-162. Illustration of Land Use Distribution in Subwatershed 060101080505.

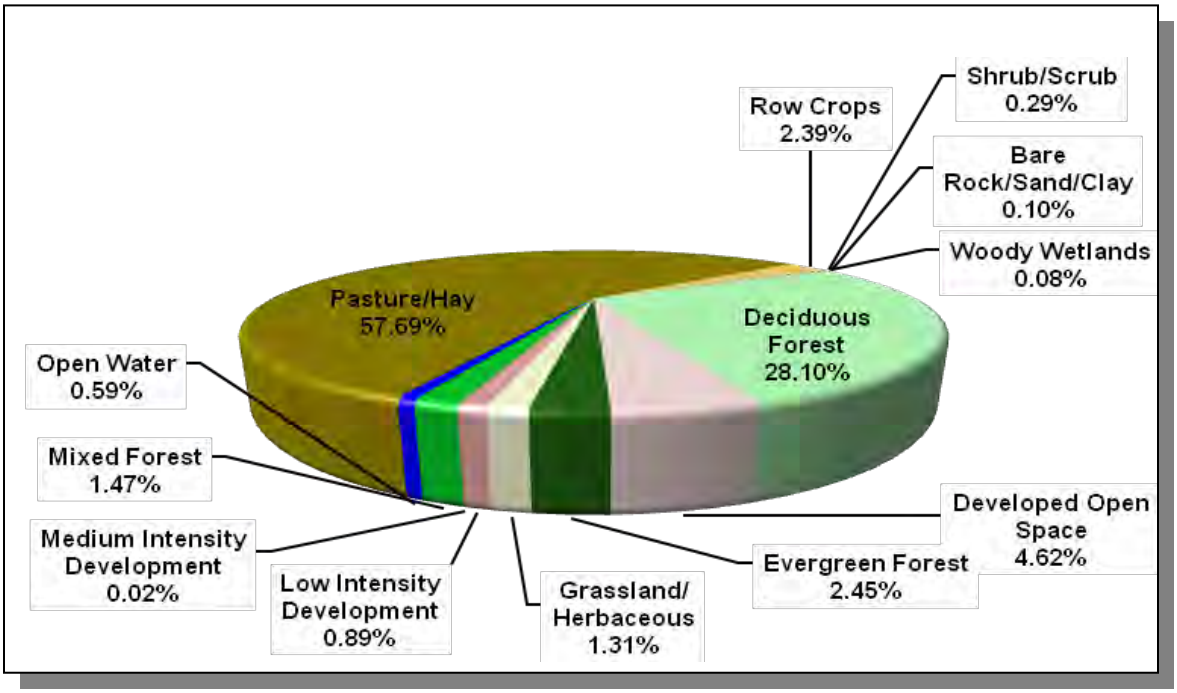


Figure 4-163. Land Use Distribution in Subwatershed 060101080505. *More information is provided in Appendix IV.*

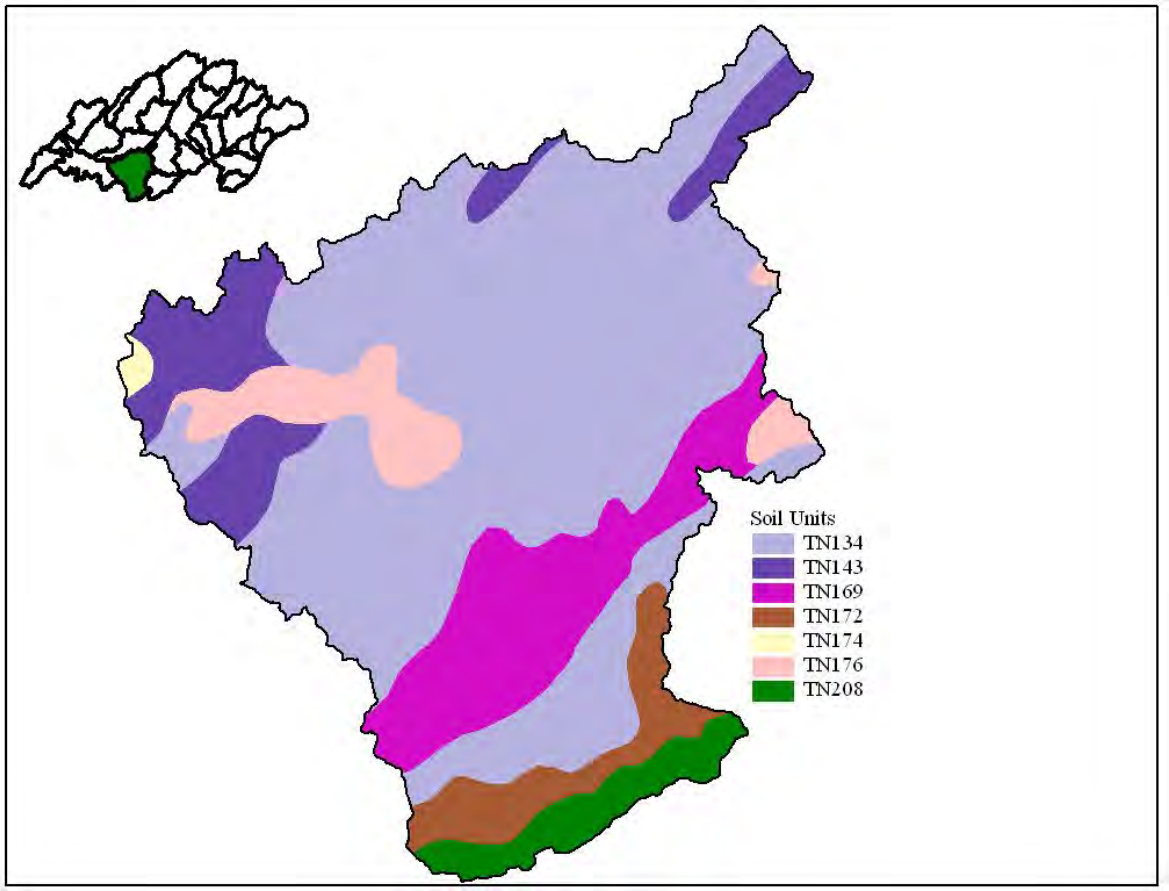


Figure 4-164. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080505.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN134	0.00	B	1.38	5.18	Loam	0.31
TN143	0.00	C	1.22	6.44	Loam	0.32
TN169	0.00	C	3.29	4.75	Loam	0.40
TN172	0.00	B	3.87	5.13	Loam	0.26
TN174	19.00	C	10.23	4.98	Sandy Loam	0.20
TN176	12.00	B	1.30	5.34	Loam	0.31
TN208	0.00	C	4.02	4.84	Loam	0.25

Table 4-98. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080505. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Cocke	29,141	31,657	33,565	2.91	848	921	977	15.20
Greene	55,853	59,369	62,909	10.18	5,684	6,042	6,402	12.60
Totals	**84,994**	**91,026**	**96,474**		**6,532**	**6,963**	**7,379**	**13.00**

Table 4-99. Population Estimates in Subwatershed 060101080505.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Greeneville	Greene	13,532	6,058	5,779	279	0

Table 4-100. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 060101080505.

4.2.P.ii. USGS Gaging Stations and STORET Sites.

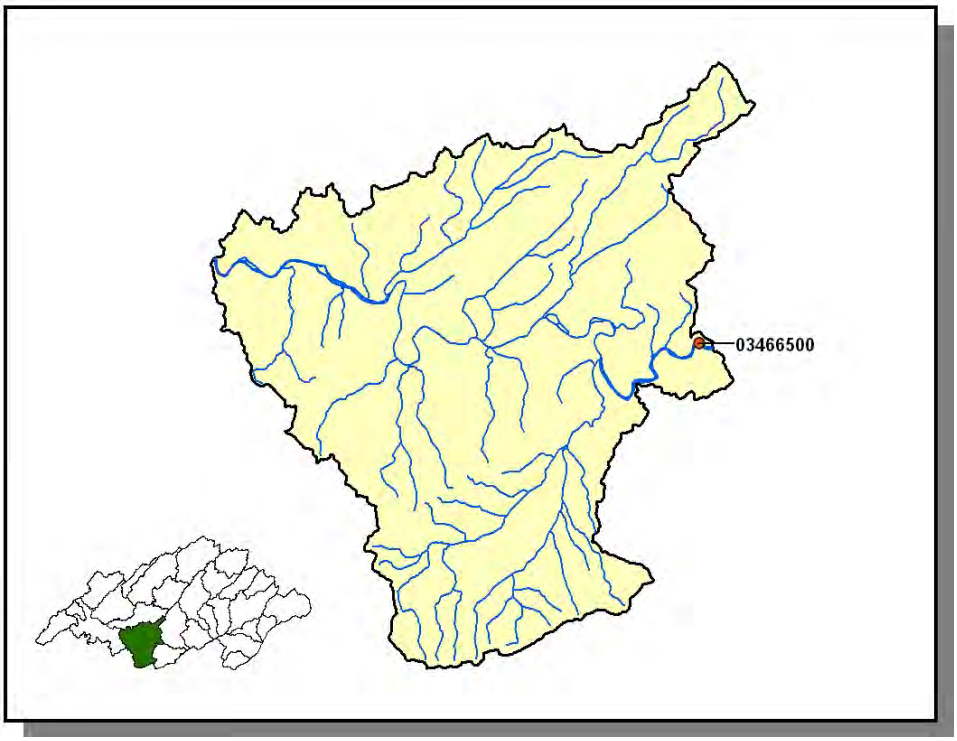


Figure 4-165. Location of USGS Continuous Record Gaging Stations in Subwatershed 060101080505. *More information is provided in Appendix IV.*

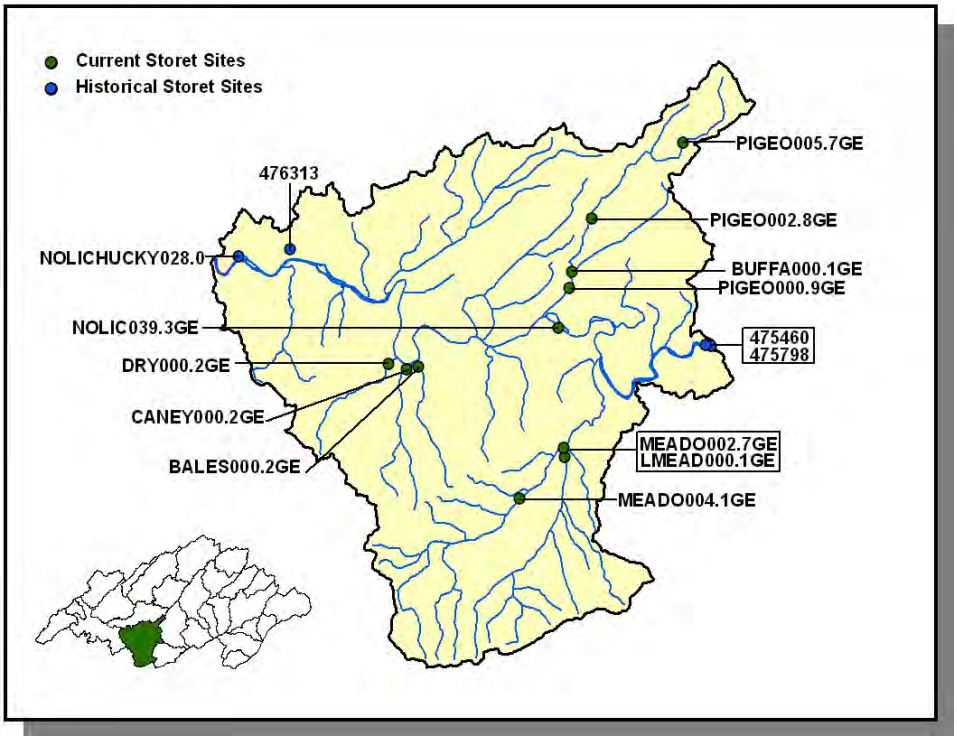


Figure 4-166. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080505. *More information, including site names and locations, is provided in Appendix IV.*

4.2.P.iii. Permitted Activities.

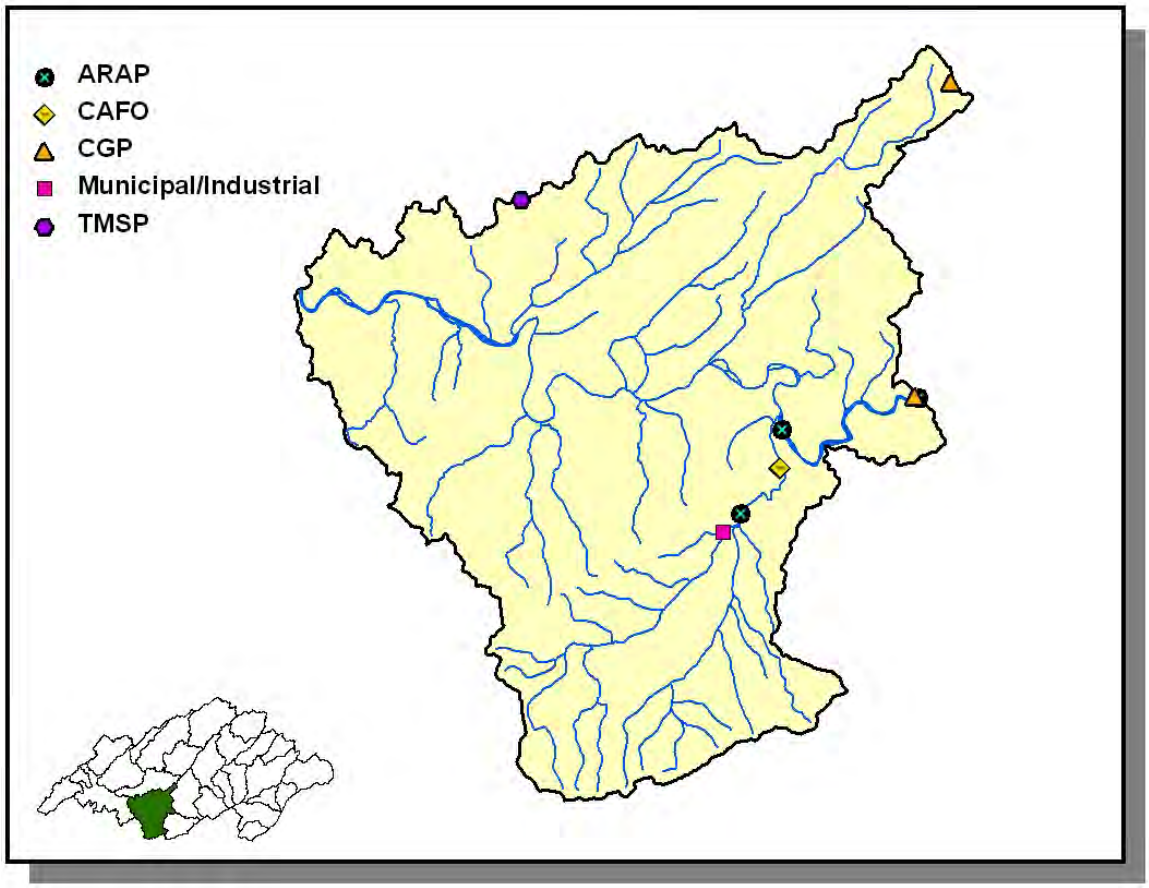


Figure 4-167. Location of Permits Issued in Subwatershed 060101080505. *More information, including the names of facilities, is provided in Appendix IV.*

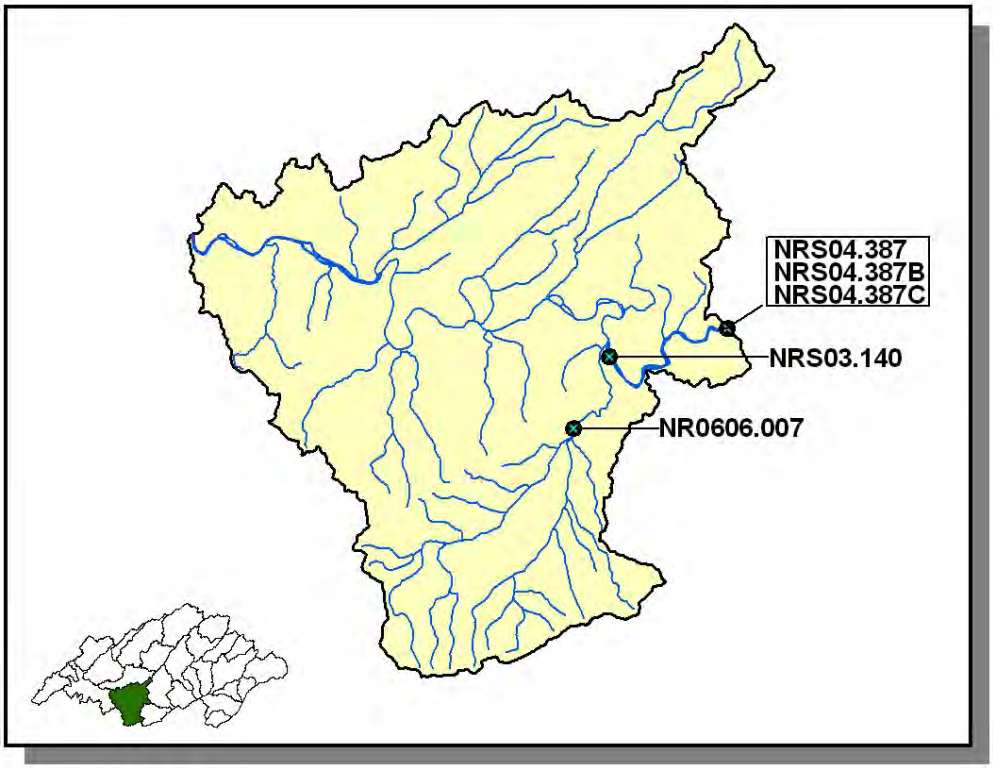


Figure 4-168. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080505. *More information is provided in Appendix IV.*

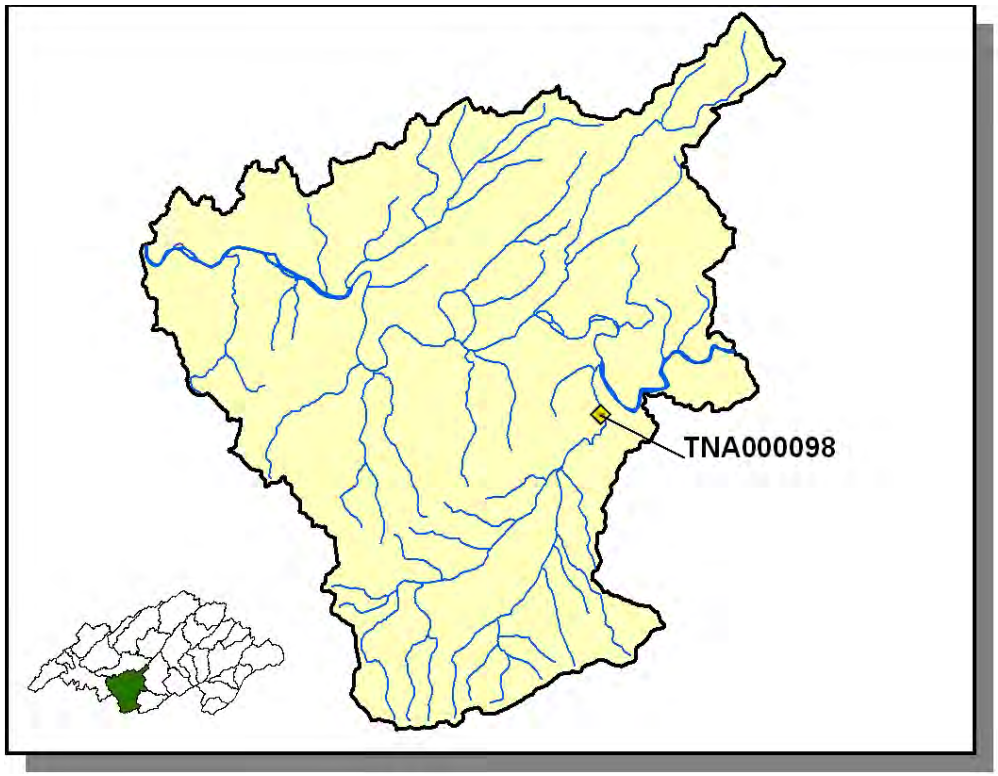


Figure 4-169. Location of CAFO (Concentrated Animal Feel Operation) Permit Sites in Subwatershed 060101080505. *More information, including the names of facilities, is provided in Appendix IV.*

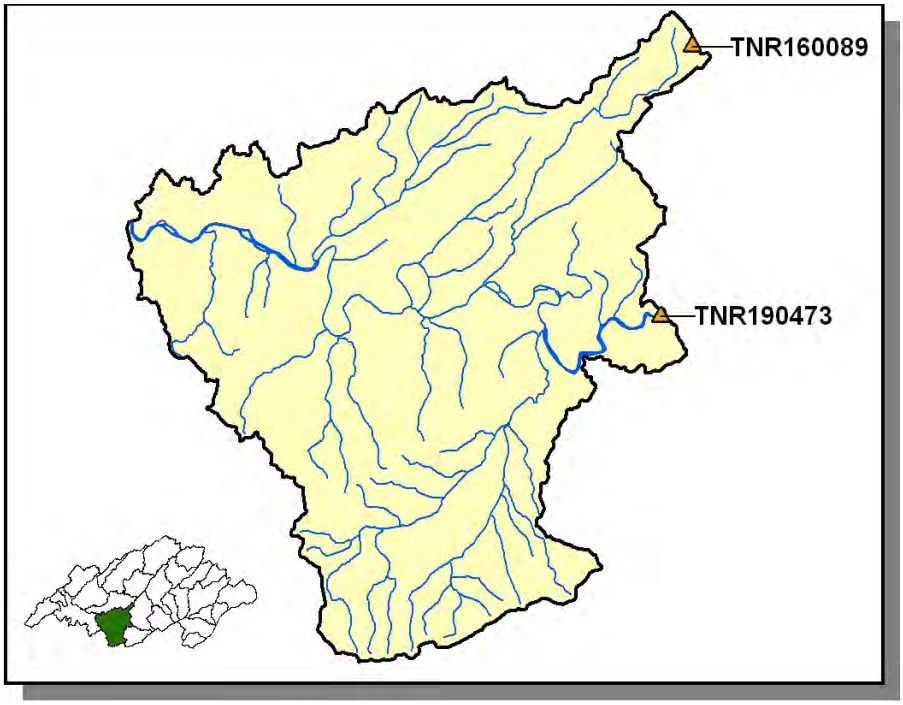


Figure 4-170. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080505. *More information is provided in Appendix IV.*

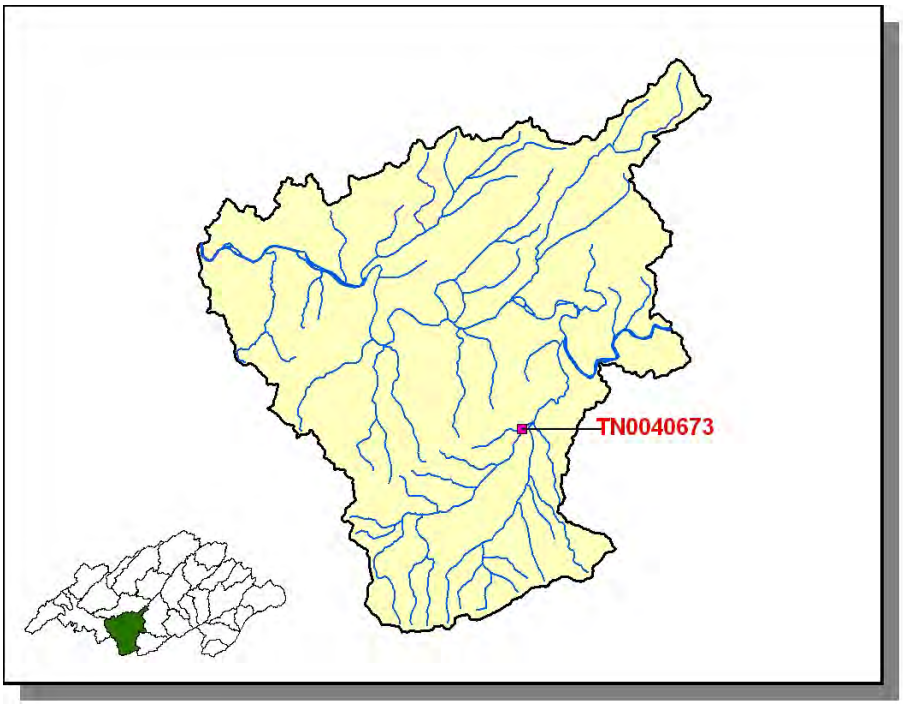


Figure 4-171. Location of Permitted Municipal and Industrial Facilities in Subwatershed 060101080505. *Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the names of facilities, is provided in Appendix IV.*

PERMIT #	7Q10	DISCHARGE FLOW
TN0040673	1.610	0.018

Table 4-101. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080505. *Data are in million gallons per day (MGD).Data were obtained from permit files.*

PERMIT #	BOD_5	DO	E. *coli*	FLOW	SS	TRC	TSS	pH
TN0040673	X	X	X	X	X	X	X	X

Table 4-102. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080505. *BOD_5, Biochemical Oxygen Demand (5-Day); DO, Dissolved Oxygen; SS, Settleable Solids; TRC, Total Residual Chlorine; TSS, Total Suspended Solids.*

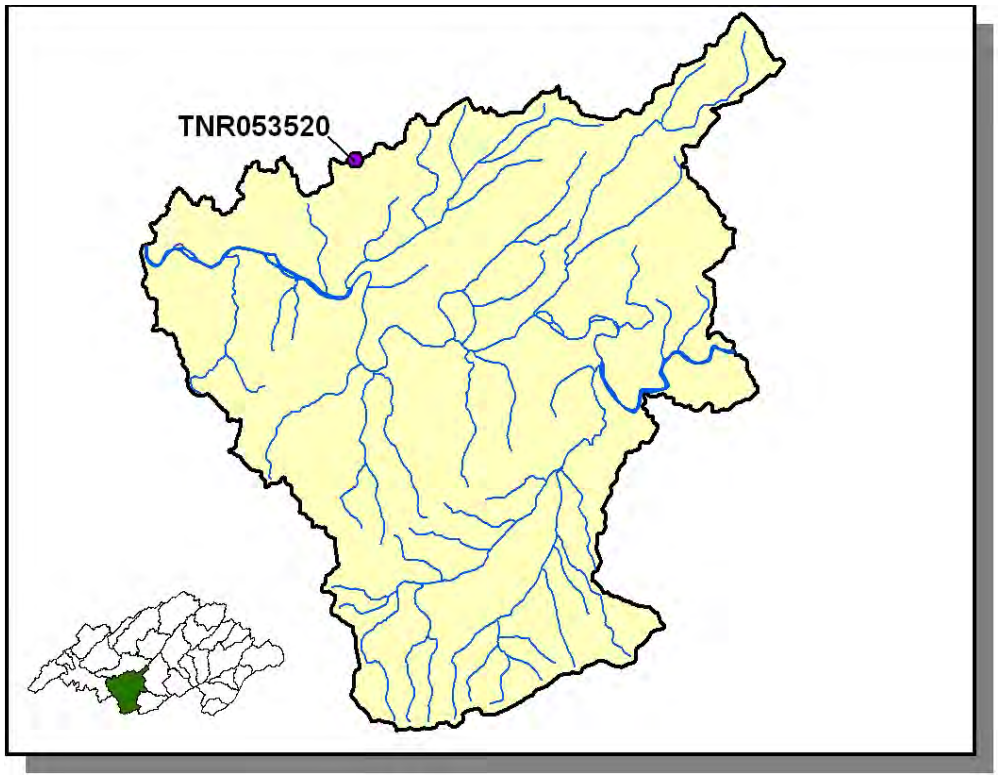


Figure 4-172. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080505. *More information is provided in Appendix IV.*

4.2.P.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Cocke	8,169	16,971	1,224	361	269	90
Greene	33,962	72,582	7,282	1,190	495	226

Table 4-103. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Cocke	182.0	163.4	3.7	17.4
Greene	180.0	171.8	2.0	10.5

Table 4-104. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Tobacco (Row Crops)	15.43
Corn (Row Crops)	14.99
Wheat (Close Grown Cropland)	5.30
Other Vegetable and Truck Crop	3.80
Farmsteads and Ranch Headquarters	1.47
Grass Forbs Legumes Mixed (Pastureland)	0.48
Grass (Pastureland)	0.35
Legume Grass (Hayland)	0.29
Legume (Hayland)	0.26
Grass (Hayland)	0.20

Table 4-105. Annual Estimated Total Soil Loss in Subwatershed 060101080505.

4.2.Q. 060101080506 (Cove Creek).

4.2.Q.i. General Description.

Figure 4-173. Location of Subwatershed 060101080506. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

Figure 4-174. Locational Details of Subwatershed 060101080506.

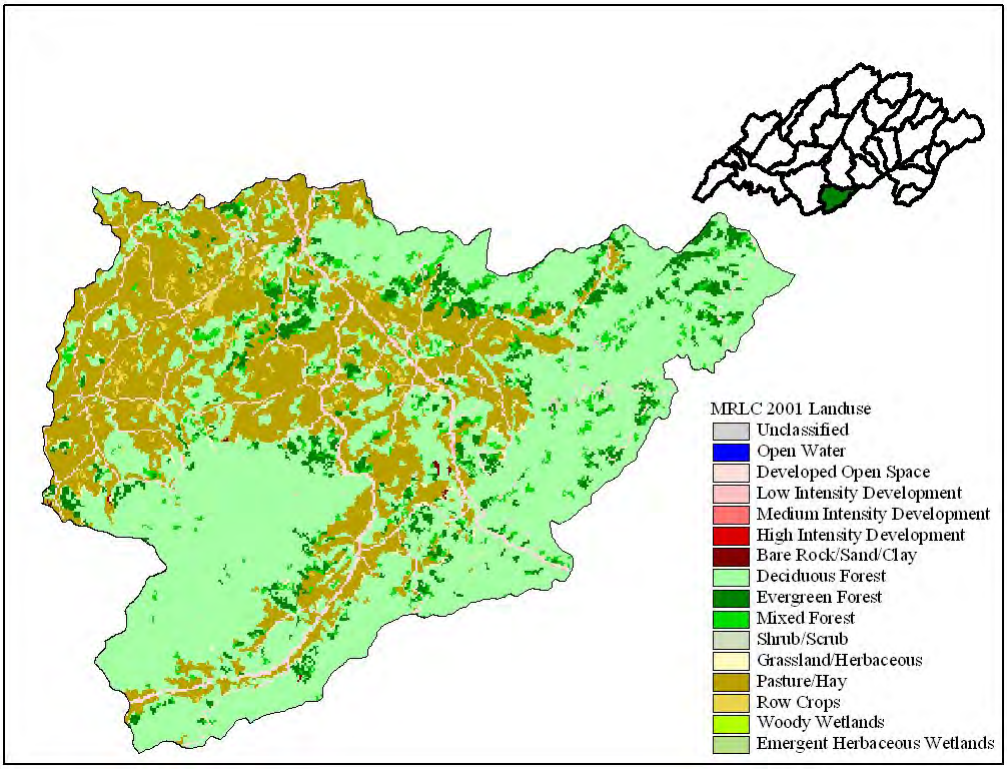


Figure 4-175. Illustration of Land Use Distribution in Subwatershed 060101080506.

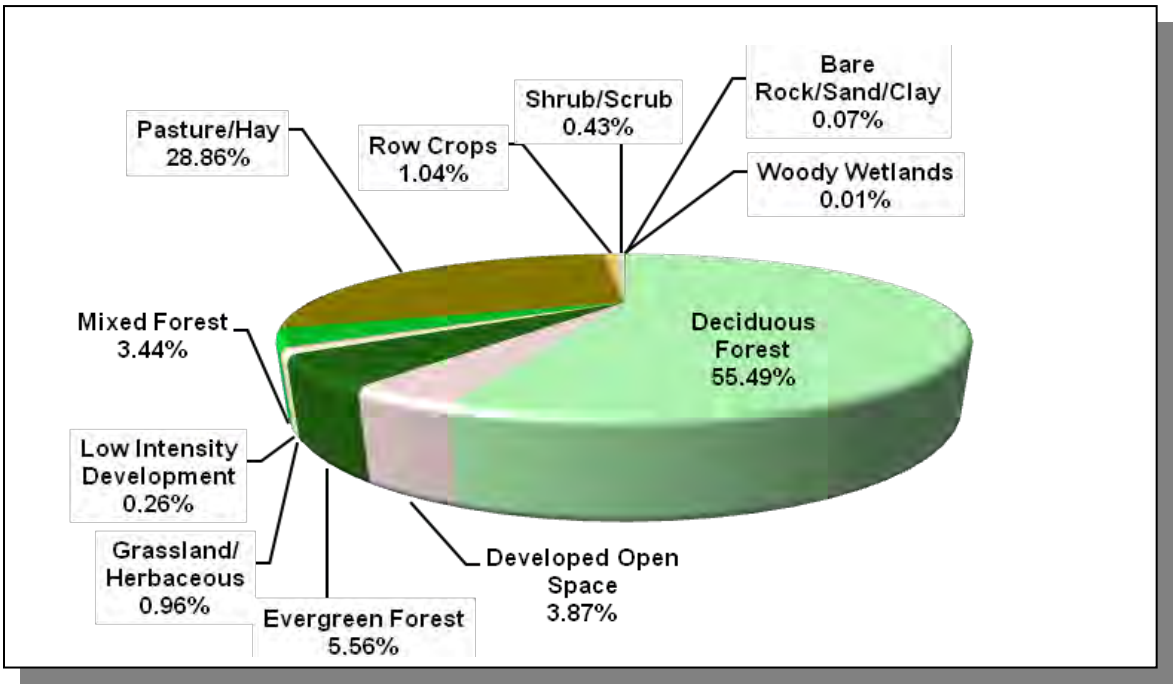


Figure 4-176. Land Use Distribution in Subwatershed 060101080506. *More information is provided in Appendix IV.*

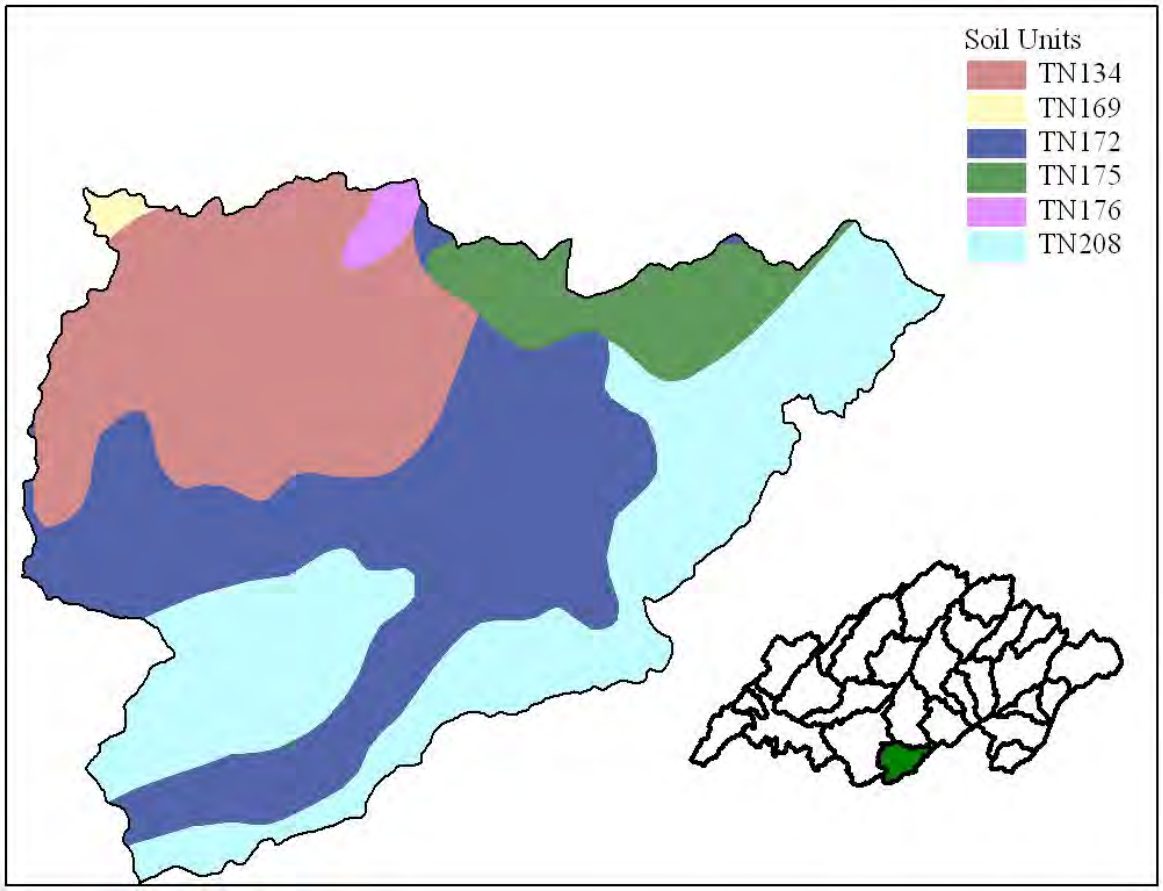


Figure 4-177. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080506.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN134	0.00	B	1.38	5.18	Loam	0.31
TN169	0.00	C	3.29	4.75	Loam	0.40
TN172	0.00	B	3.87	5.13	Loam	0.26
TN175	0.00	B	1.49	5.23	Loam	0.30
TN176	12.00	B	1.30	5.34	Loam	0.31
TN208	0.00	C	4.02	4.84	Loam	0.25

Table 4-106. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080506. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Greene	55,853	59,369	62,909	4.77	2,664	2,832	3,001	12.7

Table 4-107. Population Estimates in Subwatershed 060101080506.

4.2.Q.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080506.

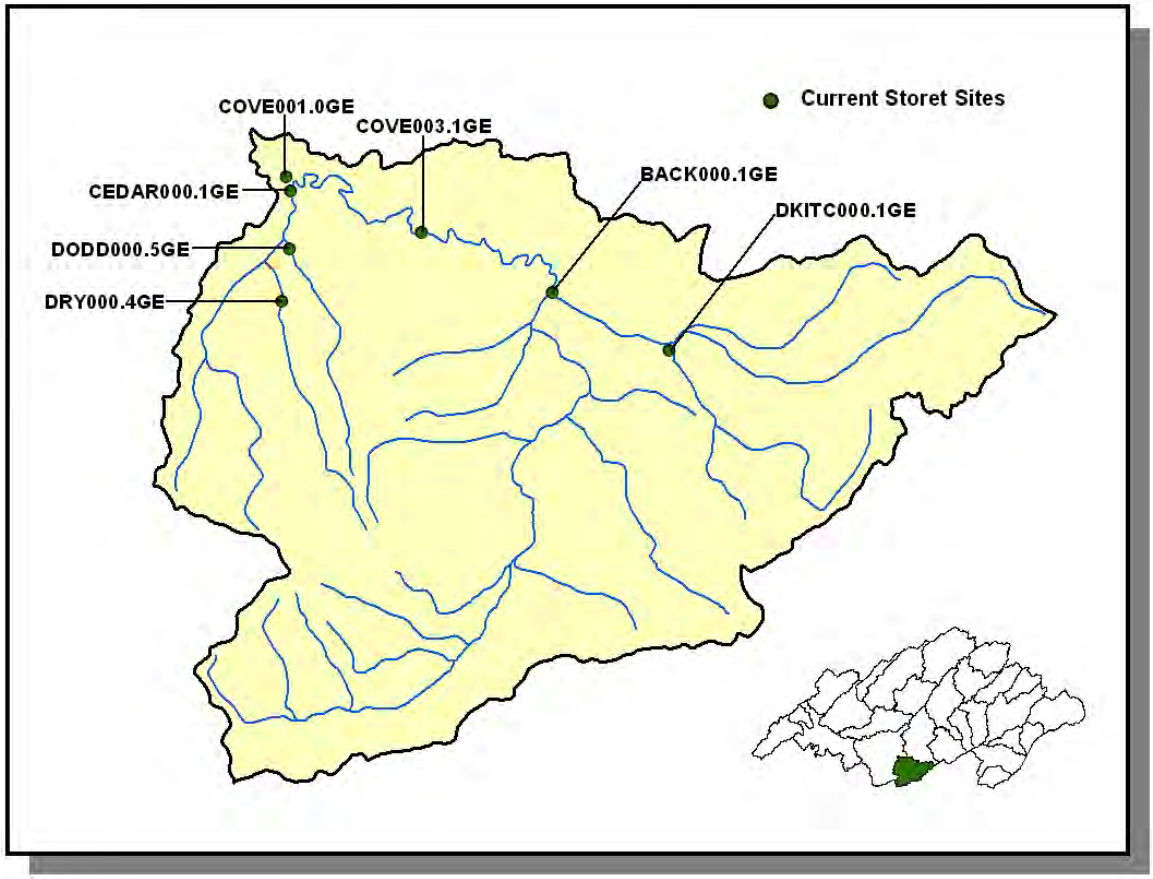


Figure 4-178. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080506. *More information, including site names and locations, is provided in Appendix IV.*

4.2.Q.iii. Permitted Activities.

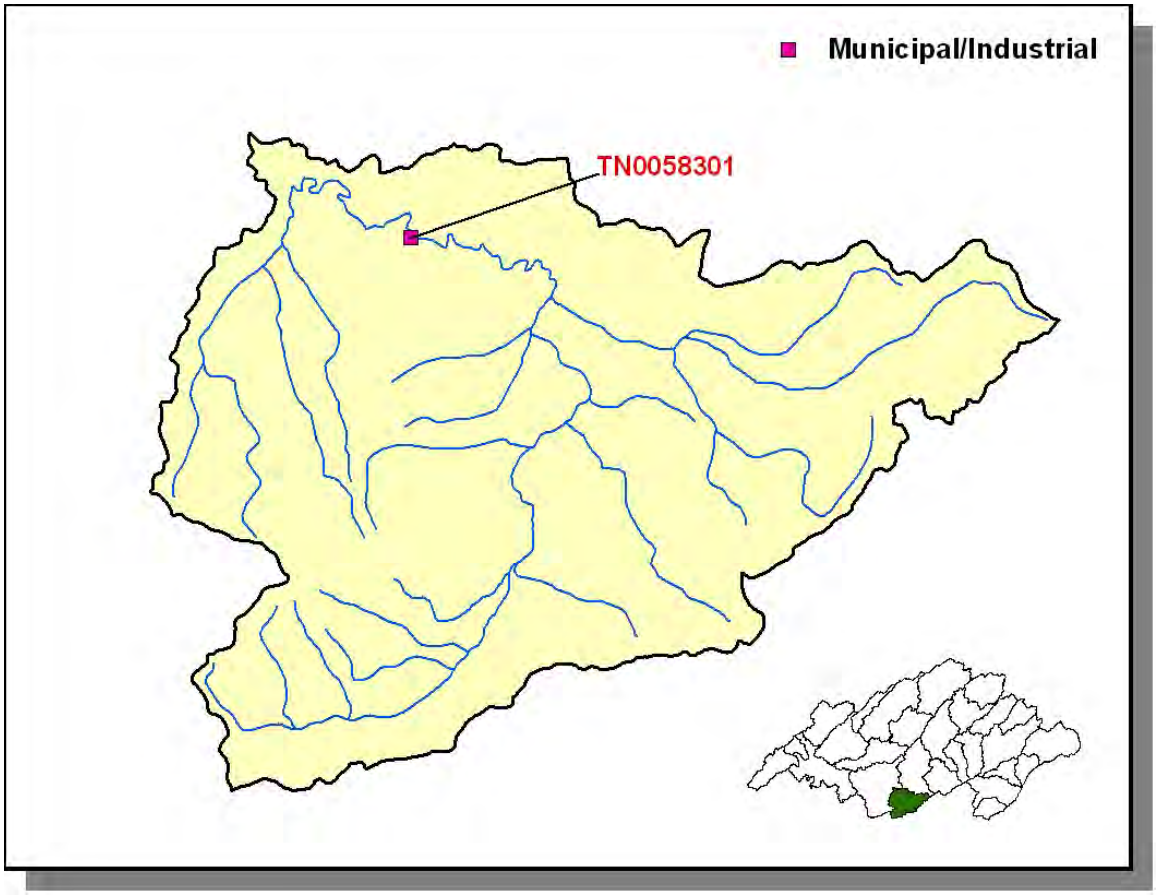


Figure 4-179. Location of Permits Issued in Subwatershed 060101080506. *Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the names of facilities, is provided in Appendix IV.*

PERMIT #	7Q10	DISCHARGE FLOW
TN0058301	1.290	0.016

Table 4-108. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080506. *Data are in million gallons per day (MGD).Data were obtained from permit files.*

PERMIT #	BOD_5	DO	E. coli	FLOW	SS	TRC	TSS	pH
TN0058301	X	X	X	X	X	X	X	X

Table 4-109. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080506. *BOD_5, Biochemical Oxygen Demand (5-Day); DO, Dissolved Oxygen; SS, Settleable Solids; TRC, Total Residual Chlorine; TSS, Total Suspended Solids.*

4.2.Q.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Greene	33,962	72,582	7,282	1,190	495	226

Table 4-110. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Greene	180.0	171.8	2.0	10.5

Table 4-111. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	16.75
Tobacco (Row Crops)	15.36
Other Vegetable and Truck Crop	3.80
Farmsteads and Ranch Headquarters	1.67
Grass Forbs Legumes Mixed (Pastureland)	0.40
Grass (Pastureland)	0.35
Legume Grass (Hayland)	0.34
Legume (Hayland)	0.26
Grass (Hayland)	0.14

Table 4-112. Annual Estimated Total Soil Loss in Subwatershed 060101080506.

4.2.R. 060101080601 (Nolichucky River).

4.2.R.i. General Description.

Figure 4-180. Location of Subwatershed 060101080601. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

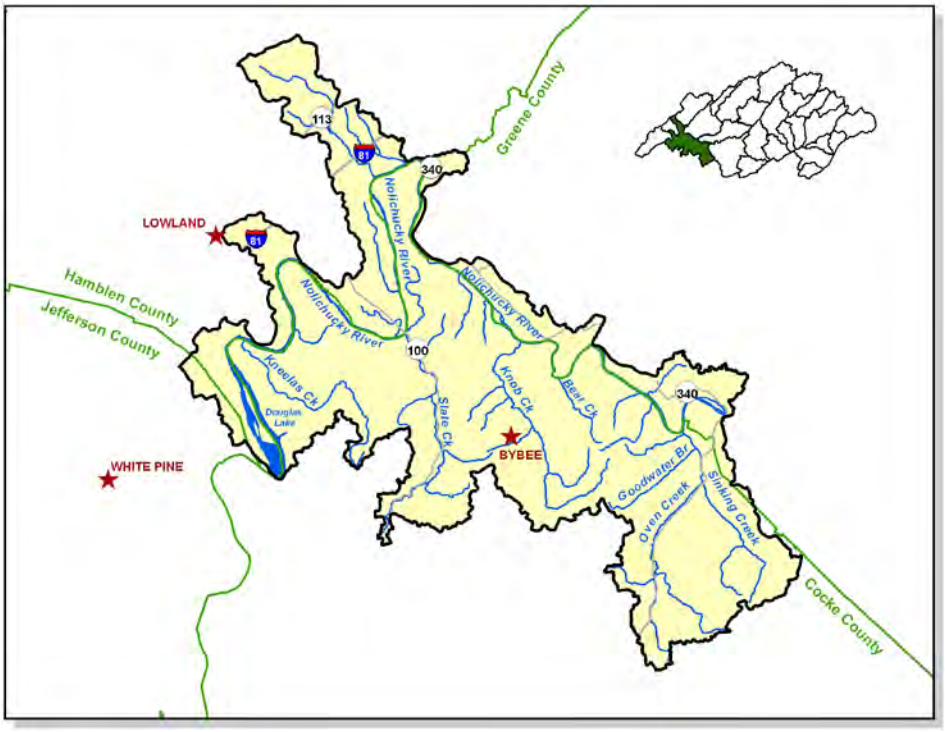


Figure 4-181. Locational Details of Subwatershed 060101080601.

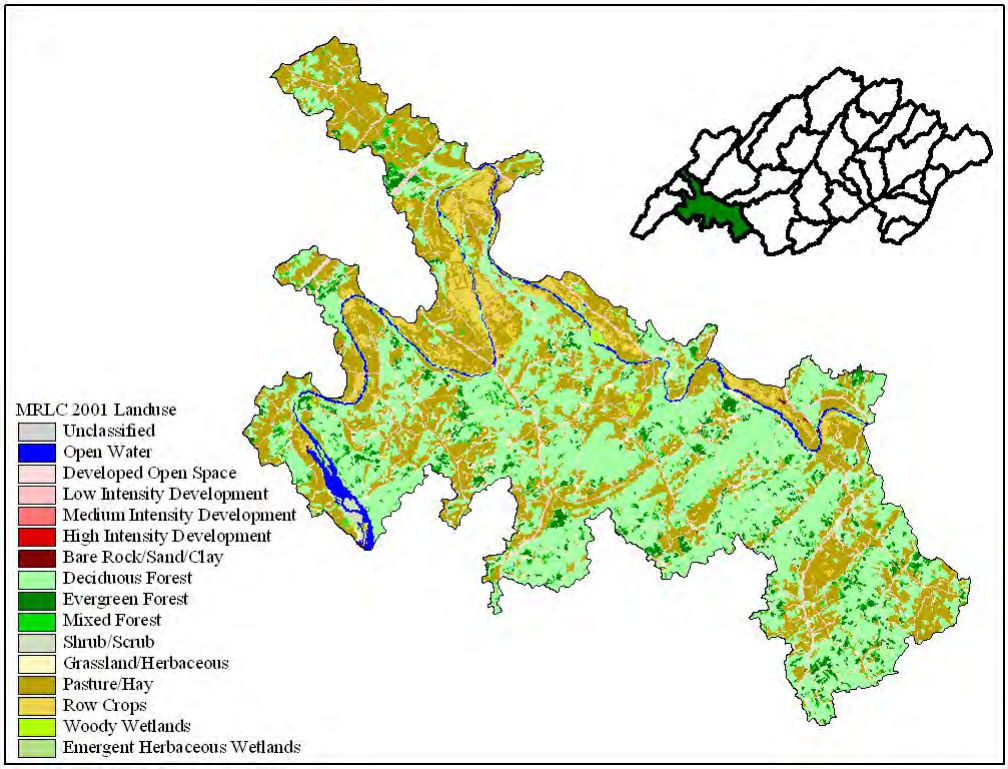


Figure 4-182. Illustration of Land Use Distribution in Subwatershed 060101080601.

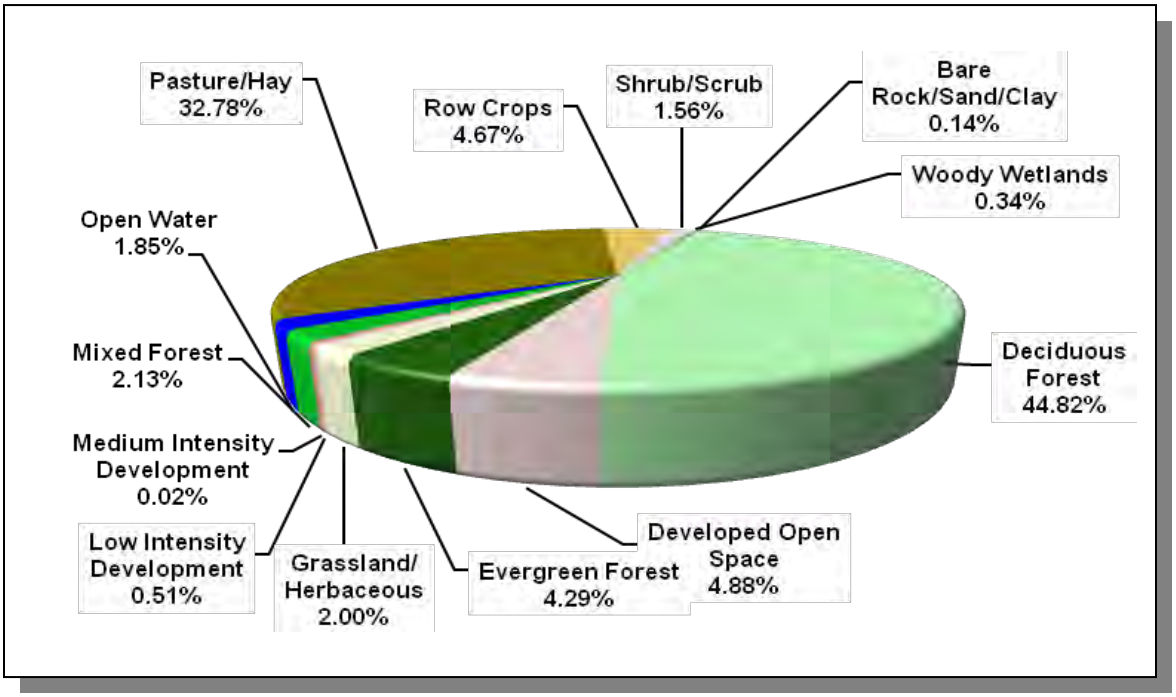


Figure 4-183. Land Use Distribution in Subwatershed 060101080601. *More information is provided in Appendix IV.*

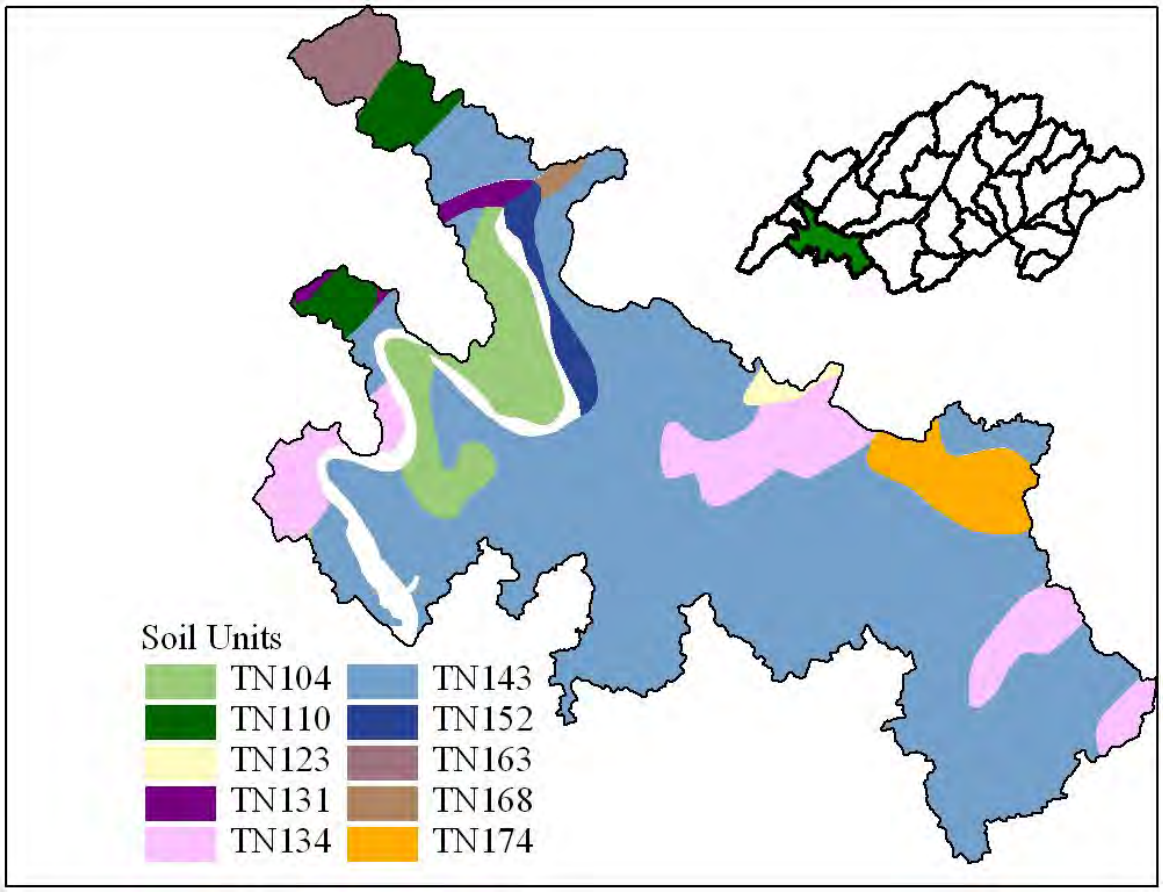


Figure 4-184. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080601.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN104	1.00	C	1.20	5.23	Silty Loam	0.38
TN110	0.00	B	2.22	4.96	Loam	0.31
TN123	6.00	C	1.30	5.81	Silty Loam	0.37
TN131	0.00	C	1.17	4.95	Silty Loam	0.33
TN134	0.00	B	1.38	5.18	Loam	0.31
TN143	0.00	C	1.22	6.44	Loam	0.32
TN152	0.00	B	2.11	5.26	Loam	0.31
TN163	0.00	B	1.37	5.15	Loam	0.31
TN168	0.00	C	1.28	5.65	Loam	0.34
TN174	19.00	C	10.23	4.98	Sandy Loam	0.20

Table 4-113. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080601. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Cocke	29,141	31,657	33,565	10.50	3,061	3,325	3,525	15.20
Greene	55,853	59,369	62,909	0.66	366	390	413	12.80
Hamblen	50,480	53,699	58,128	6.95	3,509	3,733	4,041	15.20
Jefferson	33,016	42,168	44,294	0.65	216	276	290	34.30
Totals	**168,490**	**186,893**	**198,896**		**7,152**	**7,724**	**8,269**	**15.60**

Table 4-114. Population Estimates in Subwatershed 060101080601.

4.2.R.ii. USGS Gaging Stations and STORET Sites.

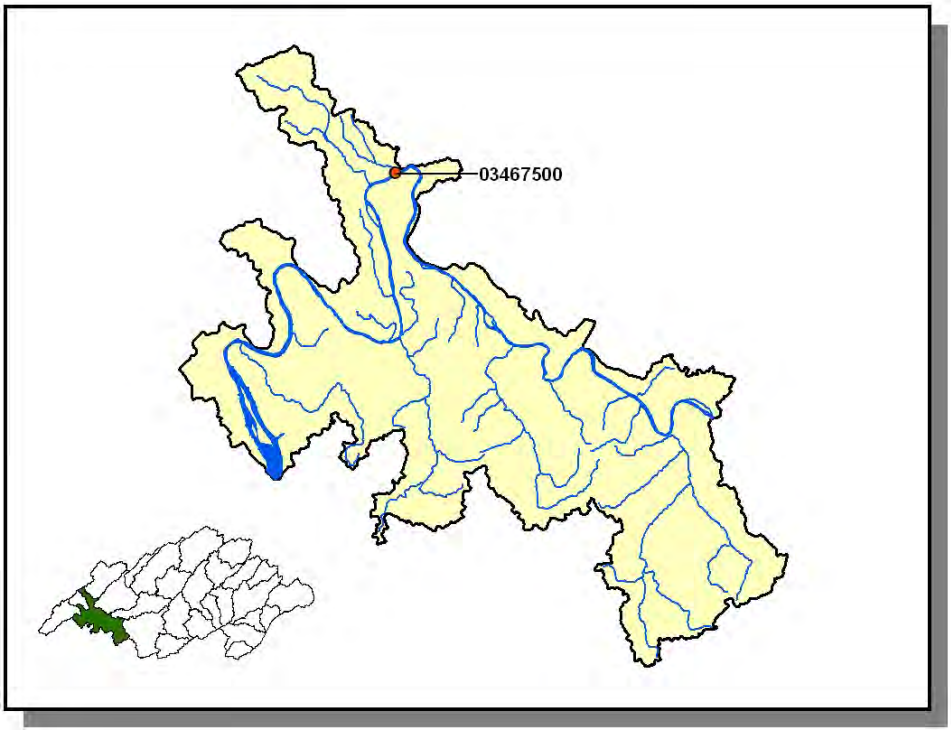


Figure 4-185. Location of USGS Continuous Record Gaging Stations in Subwatershed 060101080601. *More information is provided in Appendix IV.*

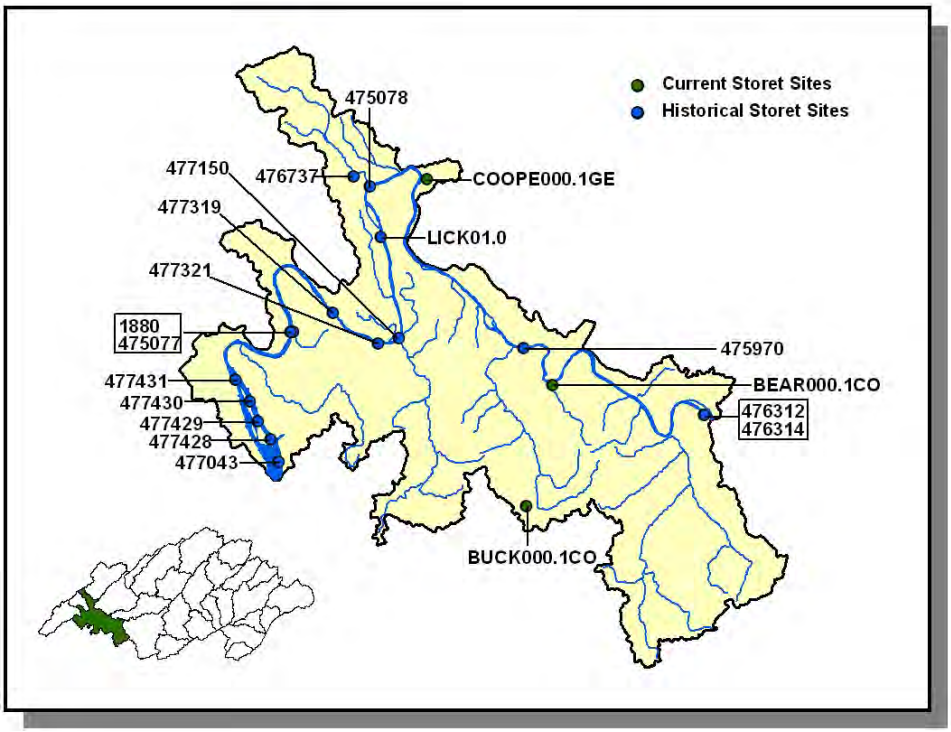


Figure 4-186. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080601. *More information, including site names and locations, is provided in Appendix IV.*

4.2.R.iii. Permitted Activities.

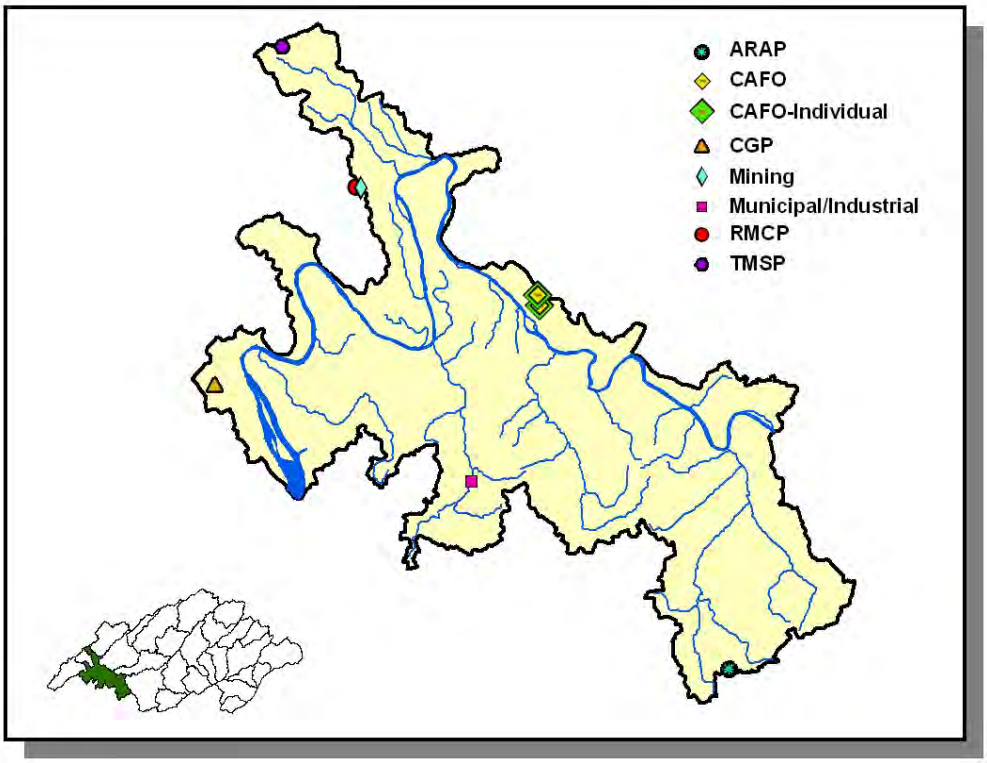


Figure 4-187. Location of Permits Issued in Subwatershed 060101080601. *More information, including the names of facilities, is provided in Appendix IV.*

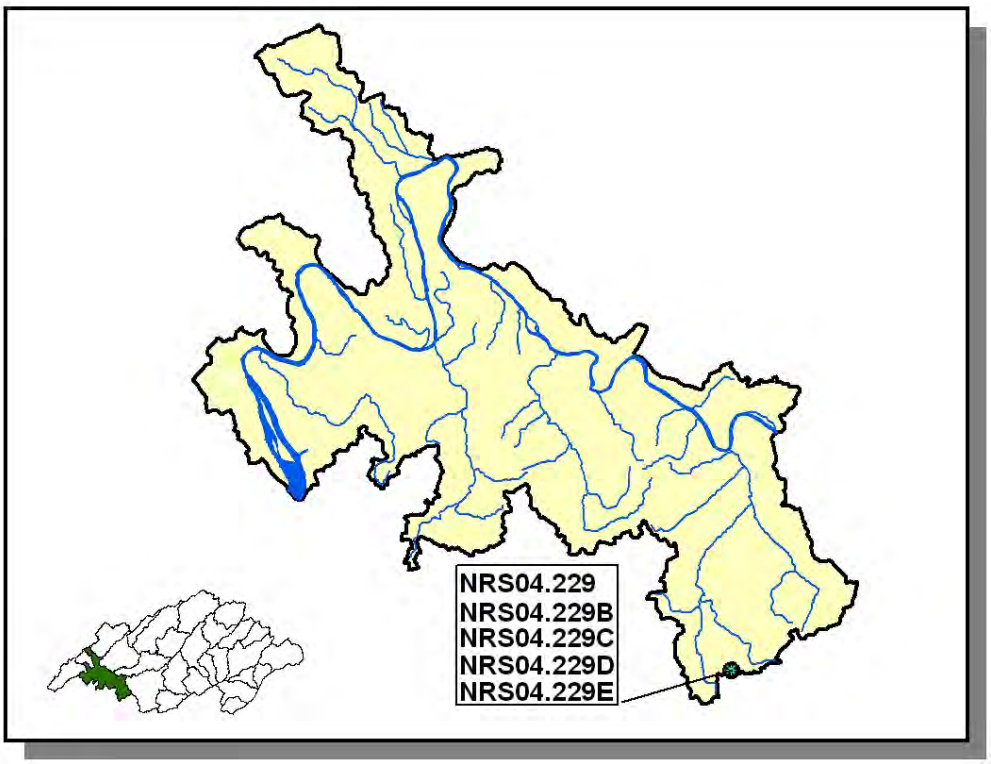


Figure 4-188. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080601. *More information is provided in Appendix IV.*

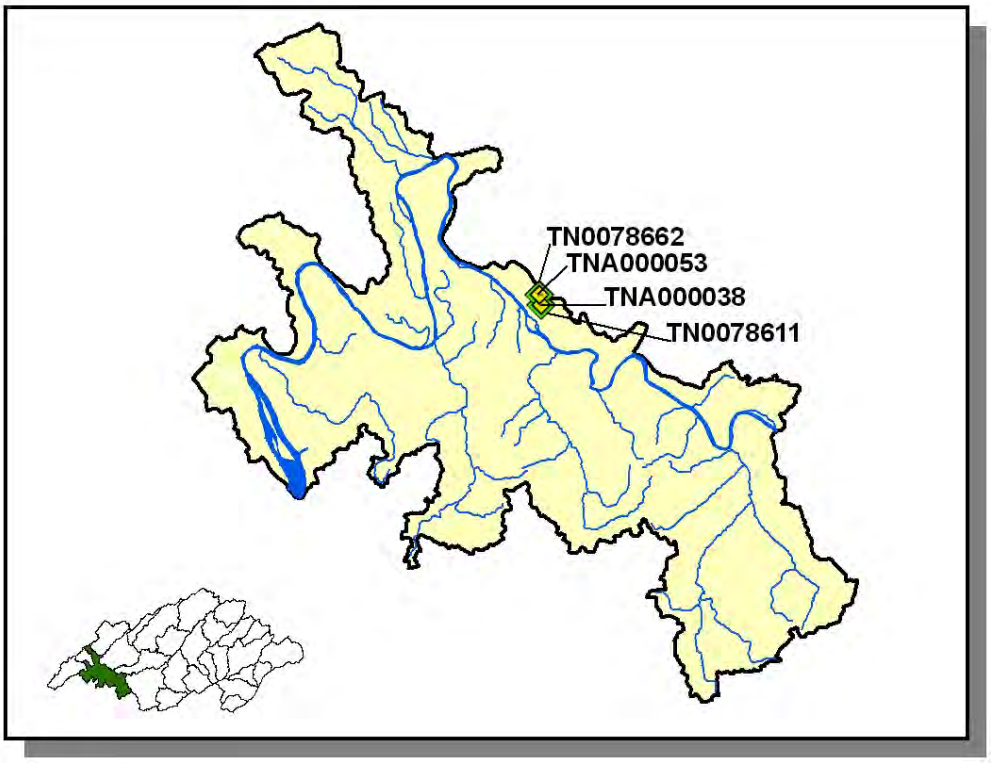


Figure 4-189. Location of CAFO (Concentrated Animal Feel Operation) Permit Sites in Subwatershed 060101080601. *More information, including the names of facilities, is provided in Appendix IV.*

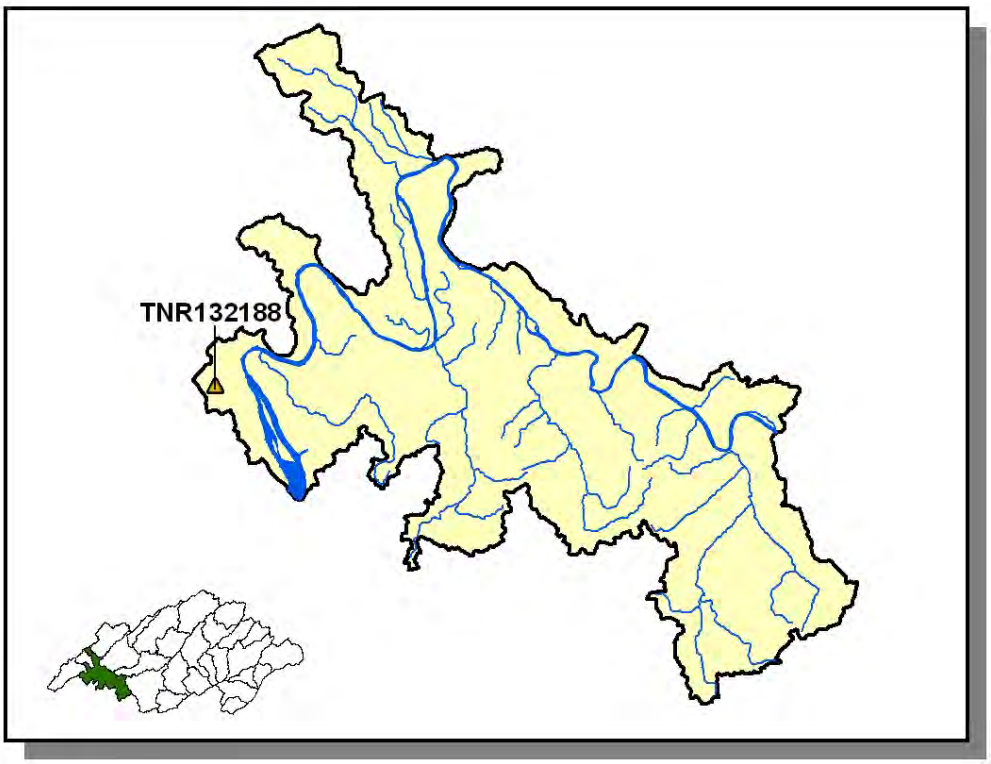


Figure 4-190. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080601. *More information is provided in Appendix IV.*

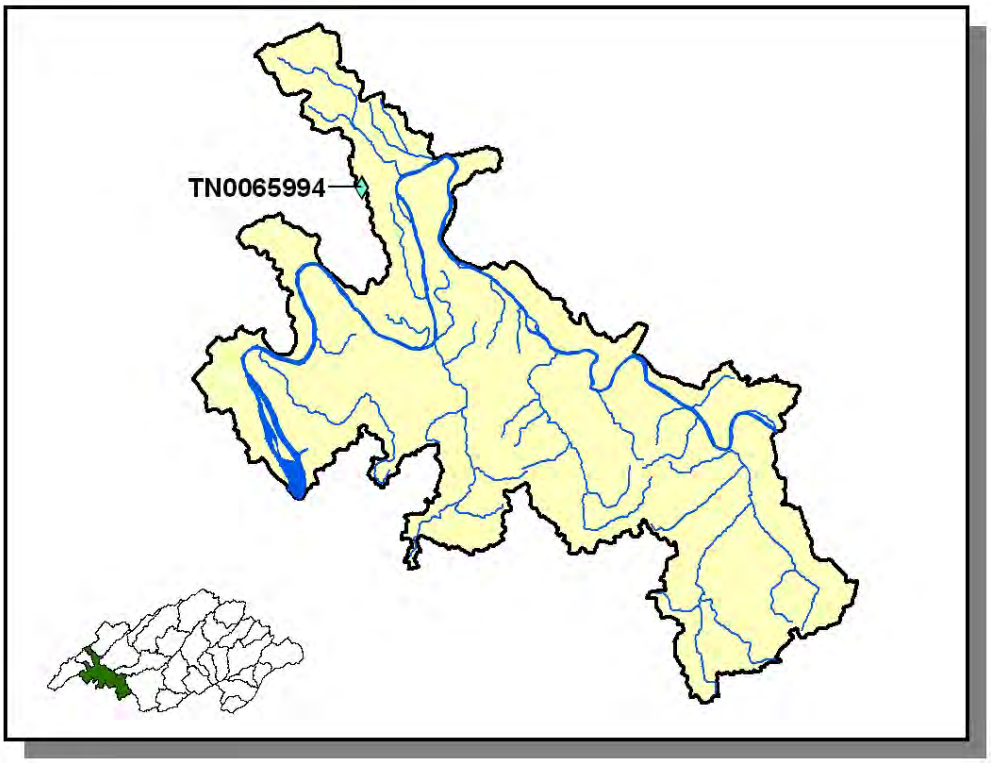


Figure 4-191. Location of permitted MINING facilities in Subwatershed 060101080601. *More information is provided in Appendix IV.*

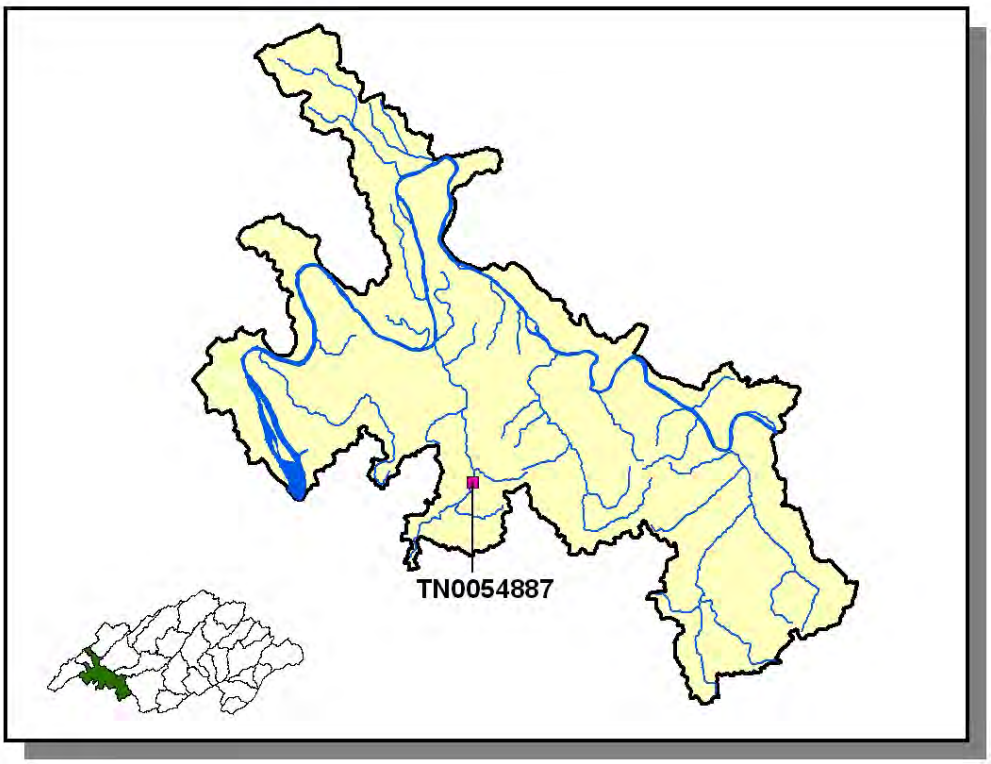


Figure 4-192. Location of Permitted MUNICIPAL and INDUSTRIAL Facilities in Subwatershed 060101080601. *More information, including the names of facilities, is provided in Appendix IV.*

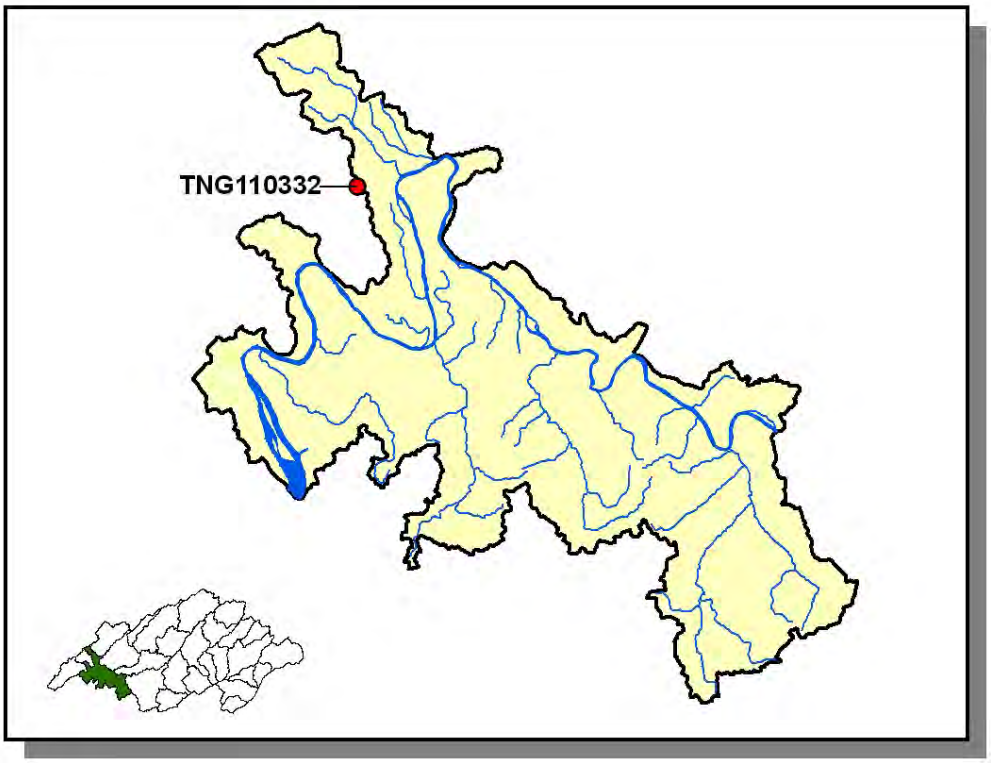


Figure 4-193. Location of RMCP (Ready Mix Concrete Plant) facilities in Subwatershed 060101080601. *More information, including the names of facilities, is provided in Appendix IV.*

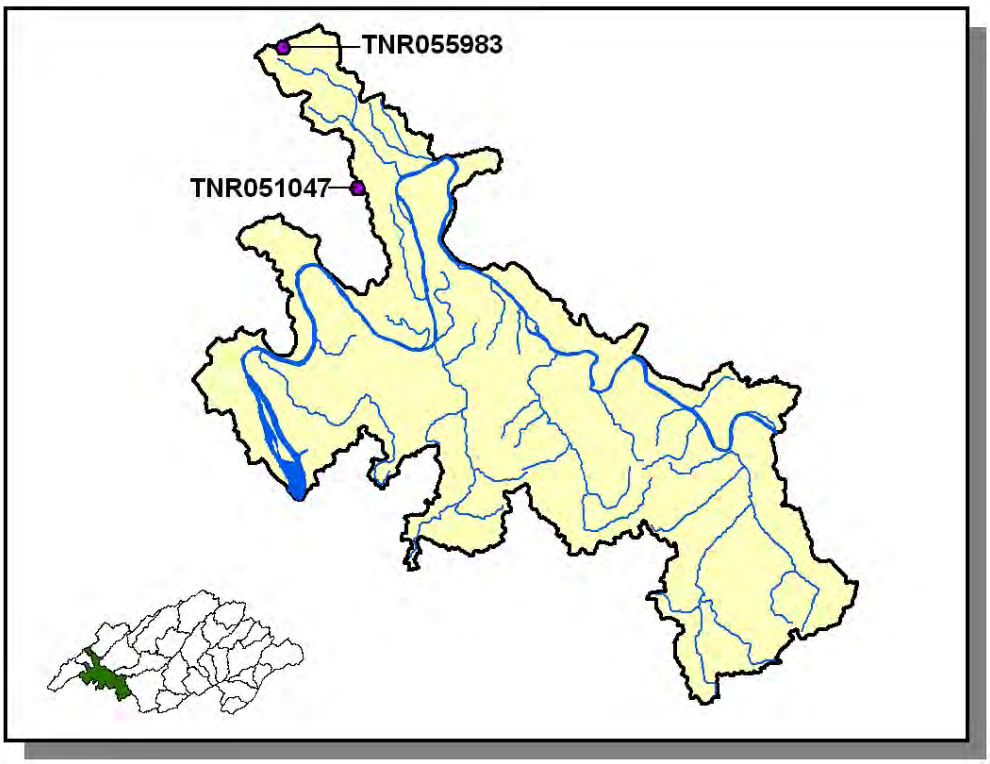


Figure 4-194. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080601. *More information is provided in Appendix IV.*

4.2.R.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Cocke	8,169	16,971	1,224	361	269	90
Greene	33,962	72,582	7,282	1,190	495	226
Hamblen	8,620	16,376	1,129	233	1,195	367
Jefferson	16,126	35,718	1,878	1,633	183	567

Table 4-115. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Cocke	182.0	163.4	3.7	17.4
Greene	180.0	171.8	2.0	10.5
Hamblen	32.8	32.8	0	0
Jefferson	62.2	62.2	0.6	1.8

Table 4-116. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Tobacco (Row Crops)	14.02
Oats (Close Grown Cropland)	13.51
Corn (Row Crops)	9.24
Wheat (Close Grown Cropland)	5.30
Other Vegetable and Truck Crop	3.80
Grass Forbs Legumes Mixed (Pastureland)	0.71
Farmsteads and Ranch Headquarters	0.50
Grass (Hayland)	0.43
Grass (Pastureland)	0.40
Legume (Hayland)	0.26
Other Land in Farms	0.21
Aquaculture in a Crop Rotation	0.15
Legume Grass (Hayland)	0.12

Table 4-117. Annual Estimated Total Soil Loss in Subwatershed 060101080601.

4.2.S. 060101080602 (Little Chucky Creek).

4.2.S.i. General Description.

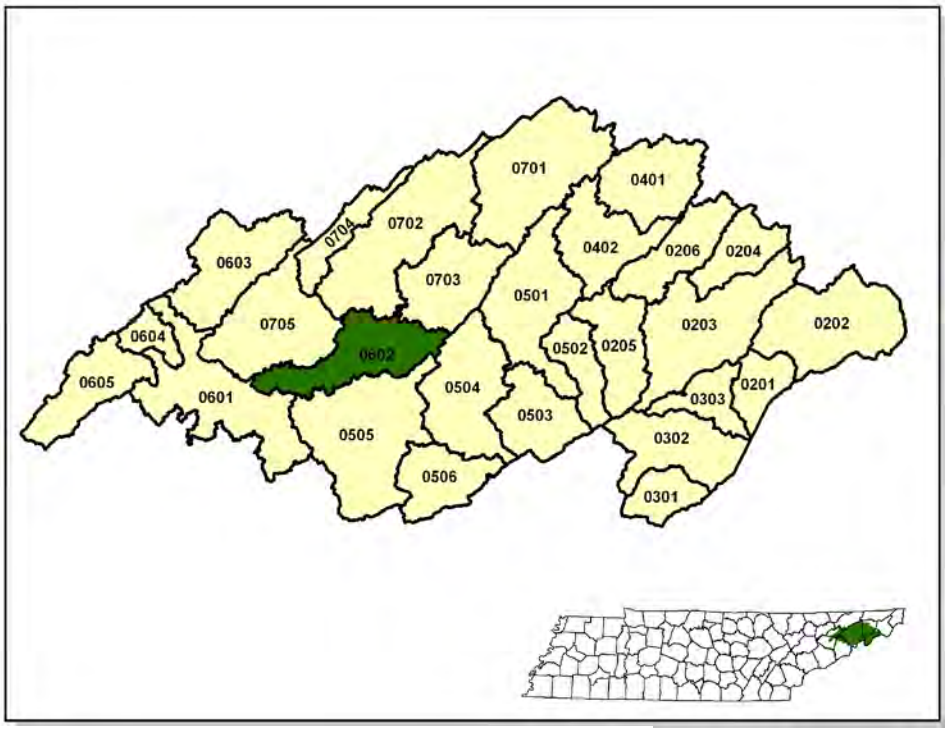


Figure 4-195. Location of Subwatershed 060101080602. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

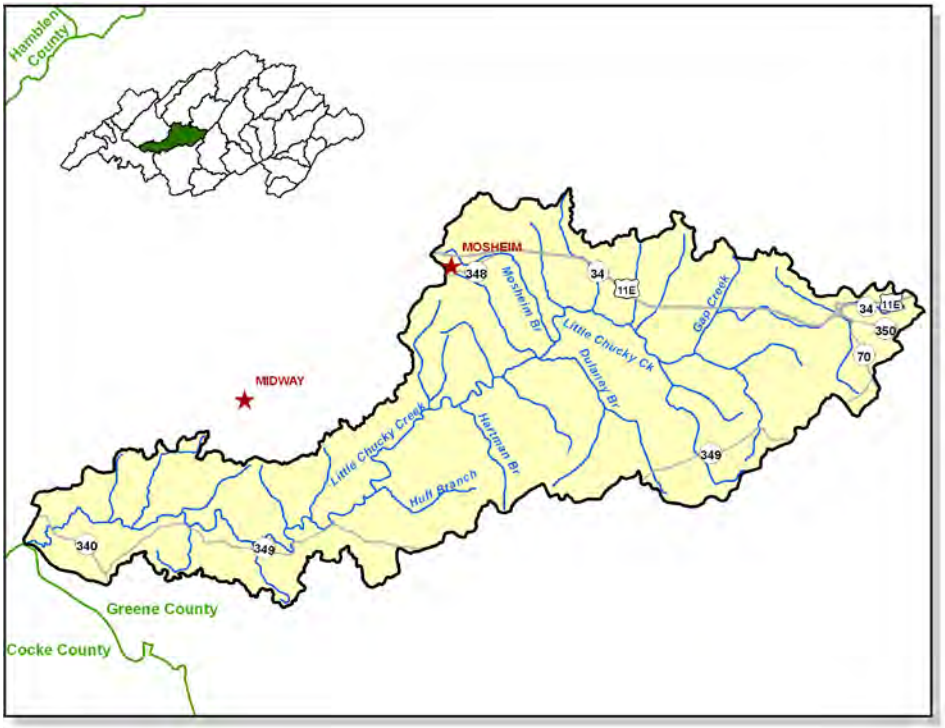


Figure 4-196. Locational Details of Subwatershed 060101080602.

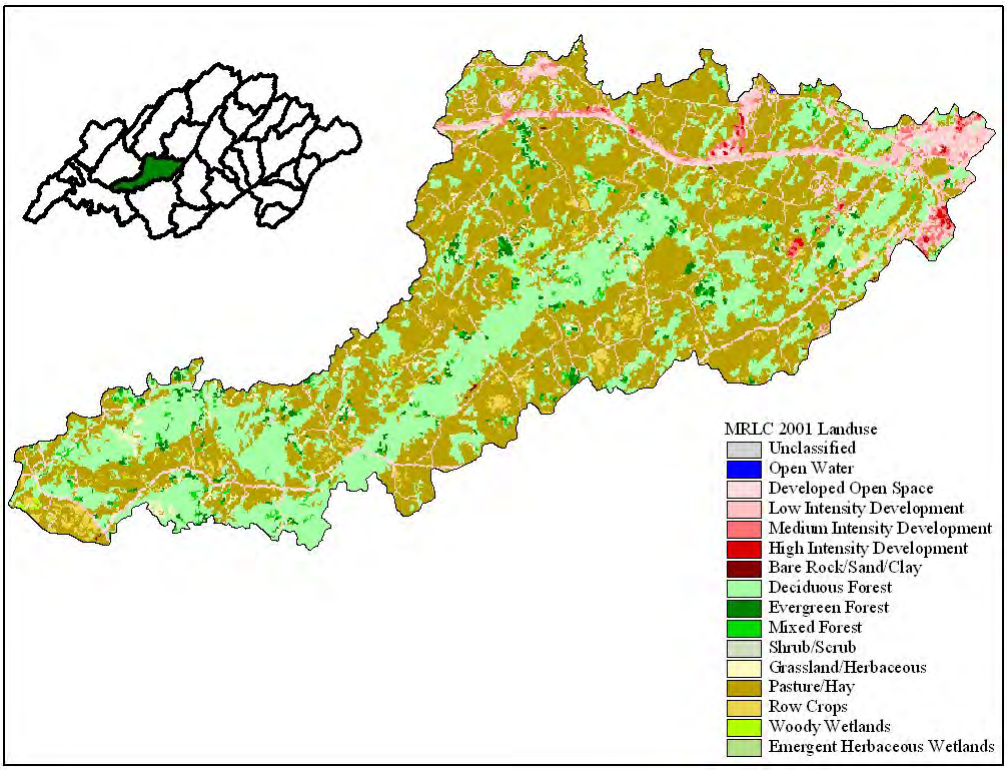


Figure 4-197. Illustration of Land Use Distribution in Subwatershed 060101080602.

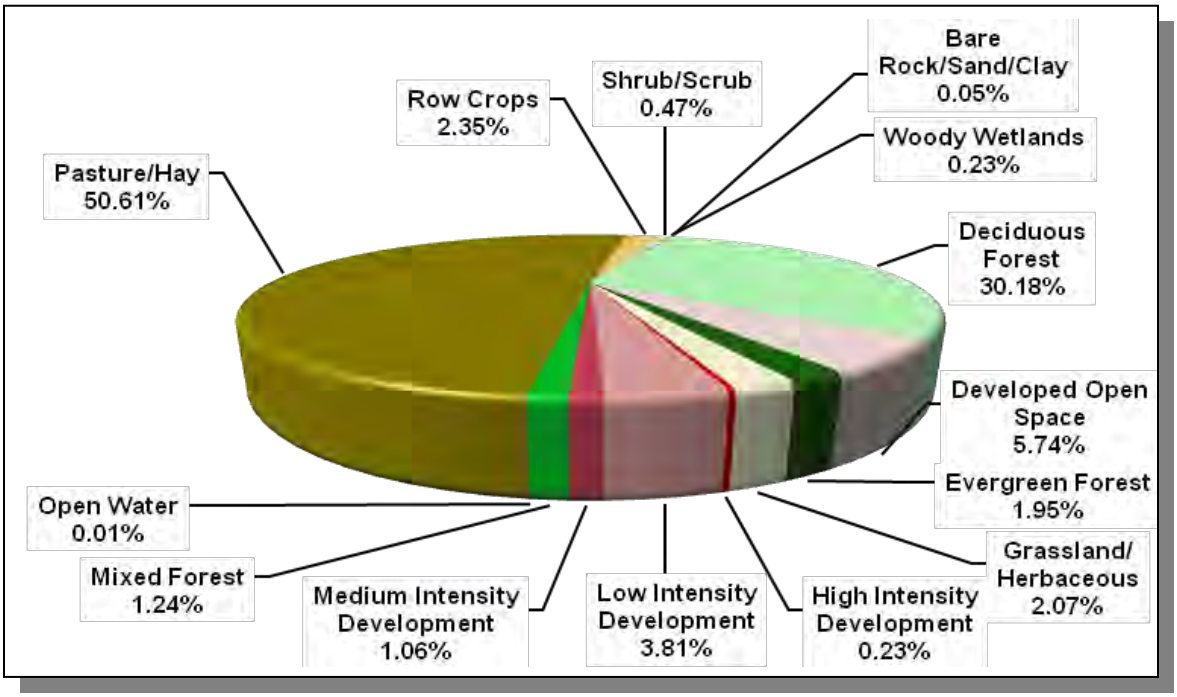


Figure 4-198. Land Use Distribution in Subwatershed 060101080602. *More information is provided in Appendix IV.*

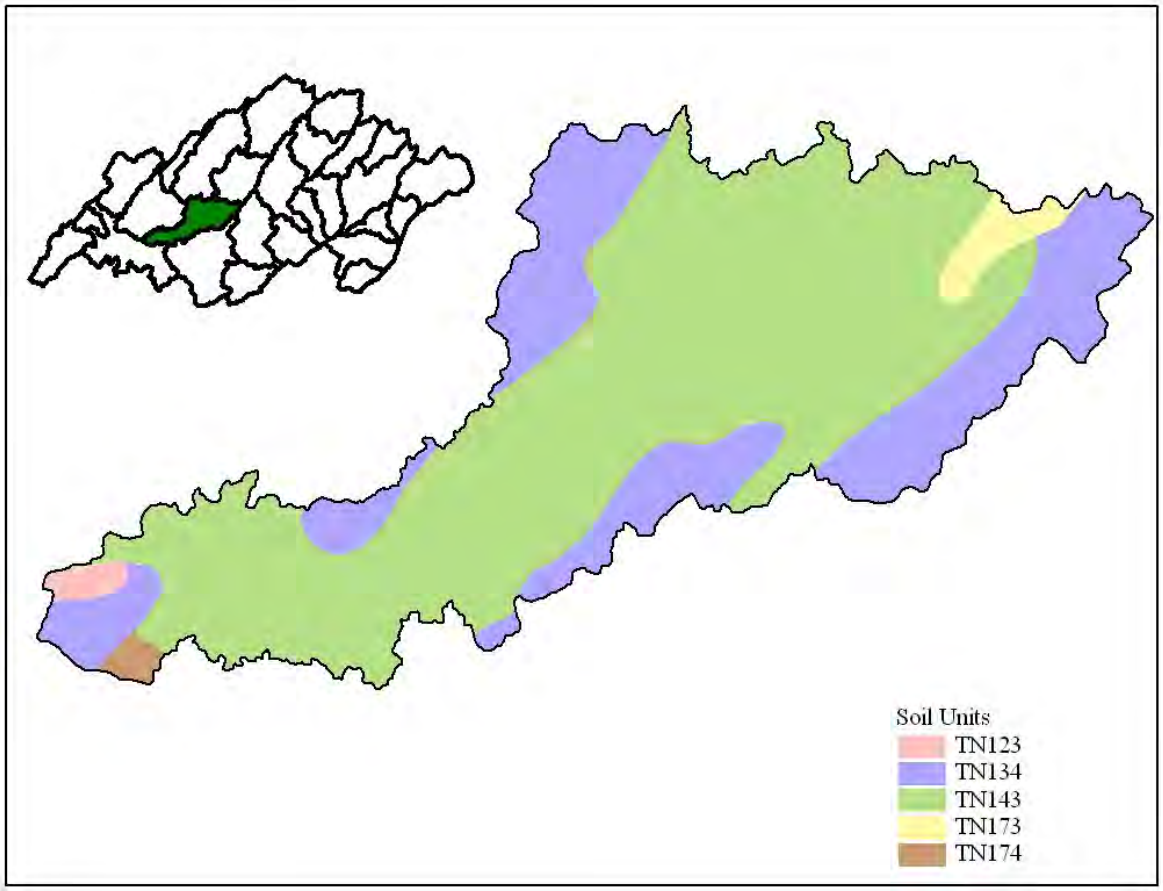


Figure 4-199. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080602.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN123	6.00	C	1.30	5.81	Silty Loam	0.37
TN134	0.00	B	1.38	5.18	Loam	0.31
TN143	0.00	C	1.22	6.44	Loam	0.32
TN173	0.00	C	0.56	2.26	Loam	0.14
TN174	19.00	C	10.23	4.98	Sandy Loam	0.20

Table 4-118. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080602. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Cocke	29,141	31,657	33,565	0.02	6	7	7	16.70
Greene	55,853	59,369	62,909	7.09	3,959	4,208	4,459	12.60
Totals	**84,994**	**91,026**	**96,474**		**3,965**	**4,215**	**4,466**	**12.60**

Table 4-119. Population Estimates in Subwatershed 060101080602.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Greeneville	Greene	13,532	6,058	5,779	279	0

Table 4-120. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 060101080602.

4.2.S.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080602.

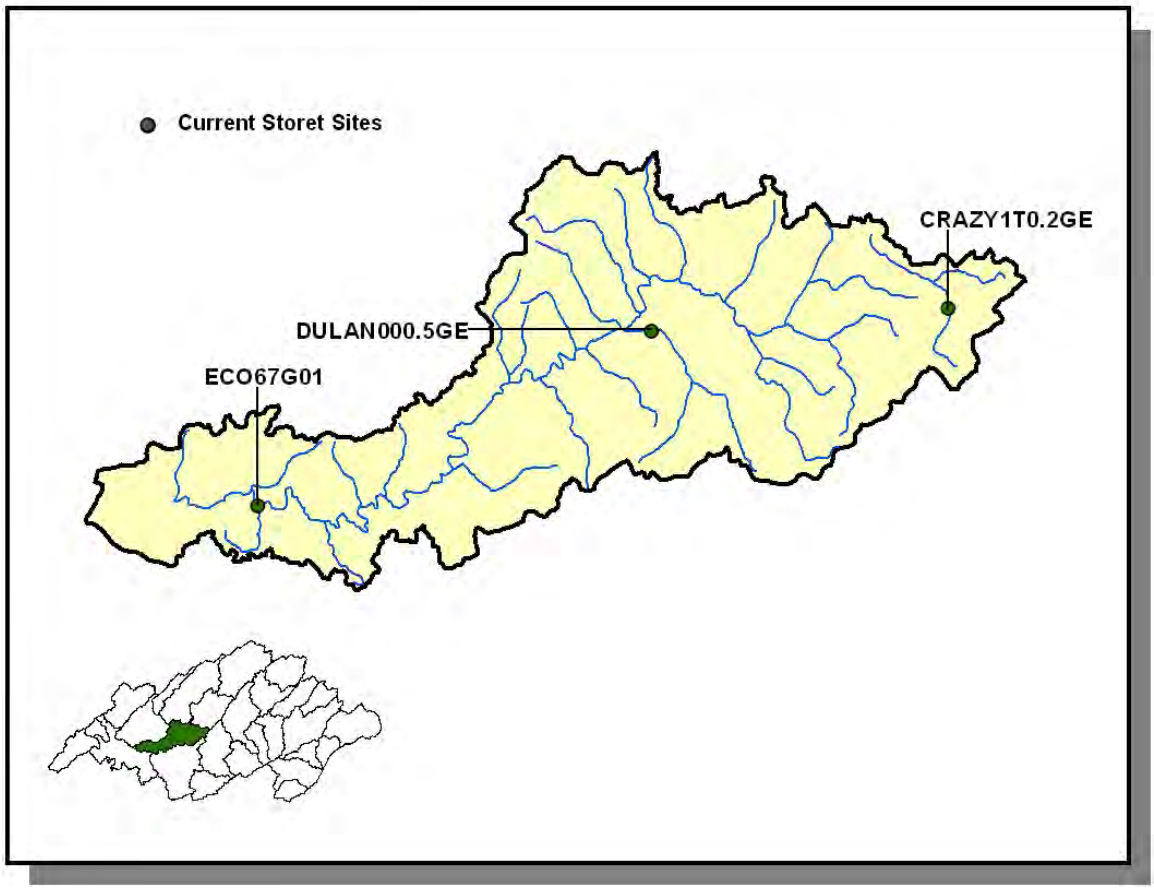


Figure 4-200. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080602. *More information, including site names and locations, is provided in Appendix IV.*

4.2.S.iii. Permitted Activities.

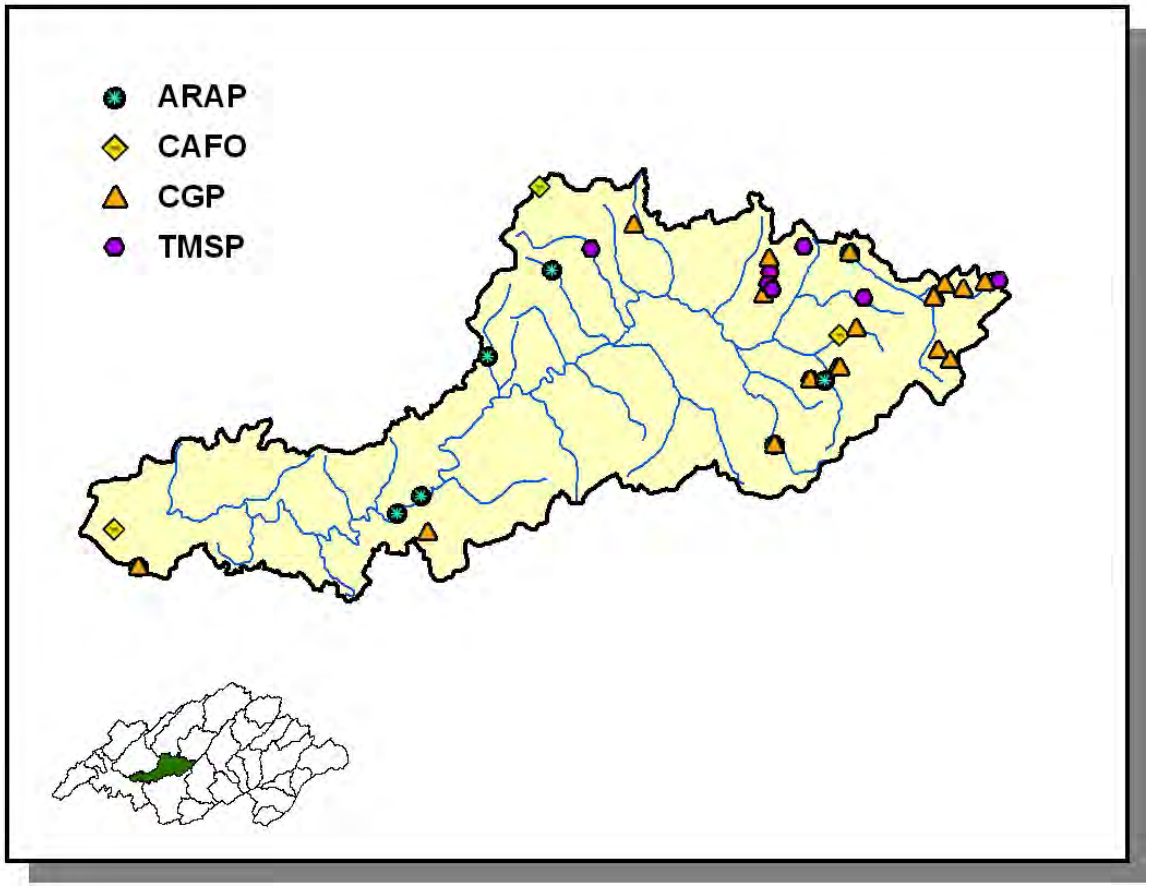


Figure 4-201. Location of Permits Issued in Subwatershed 060101080602. *More information, including the names of facilities, is provided in Appendix IV.*

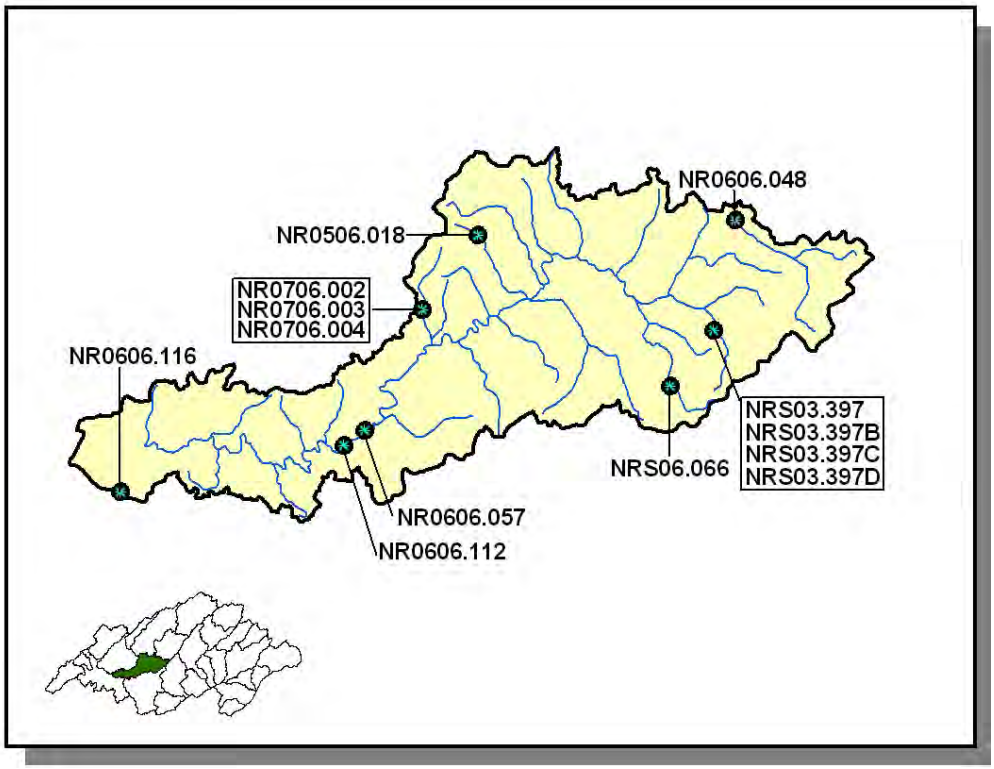


Figure 4-202. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080602. *More information is provided in Appendix IV.*

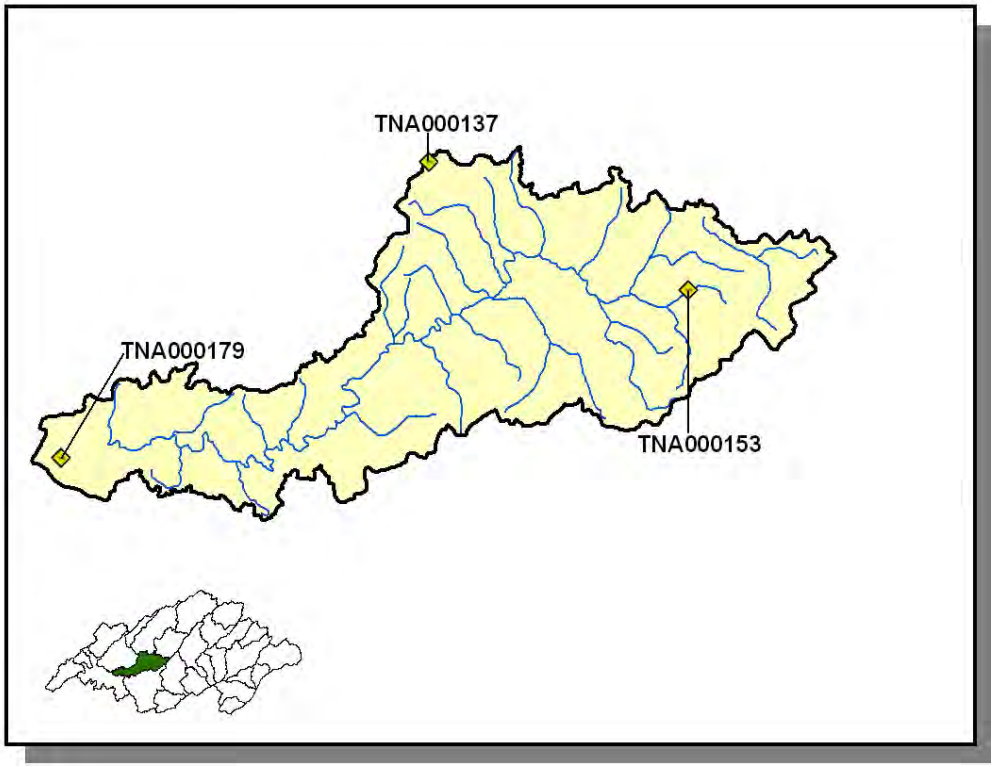


Figure 4-203. Location of CAFO (Concentrated Animal Feel Operation) Permit Sites in Subwatershed 060101080602. *More information, including the names of facilities, is provided in Appendix IV.*

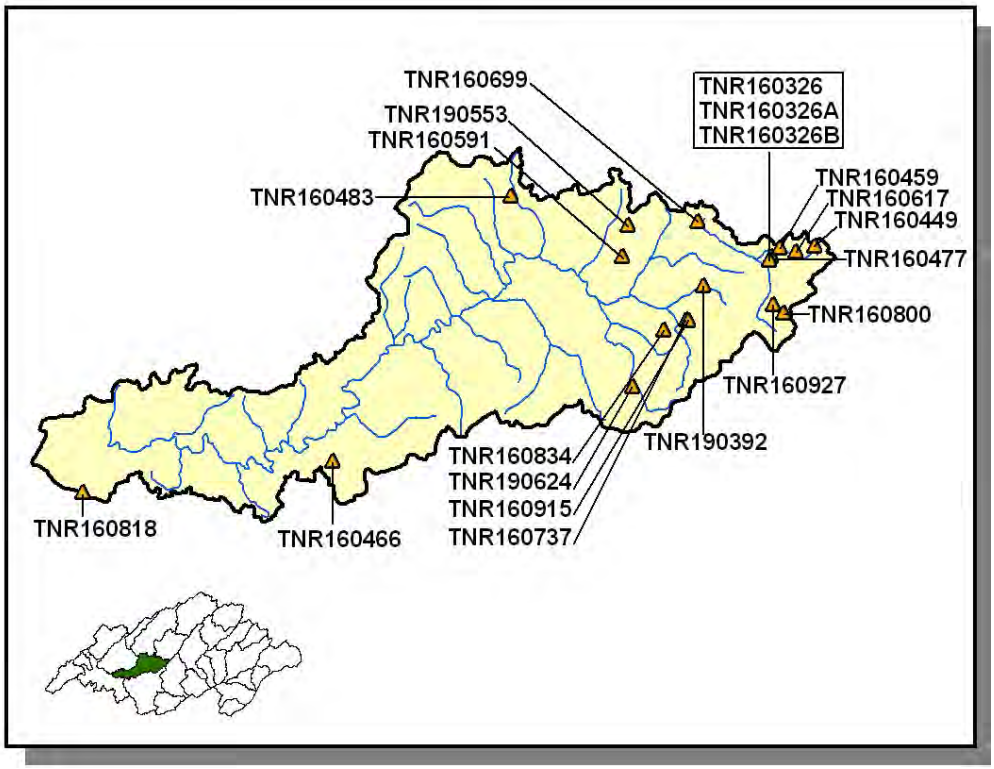


Figure 4-204. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080602. *More information is provided in Appendix IV.*

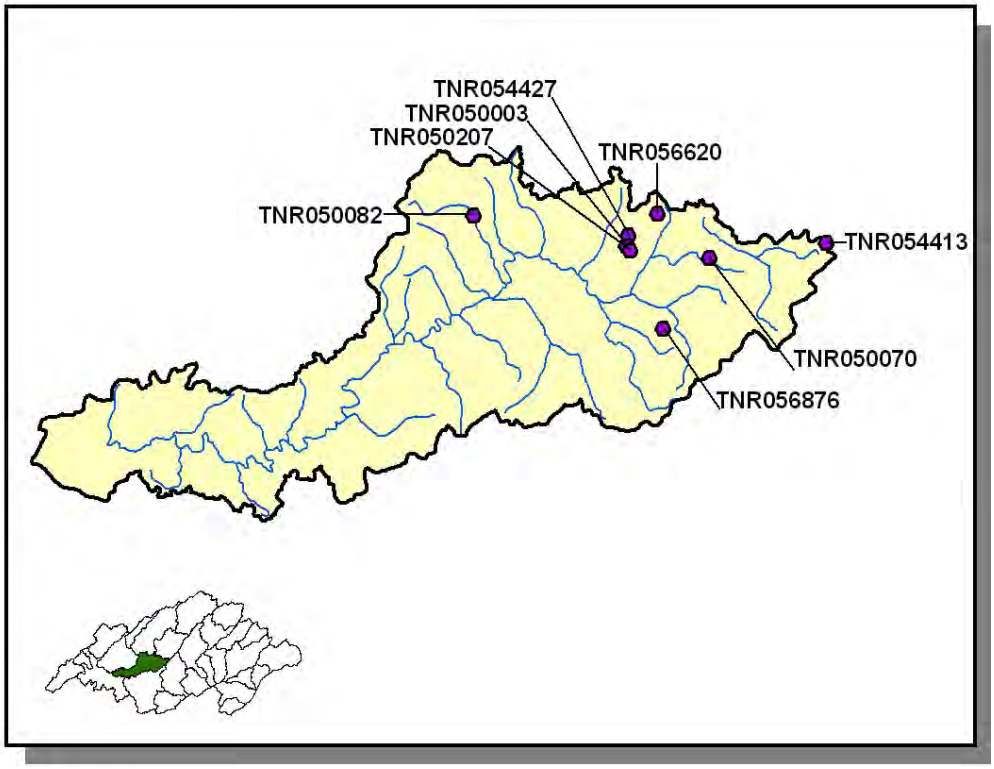


Figure 4-205. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080602. *More information is provided in Appendix IV.*

4.2.S.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Cocke	8,169	16,971	1,224	361	269	90
Greene	33962	72582	7,282	1,190	495	226

Table 4-121. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Cocke	182.0	163.4	3.7	17.4
Greene	180.0	171.8	2.0	10.5

Table 4-122. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	16.73
Tobacco (Row Crops)	15.36
Wheat (Close Grown Cropland)	5.30
Other Vegetable and Truck Crop	3.80
Farmsteads and Ranch Headquarters	1.67
Grass Forbs Legumes Mixed (Pastureland)	0.40
Grass (Pastureland)	0.35
Legume Grass (Hayland)	0.34
Legume (Hayland)	0.26
Grass (Hayland)	0.14

Table 4-123. Annual Estimated Total Soil Loss in Subwatershed 060101080602.

4.2.T. 060101080603 (Bent Creek).

4.2.T.i. General Description.

Figure 4-206. Location of Subwatershed 060101080603. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

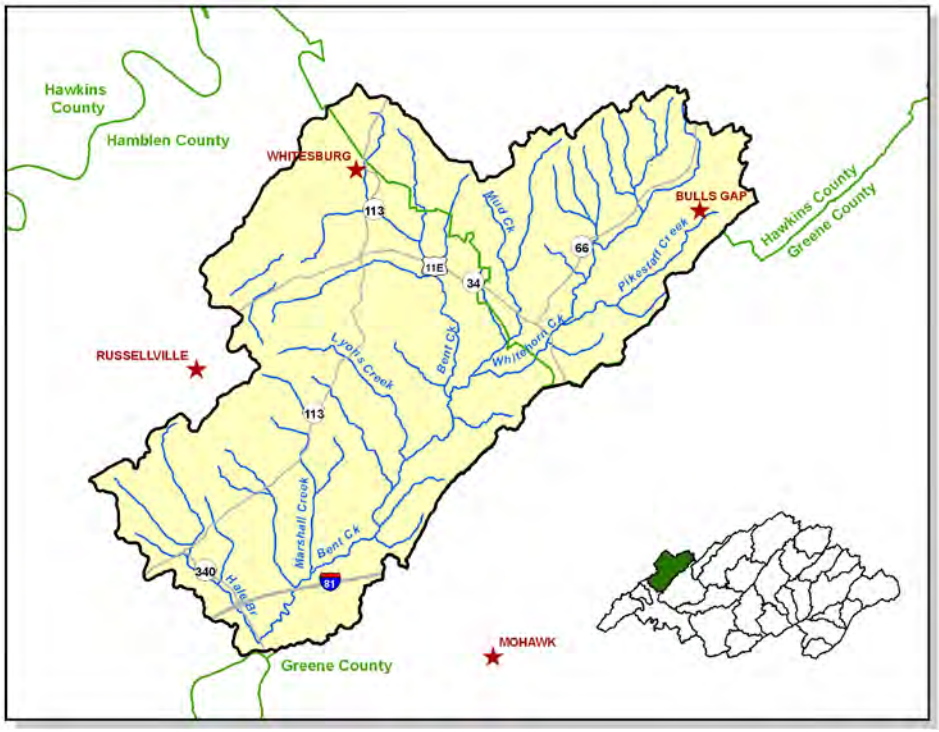


Figure 4-207. Locational Details of Subwatershed 060101080603.

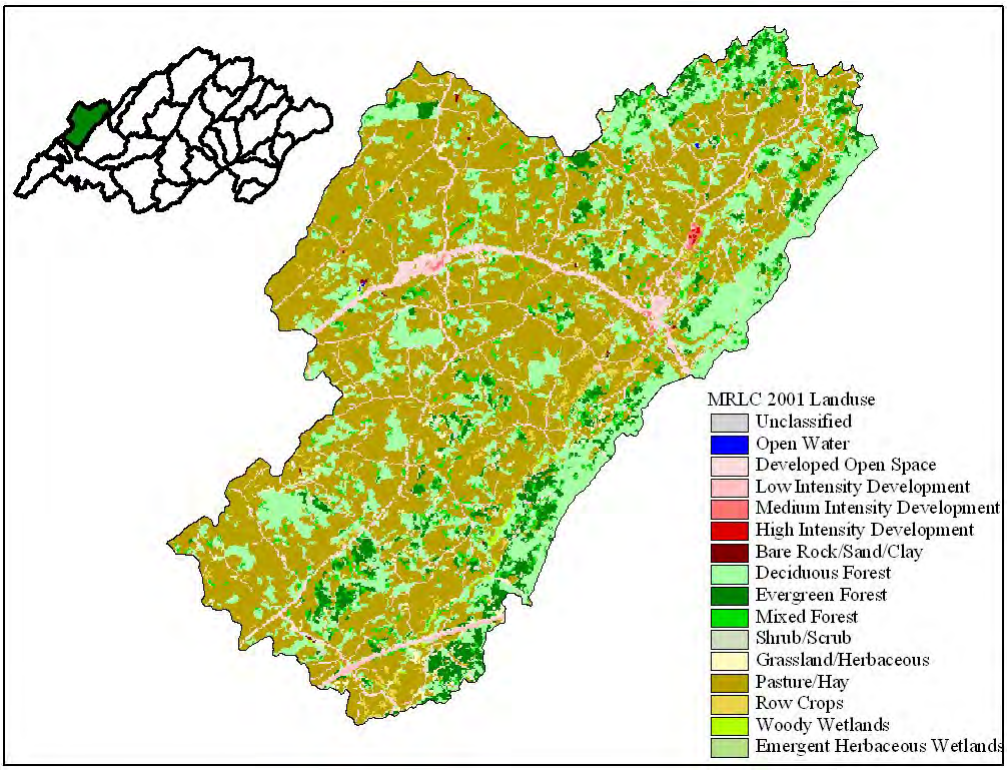


Figure 4-208. Illustration of Land Use Distribution in Subwatershed 060101080603.

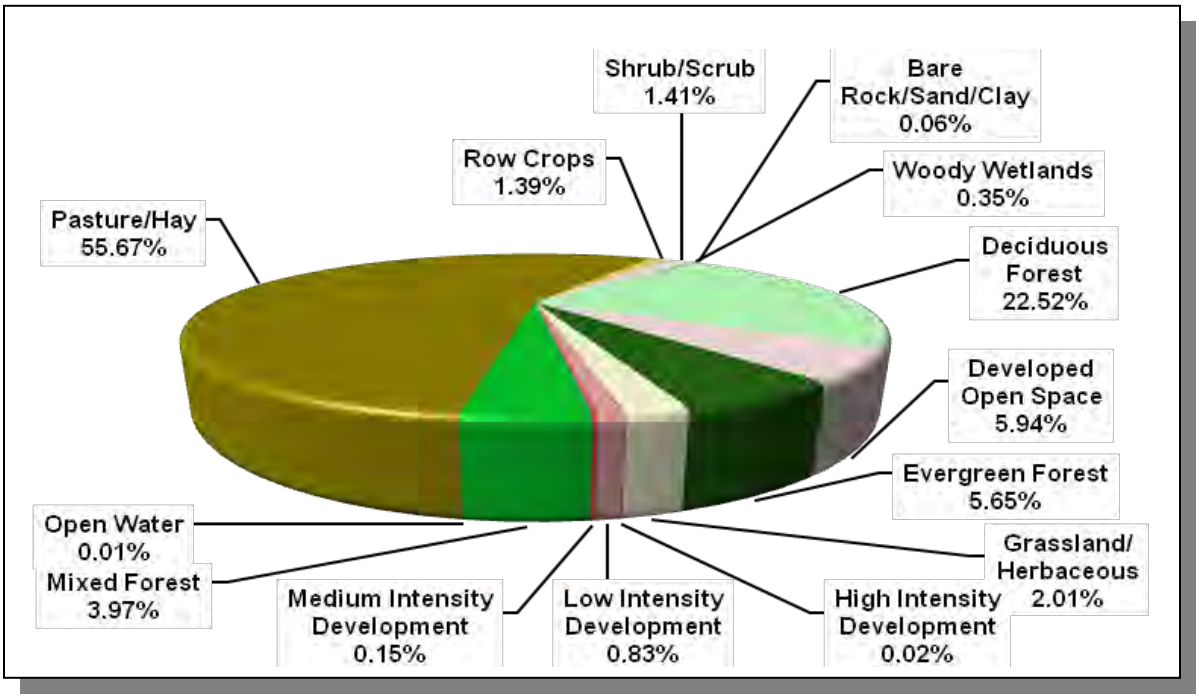


Figure 4-209. Land Use Distribution in Subwatershed 060101080603. *More information is provided in Appendix IV.*

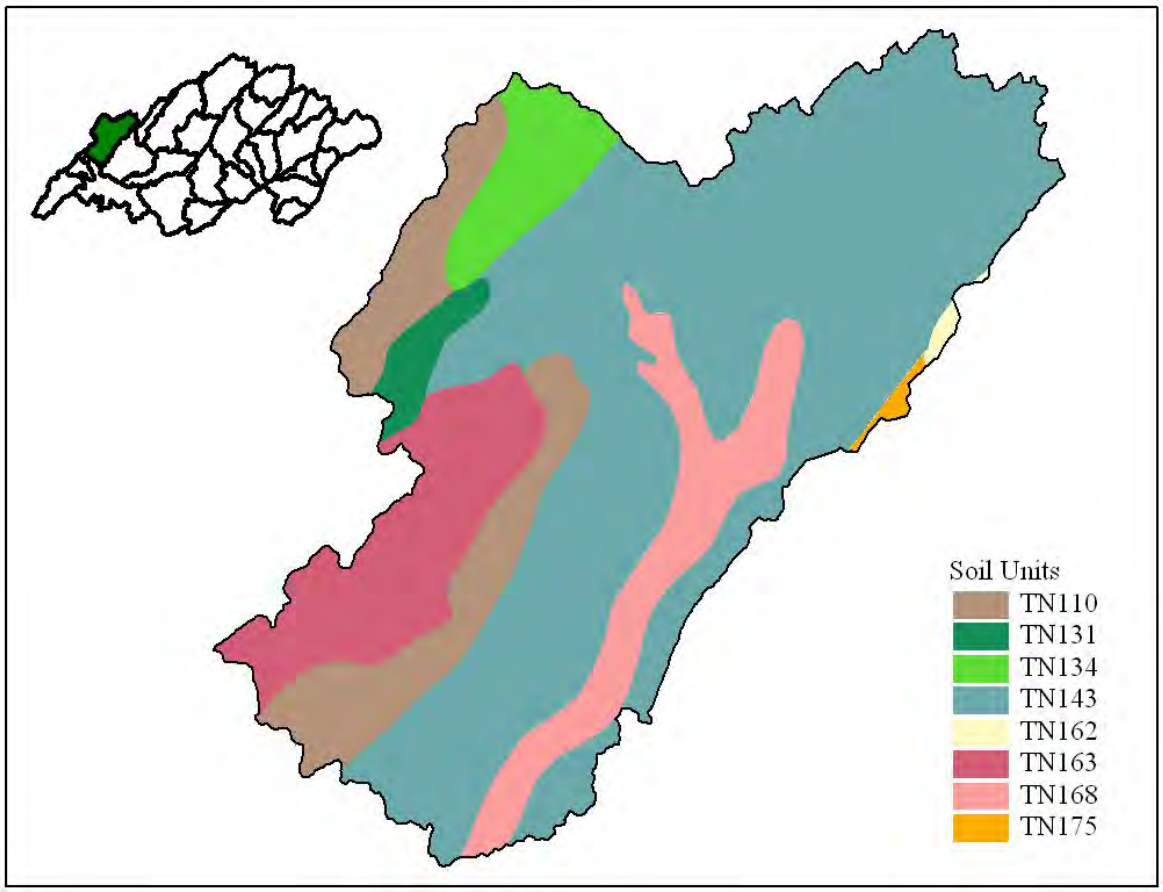


Figure 4-210. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080603.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN110	0.00	B	2.22	4.96	Loam	0.31
TN131	0.00	C	1.17	4.95	Silty Loam	0.33
TN134	0.00	B	1.38	5.18	Loam	0.31
TN143	0.00	C	1.22	6.44	Loam	0.32
TN162	0.00	C	1.52	6.20	Loam	0.36
TN163	0.00	B	1.37	5.15	Loam	0.31
TN168	0.00	C	1.28	5.65	Loam	0.34
TN175	0.00	B	1.49	5.23	Loam	0.30

Table 4-124. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080603. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Cocke	29,141	31,657	33,565	0.01	3	3	3	0.0
Greene	55,853	59,369	62,909	0.10	55	58	62	12.70
Hamblen	50,480	53,699	58,128	18.42	9,298	9,891	10,706	15.10
Hawkins	44,565	48,821	53,563	3.12	1,389	1,522	1,670	20.20
Totals	**180,039**	**193,546**	**208,165**		**10,745**	**11,474**	**12,441**	**15.80**

Table 4-125. Population Estimates in Subwatershed 060101080603.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Bulls Gap	Hawkins	673	319	283	31	5
Mosheim	Greene	1,451	586	473	113	0
Total		**2,124**	**905**	**756**	**144**	**5**

Table 4-126. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 060101080603.

4.2.T.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080603.

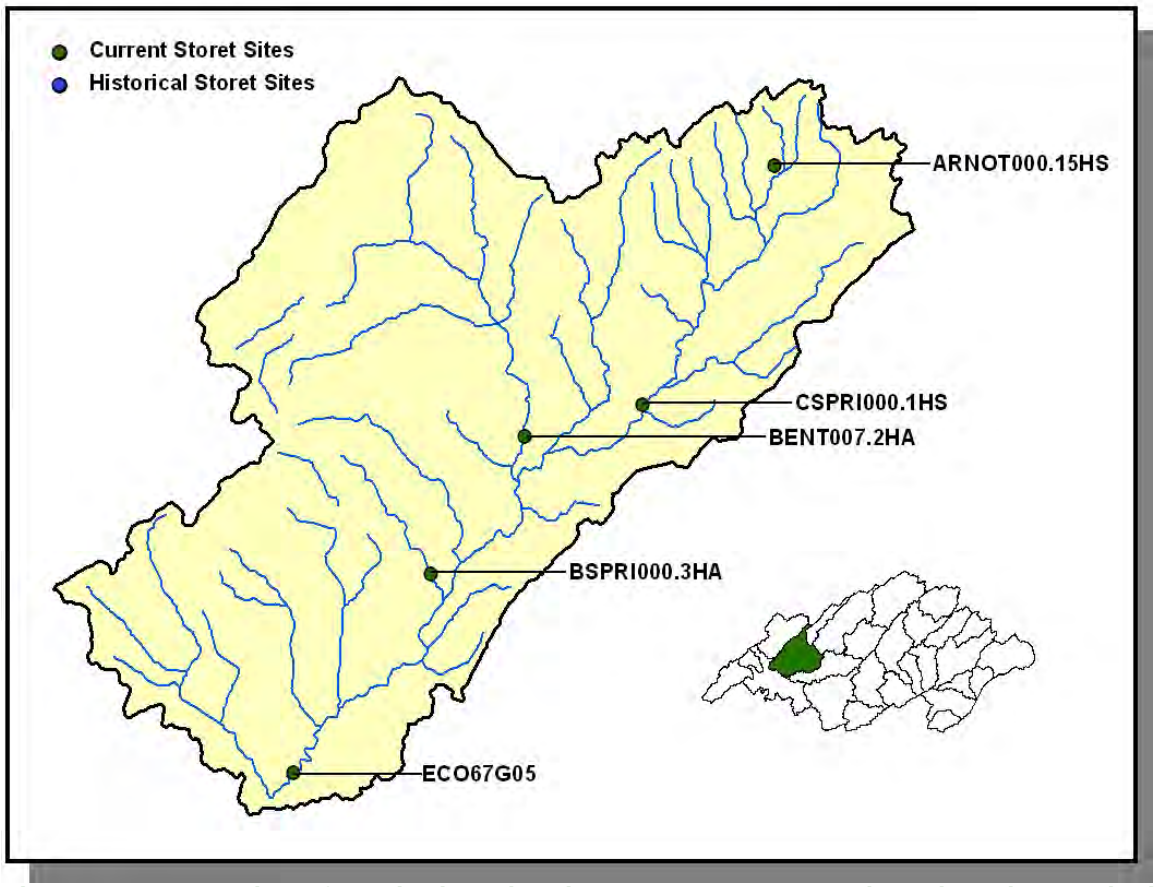


Figure 4-211. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080603. *More information, including site names and locations, is provided in Appendix IV.*

4.2.T.iii. Permitted Activities.

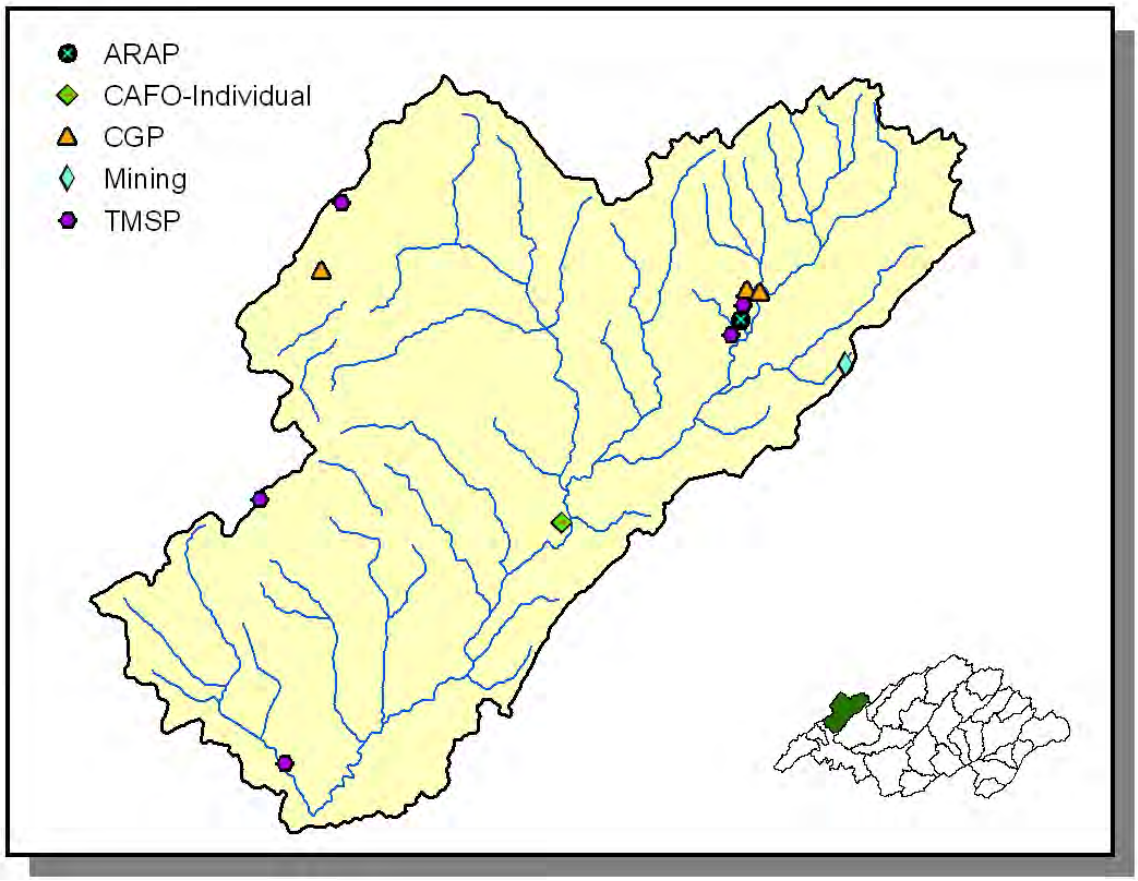


Figure 4-212. Location of Permits Issued in Subwatershed 060101080603. *More information, including the names of facilities, is provided in Appendix IV.*

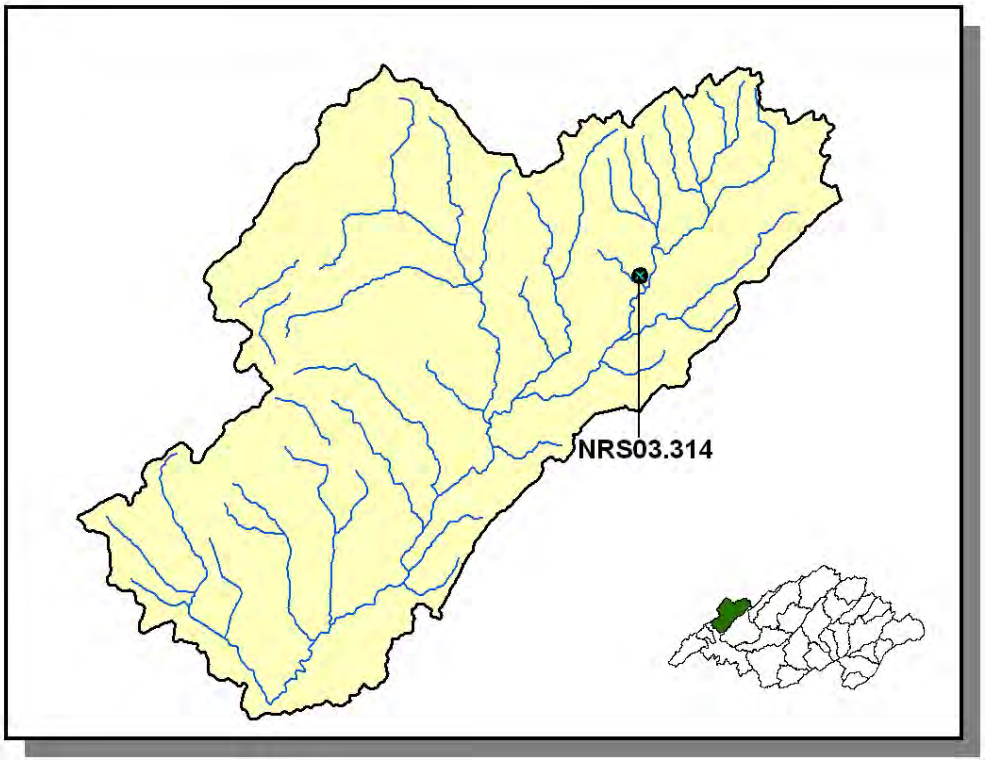


Figure 4-213. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080603. *More information is provided in Appendix IV.*

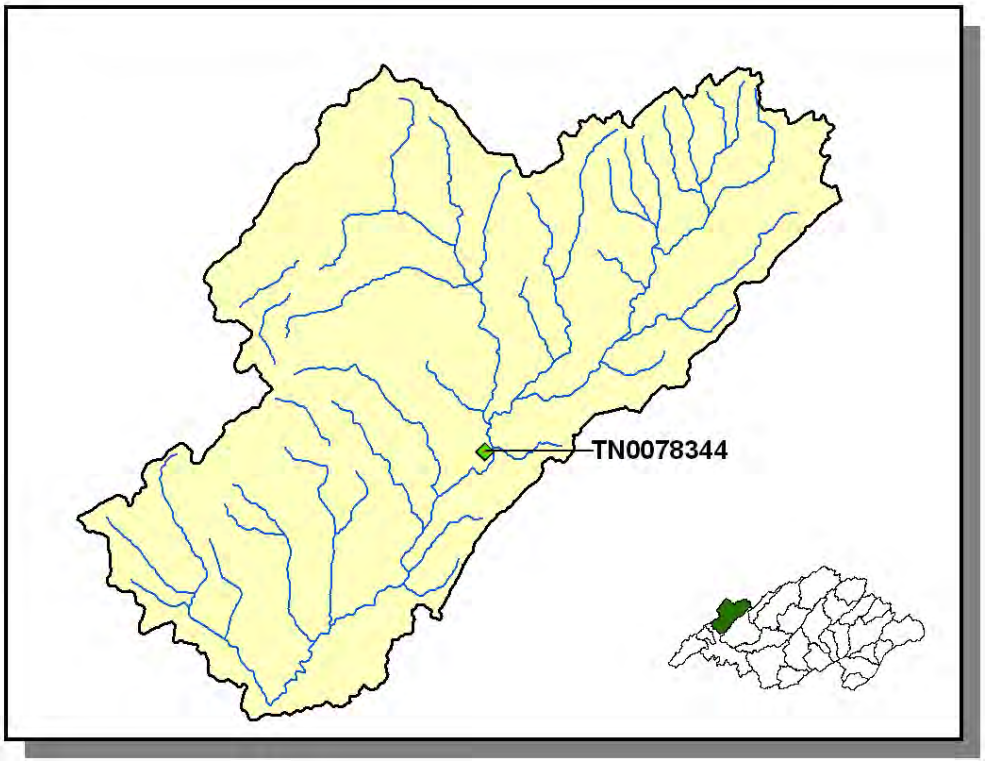


Figure 4-214. Location of CAFO (Concentrated Animal Feel Operation) Permit Sites in Subwatershed 060101080603. *More information, including the names of facilities, is provided in Appendix IV.*

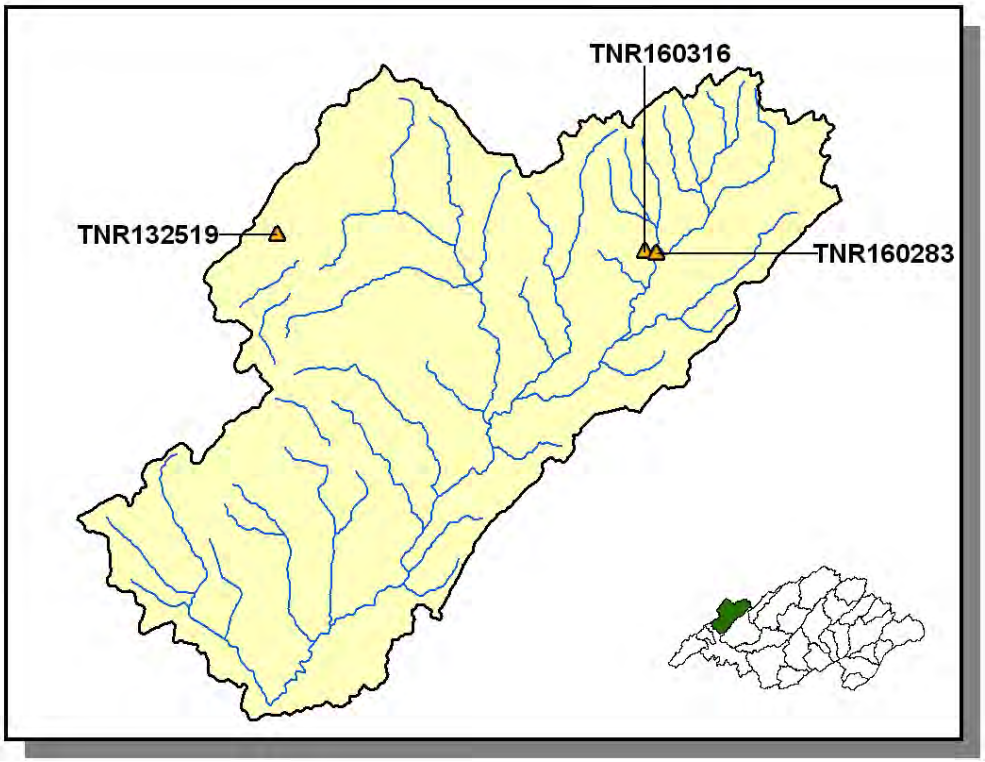


Figure 4-215. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080603. *More information is provided in Appendix IV.*

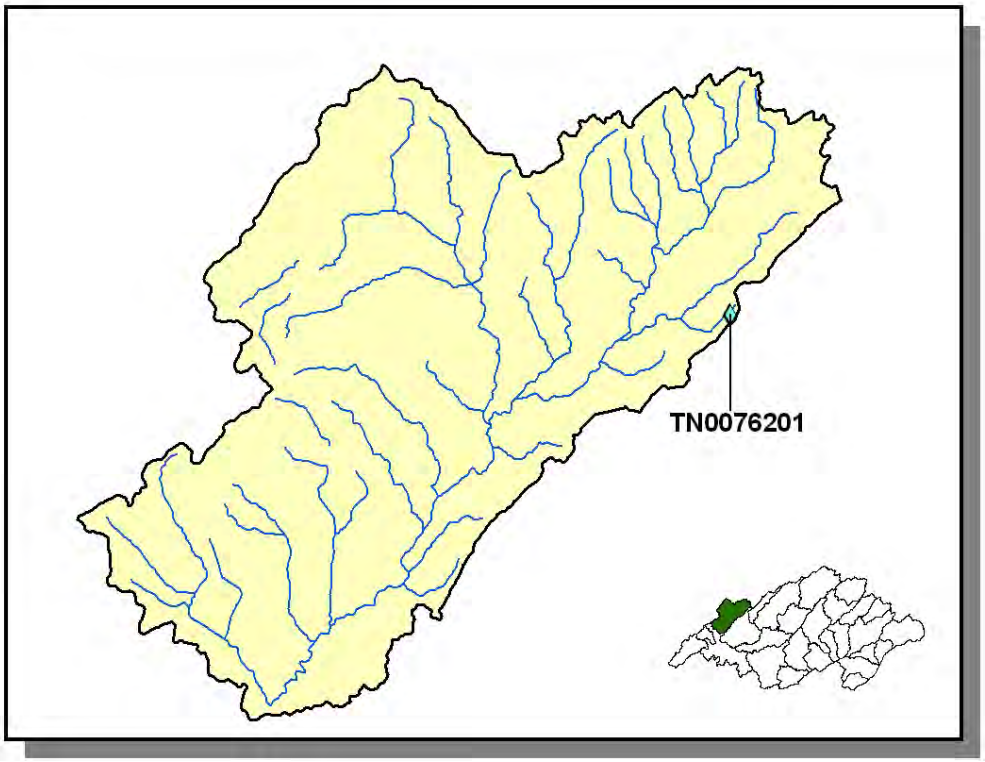


Figure 4-216. Location of permitted MINING facilities in Subwatershed 060101080603. *More information is provided in Appendix IV.*

4.2.T.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Cocke	8,169	16,971	1,224	361	269	90
Greene	33,962	72,582	7,282	1,190	495	226
Hamblen	8,620	16,376	1,129	233	1,195	367
Hawkins	18,796	36,429	903	1,079	442	243

Table 4-127. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Cocke	182.0	163.4	3.7	17.4
Greene	180.0	171.8	2.0	10.5
Hamblen	32.8	32.8	0	0
Hawkins	177.4	177.4	0.4	2.1

Table 4-128. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Other Vegetable and Truck Crop	32.37
Corn (Row Crops)	14.94
Tobacco (Row Crops)	11.08
Wheat (Close Grown Cropland)	5.30
Grass (Pastureland)	0.47
Grass (Hayland)	0.42
Grass Forbs Legumes Mixed (Pastureland)	0.38
Farmsteads and Ranch Headquarters	0.24
Legume Grass (Hayland)	0.23
Other Land in Farms	0.21
Legume (Hayland)	0.16
Aquaculture in a Crop Rotation	0.15

Table 4-129. Annual Estimated Total Soil Loss in Subwatershed 060101080603.

4.2.U. 060101080604 (Flat Creek).

4.2.U.i. General Description.

Figure 4-217. Location of Subwatershed 060101080604. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

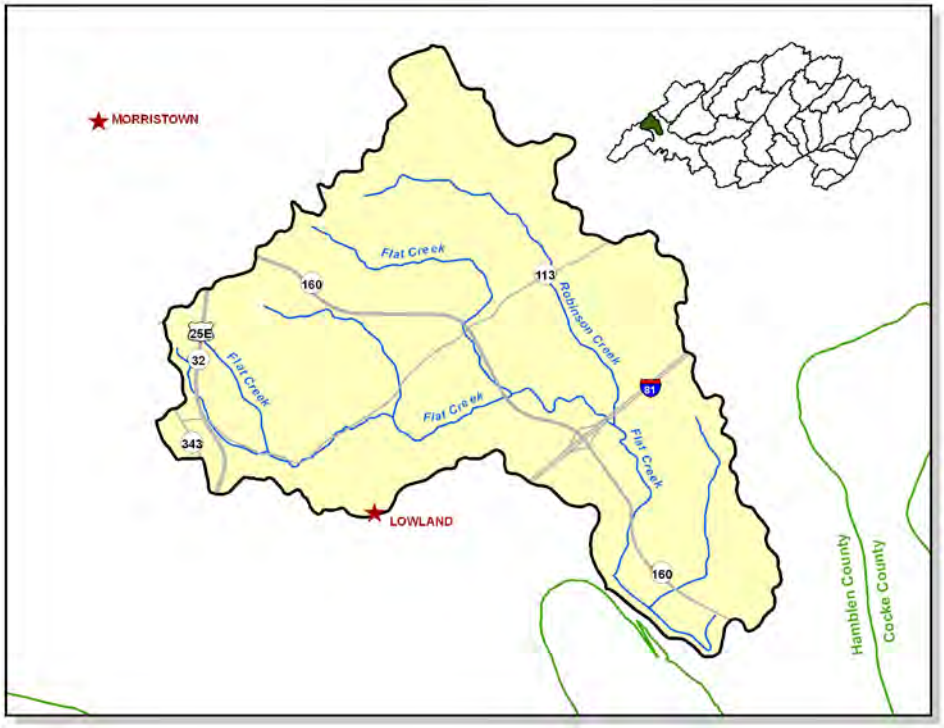


Figure 4-218. Locational Details of Subwatershed 060101080604.

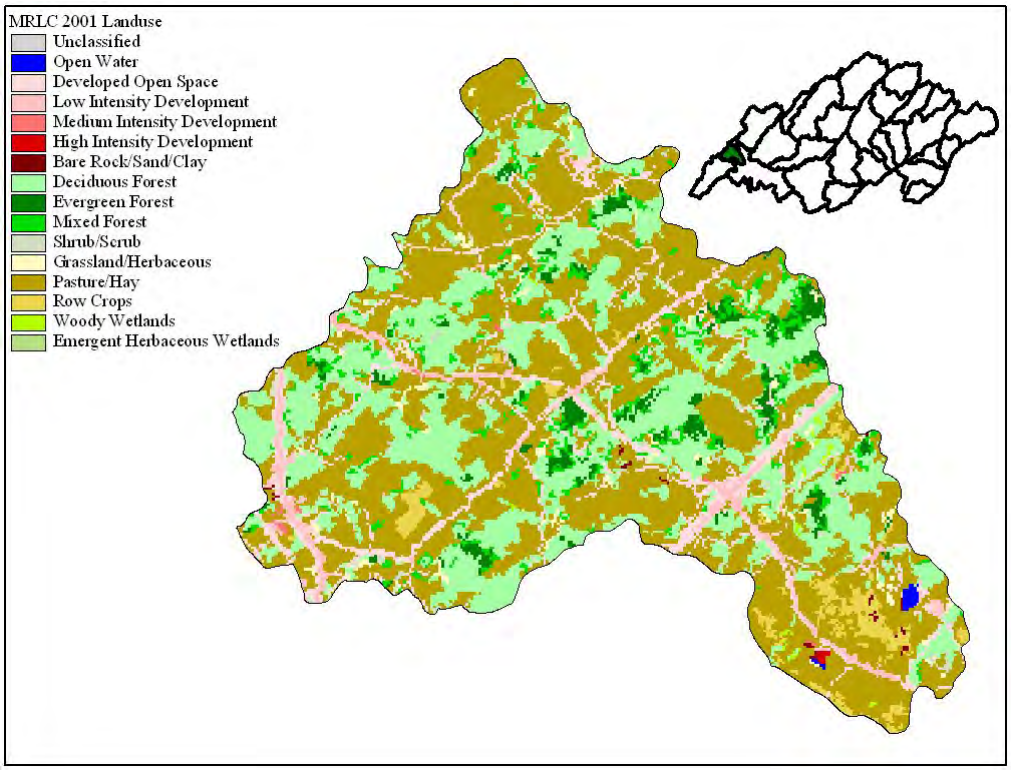


Figure 4-219. Illustration of Land Use Distribution in Subwatershed 060101080604.

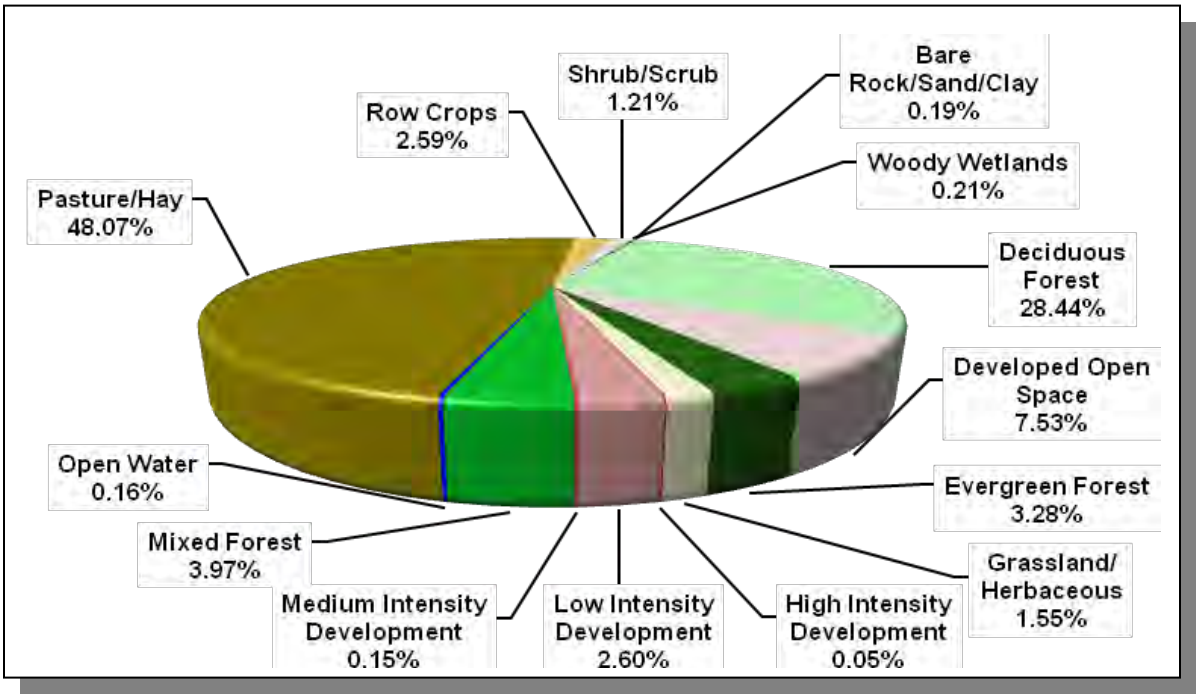


Figure 4-220. Land Use Distribution in Subwatershed 060101080604. *More information is provided in Appendix IV.*

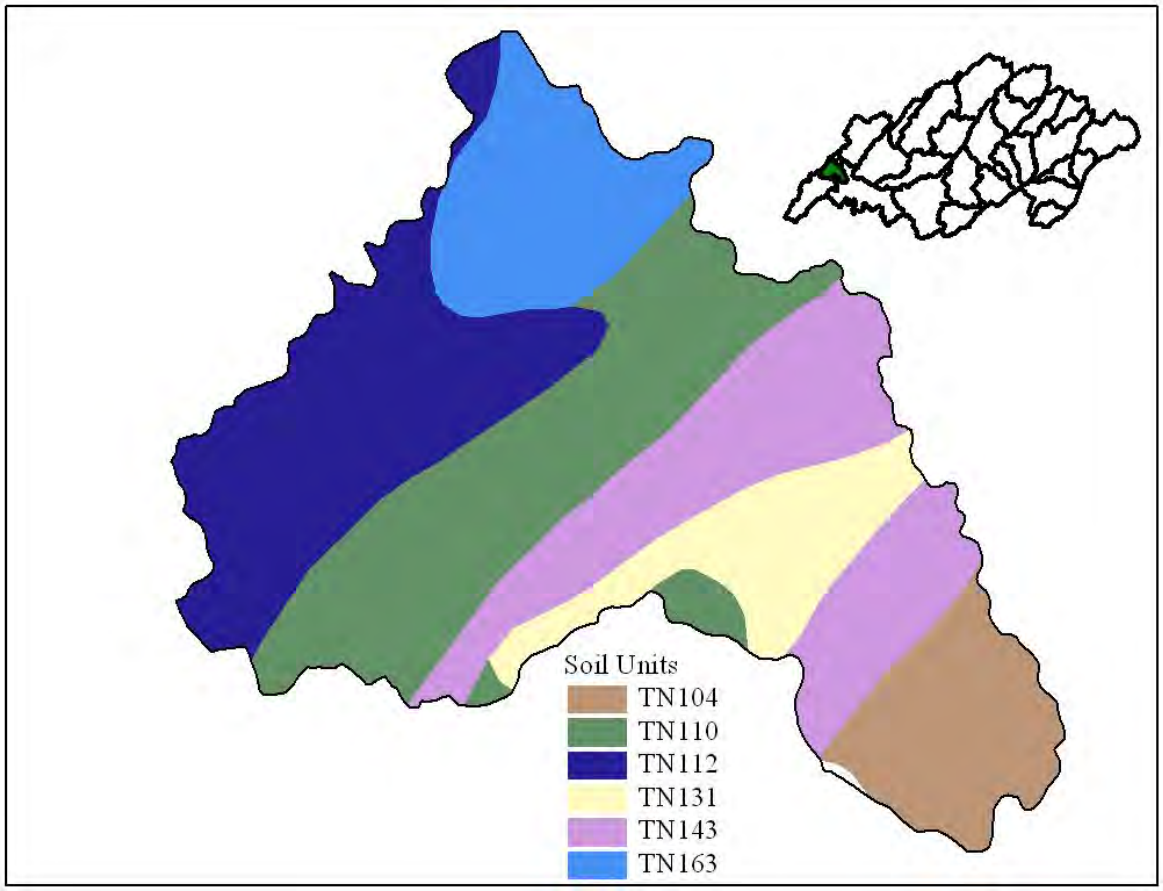


Figure 4-221. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080604.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN104	1.00	C	1.20	5.23	Silty Loam	0.38
TN110	0.00	B	2.22	4.96	Loam	0.31
TN112	2.00	C	2.36	5.09	Loam	0.35
TN131	0.00	C	1.17	4.95	Silty Loam	0.33
TN143	0.00	C	1.22	6.44	Loam	0.32
TN163	0.00	B	1.37	5.15	Loam	0.31

Table 4-130. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080604. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Hamblen	50,480	53,699	58,128	6.7	3,382	3,597	3,894	15.1
Totals	**79,621**	**85,356**	**91,693**		**3,392**	**3,608**	**3,905**	**15.1**

Table 4-131. Population Estimates in Subwatershed 060101080604.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Morristown	Hamblen	21,385	9,248	8,768	466	14

Table 4-132. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 060101080604.

4.2.U.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations or STORET sites located in subwatershed 060101080604.

4.2.U.iii. Permitted Activities.

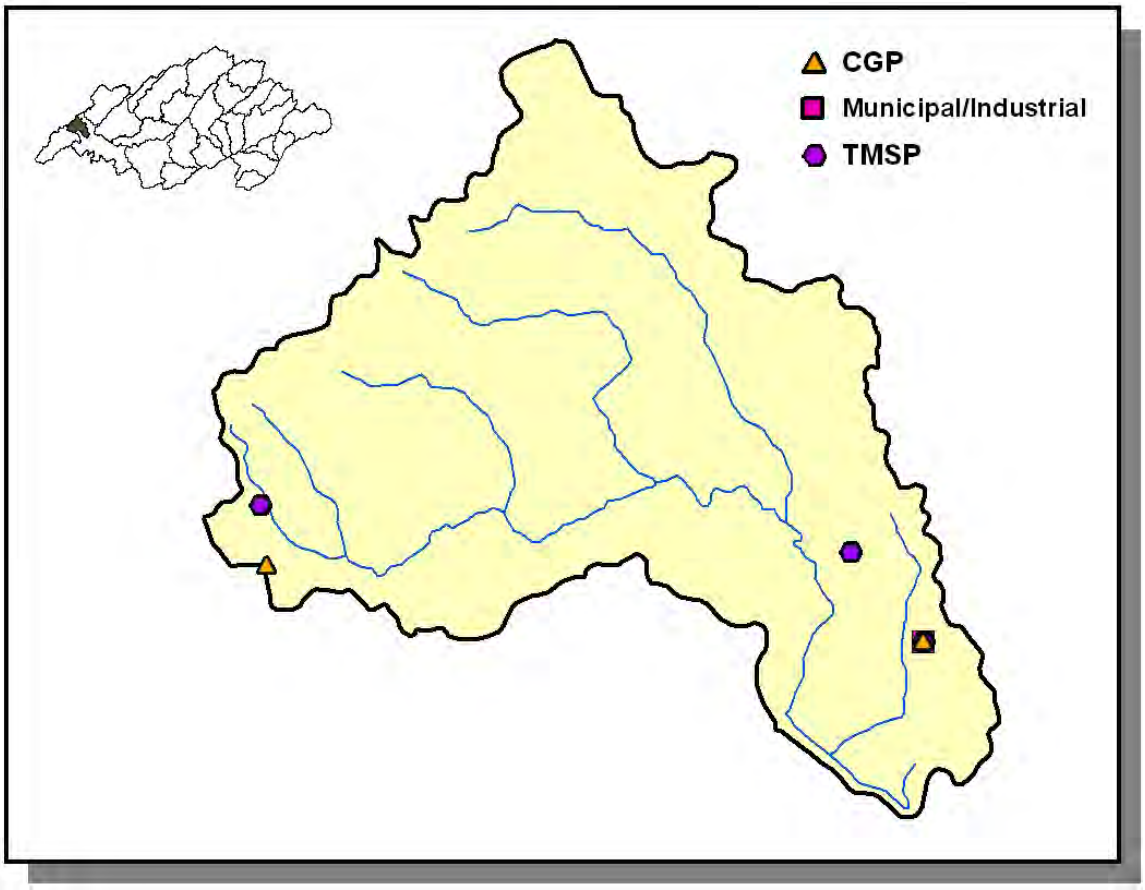


Figure 4-222. Location of Permits Issued in Subwatershed 060101080604. *More information, including the names of facilities, is provided in Appendix IV.*

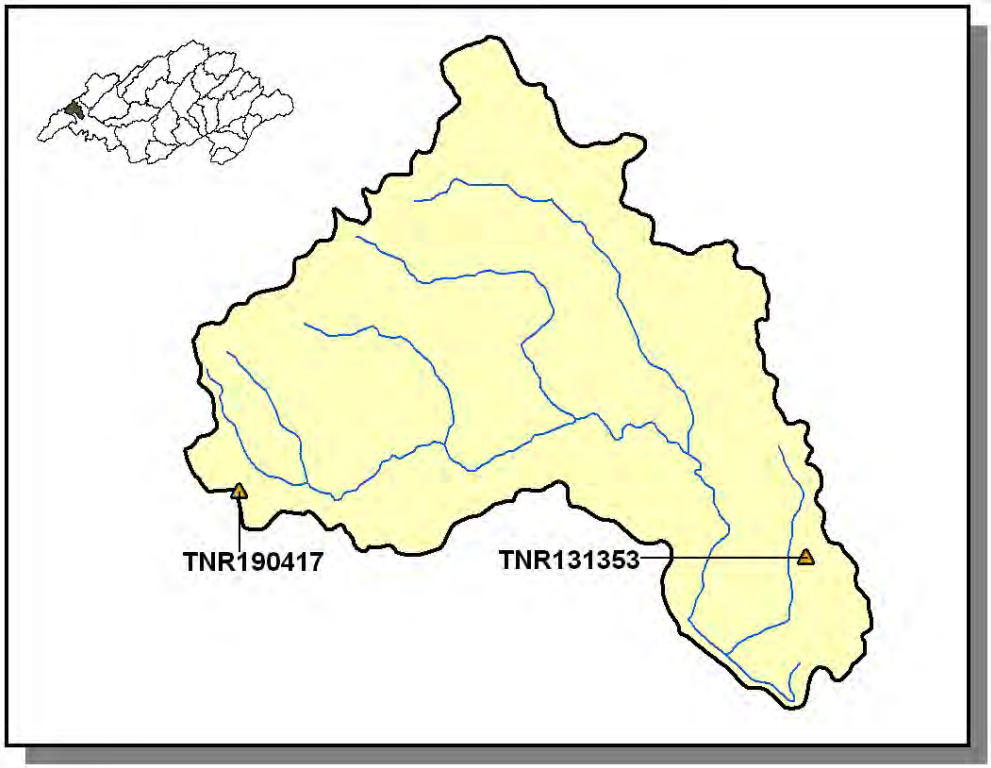


Figure 4-223. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080604. *More information is provided in Appendix IV.*

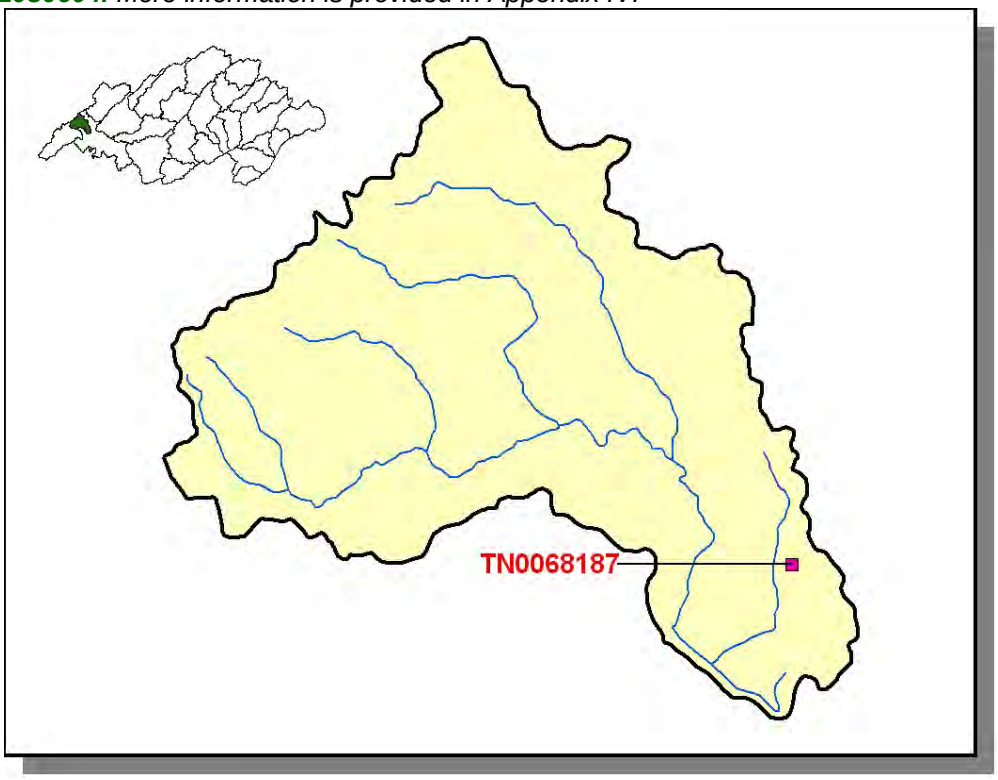


Figure 4-224. Location of Permitted Municipal and Industrial Facilities in Subwatershed 060101080604. *Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the names of facilities, is provided in Appendix IV.*

PERMIT #	1Q10	7Q10	30Q5	DISCHARGE FLOW
TN0068187	174.6	206.9	6.856	Outfall 001: 6.8586
	174.6	206.9	12.20	Outfall 002: 12.20
	0.47	0.51	0.71	Outfall 003/004: 0.08

Table 4-133. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080604. *Data are in million gallons per day (MGD).Data were obtained from permit files.*

PERMIT #	Zn	Cr	Cu	Pb
TN0068187	X	X	X	X

Table 4-134. Metal Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080604.

PERMIT #	DI-N-BUTYL PHTHALATE	ETHYLBENZENE	HEXACHLOROETHANE	AMMONIA AS N TOTAL	CYANIDE TOTAL (CN-)	BIS (2-ETHYLHEXYL) PHTHALATE
TN0068187	X	X	X	X	X	X

Table 4-135. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080604.

PERMIT #	VINYL CHLORIDE	PHENOLS	TRC	WET	BOD_5	E. *coli*	FLOW	SS	TSS	pH
TN0068187	X	X	X	X	X	X	X	X	X	X

Table 4-136. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080604. *TRC, Total Residual Chlorine; WET, Whole Effluent Toxicity; BOD_5, Biochemical Oxygen Demand (5-Day); SS, Settleable Solids; TSS, Total Suspended Solids.*

** See Permit for Additional Parameters Monitored (for Limits) Annually.*

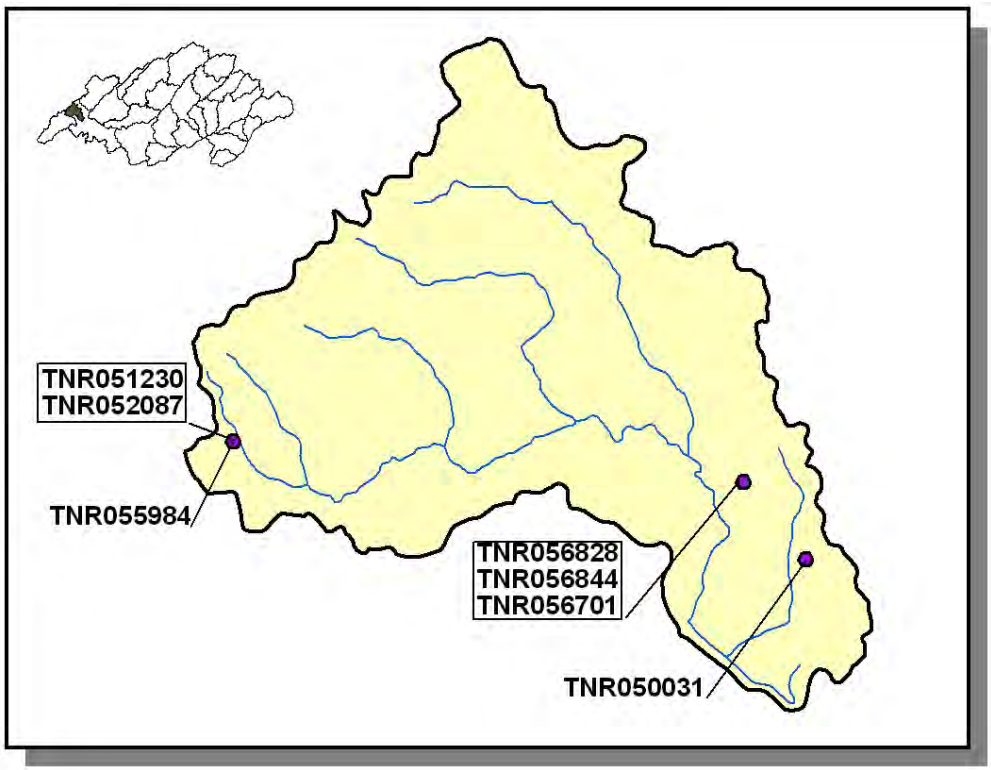


Figure 4-225. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080604. *More information is provided in Appendix IV.*

4.2.U.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Hamblen	8,620	16,376	1,129	233	1,195	367

Table 4-137. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Hamblen	32.8	32.8	0	0

Table 4-138. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	14.81
Tobacco (Row Crops)	8.53
Wheat (Close Grown Cropland)	5.30
Grass (Pastureland)	0.57
Grass (Hayland)	0.37
Grass Forbs Legumes Mixed (Pastureland)	0.31
Other Land in Farms	0.21
Aquaculture in a Crop Rotation	0.15
Legume Grass (Hayland)	0.14
Farmsteads and Ranch Headquart	0.13

Table 4-139. Annual Estimated Total Soil Loss in Subwatershed 060101080604.

4.2.V. 060101080605 (Long Creek).

4.2.V.i. General Description.

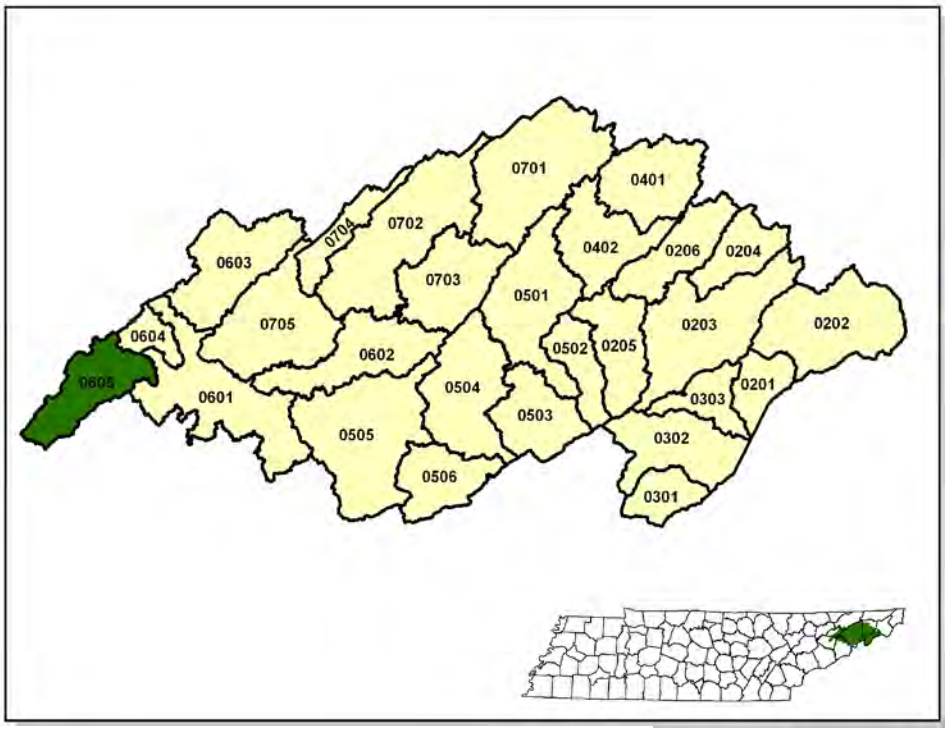


Figure 4-226. Location of Subwatershed 060101080605. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

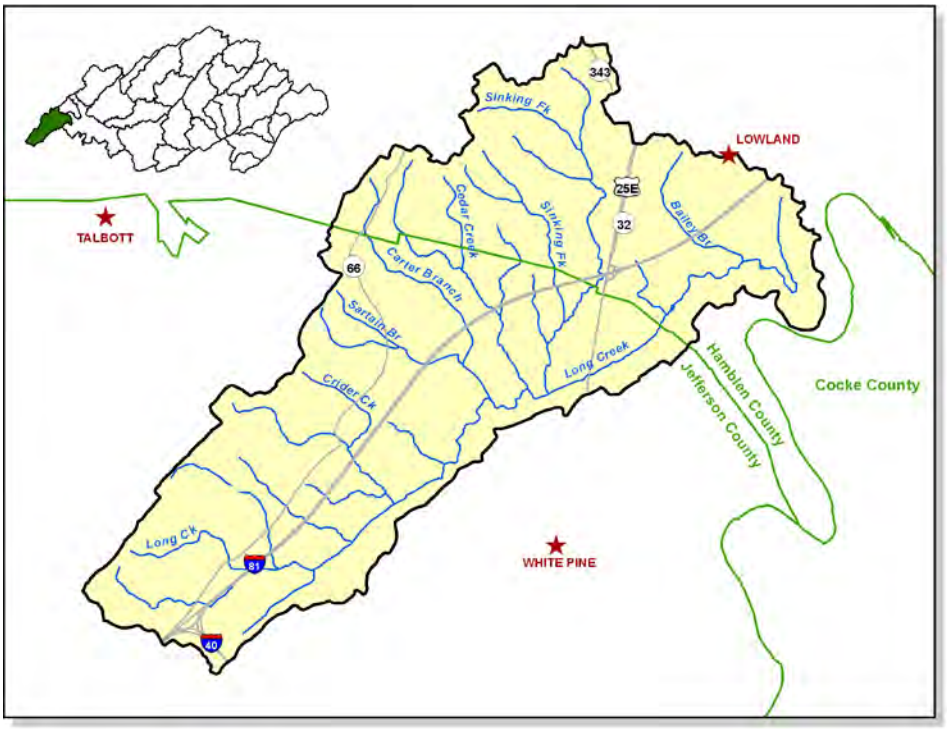


Figure 4-227. Locational Details of Subwatershed 060101080605.

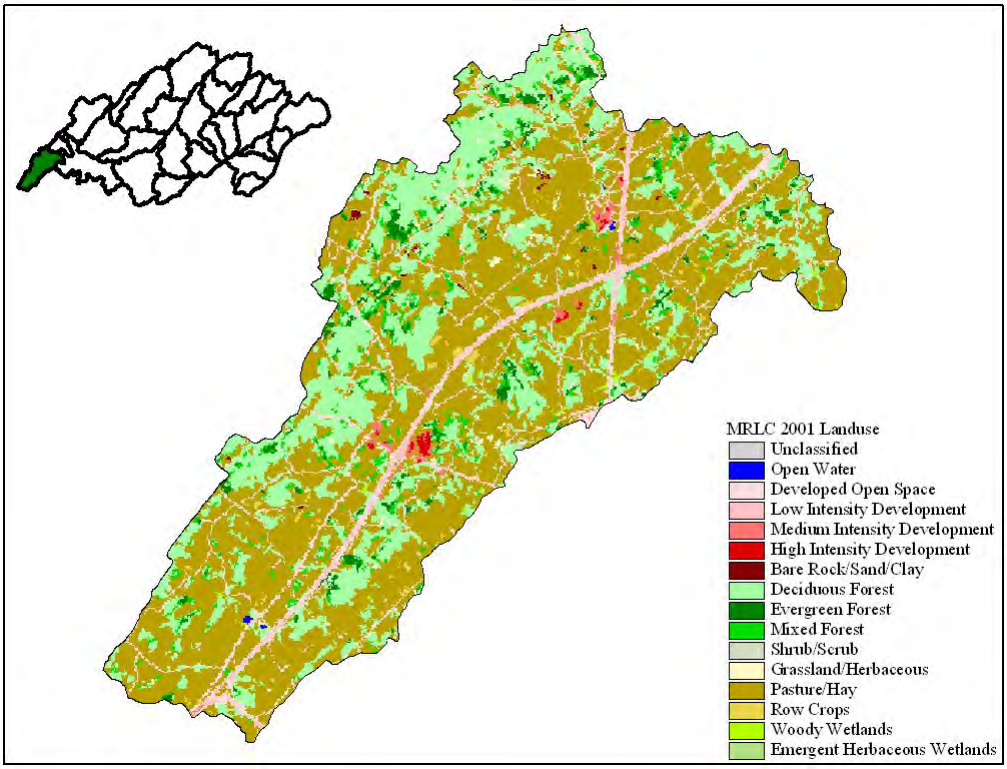


Figure 4-228. Illustration of Land Use Distribution in Subwatershed 060101080605.

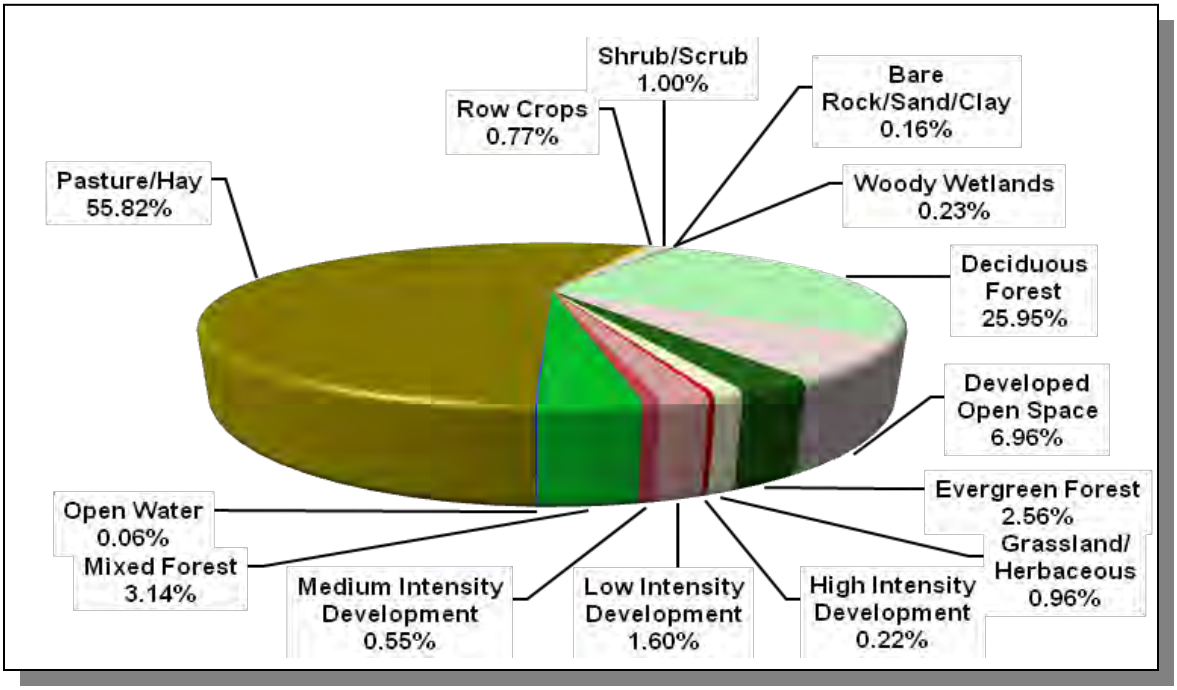


Figure 4-229. Land Use Distribution in Subwatershed 060101080605. *More information is provided in Appendix IV.*

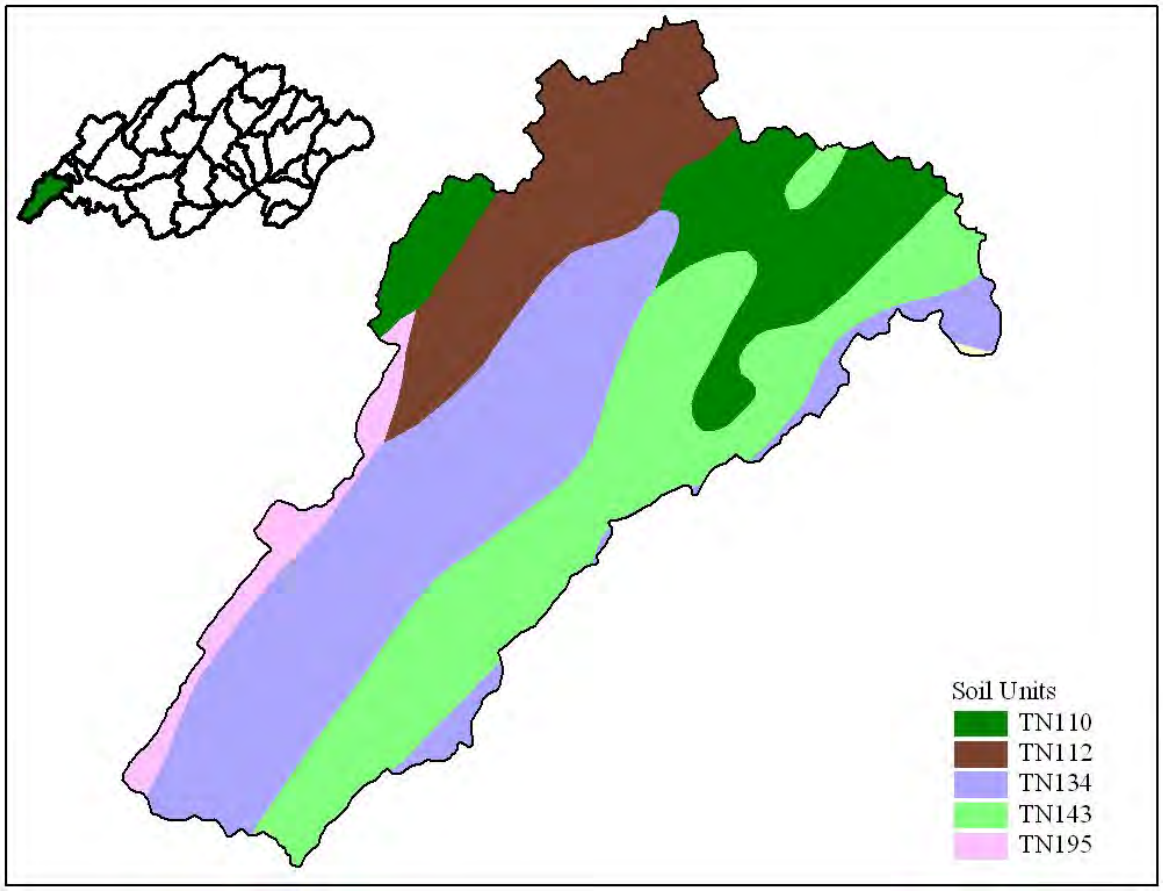


Figure 4-230. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080605.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN110	0.00	B	2.22	4.96	Loam	0.31
TN112	2.00	C	2.36	5.09	Loam	0.35
TN134	0.00	B	1.38	5.18	Loam	0.31
TN143	0.00	C	1.22	6.44	Loam	0.32
TN195	0.00	C	1.93	5.19	Silty Loam	0.34

Table 4-140. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080605. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Hamblen	50,480	53,699	58,128	6.15	3,103	3,301	3,573	15.10
Jefferson	33,016	42,168	44,294	7.86	2,594	3,312	3,479	34.10
Totals	**83,496**	**95,867**	**102,422**		**5,697**	**6,613**	**7,052**	**23.80**

Table 4-141. Population Estimates in Subwatershed 060101080605.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
White Pine	Jefferson	1,771	768	638	127	3
Morristown	Hamblen	21,385	9,248	8,768	466	14
Total		**23,156**	**11,475**	**9,406**	**593**	**17**

Table 4-142. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 060101080605.

4.2.V.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080605.

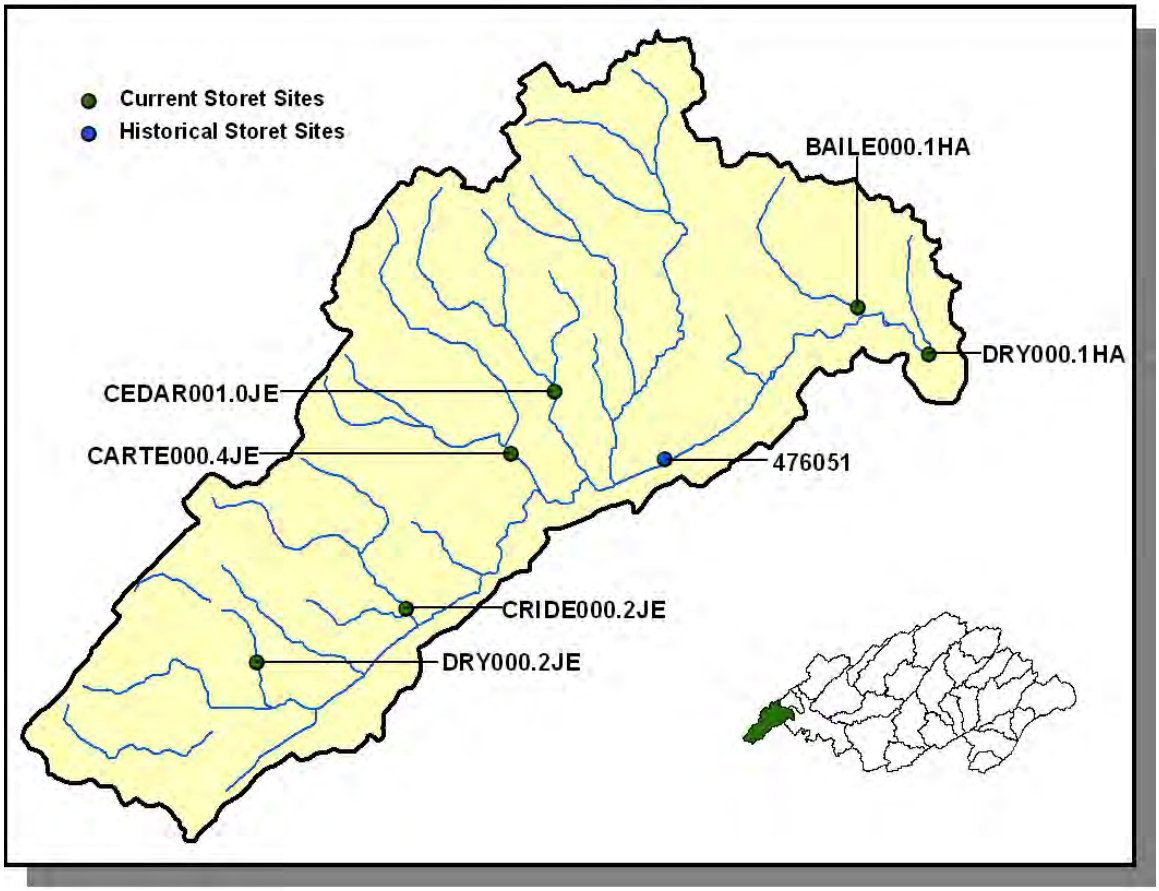


Figure 4-231. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080605. *More information, including site names and locations, is provided in Appendix IV.*

4.2.V.iii. Permitted Activities.

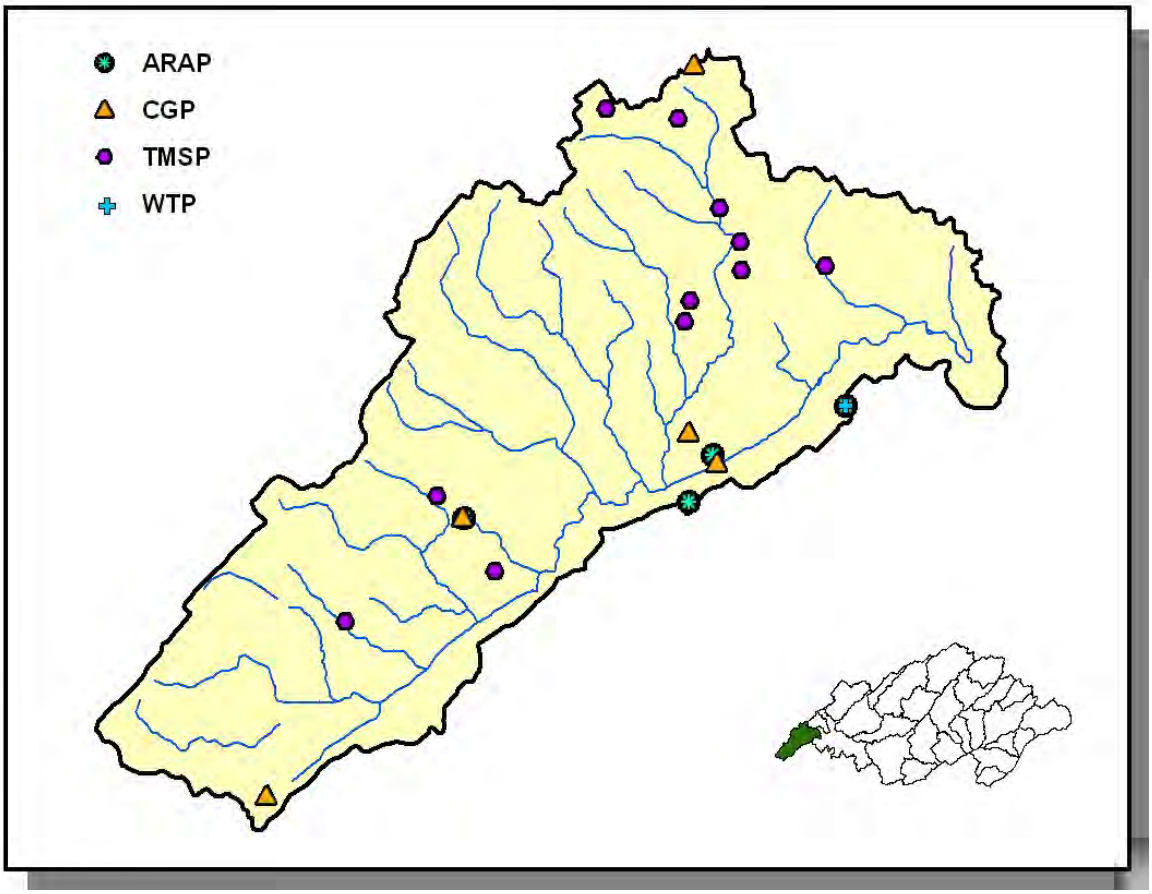


Figure 4-232. Location of Permits Issued in Subwatershed 060101080605. *More information, including the names of facilities, is provided in Appendix IV.*

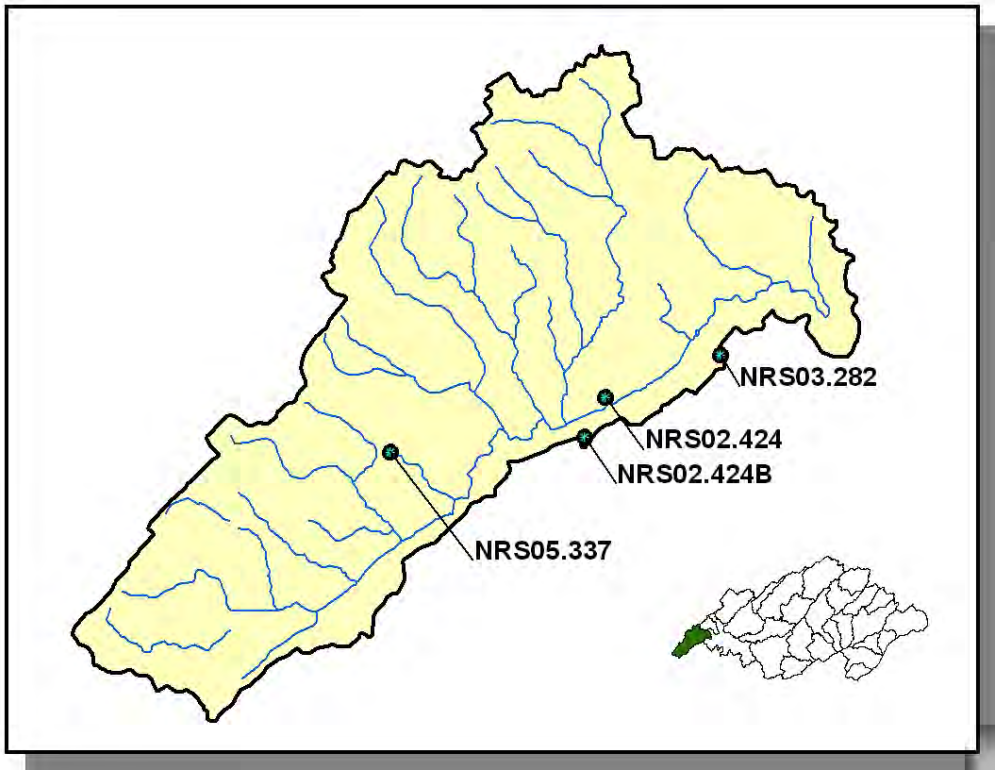


Figure 4-233. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080605. *More information is provided in Appendix IV.*

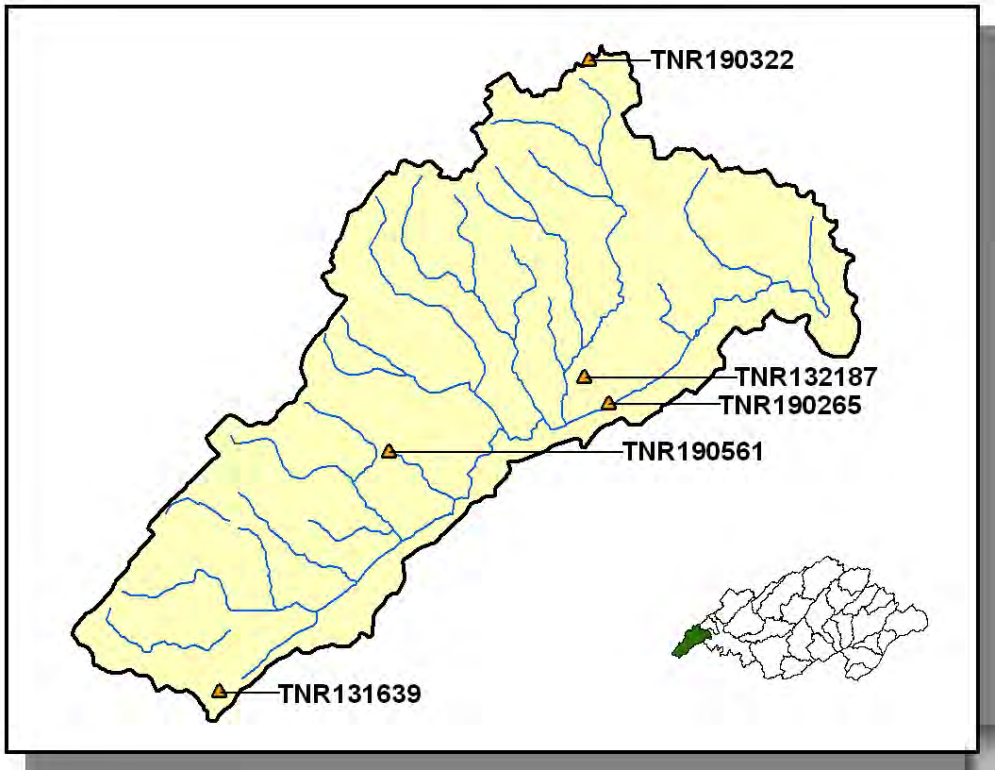


Figure 4-234. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080605. *More information is provided in Appendix IV.*

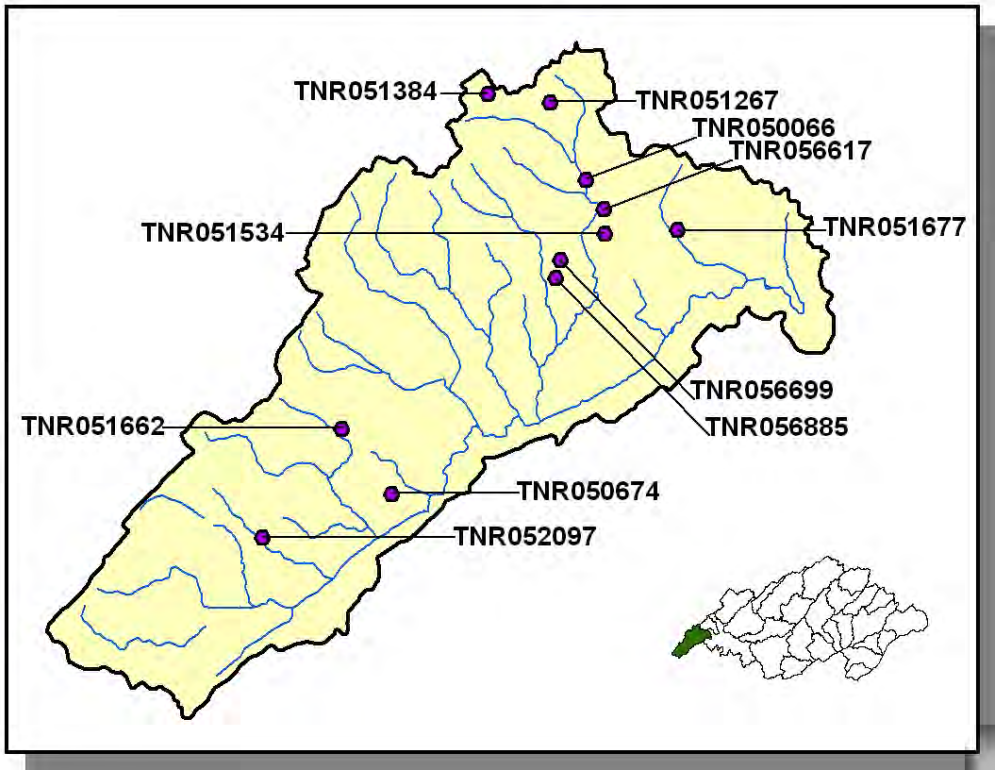


Figure 4-235. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080605. *More information is provided in Appendix IV.*

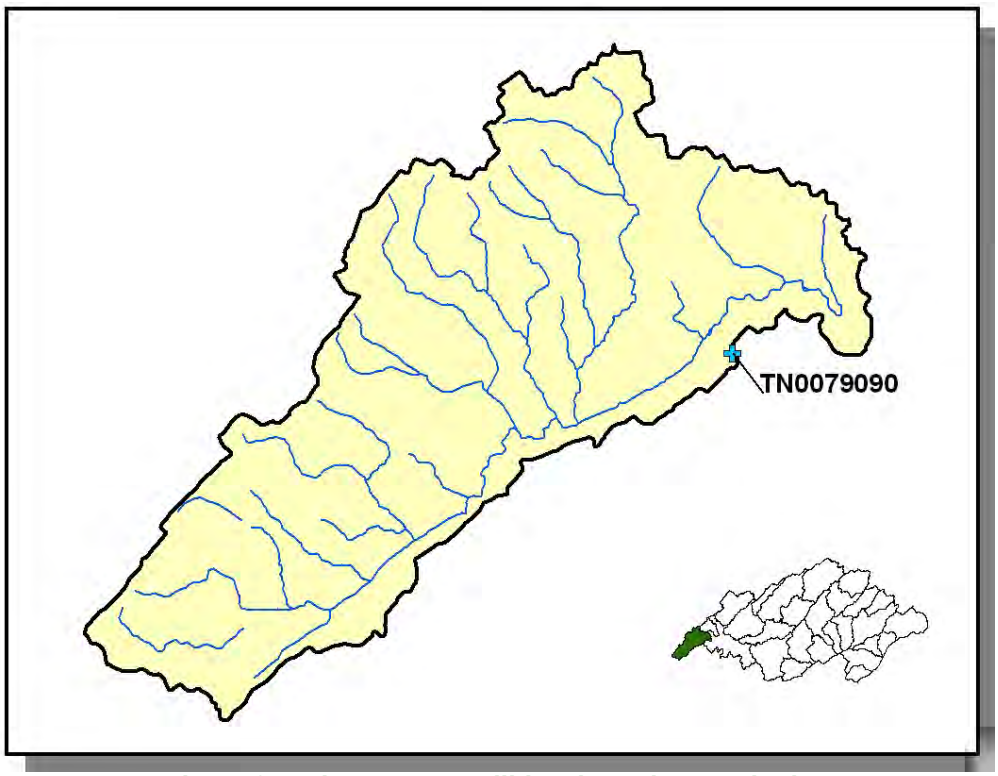


Figure 4-236. Location of Active WTP Facilities in Subwatershed 060101080605. *More information, including the names of facilities, is provided in Appendix IV.*

4.2.V.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Hamblen	8,620	16,376	1,129	233	1,195	367
Jefferson	16,126	35,718	1,878	1,633	183	567

Table 4-143. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Hamblen	32.8	32.8	0	0
Jefferson	62.2	62.2	0.6	1.8

Table 4-144. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	20.43
Oats (Close Grown Cropland)	13.51
Tobacco (Row Crops)	4.63
Grass (Pastureland)	0.56
Grass Forbs Legumes Mixed (Pastureland)	0.39
Legume Grass (Hayland)	0.31
Grass (Hayland)	0.27
Other Land in Farms	0.21
Aquaculture in a Crop Rotation	0.15

Table 4-145. Annual Estimated Total Soil Loss in Subwatershed 060101080605.

4.2.W. 060101080701 (Lick Creek, Upper).

4.2.W.i. General Description.

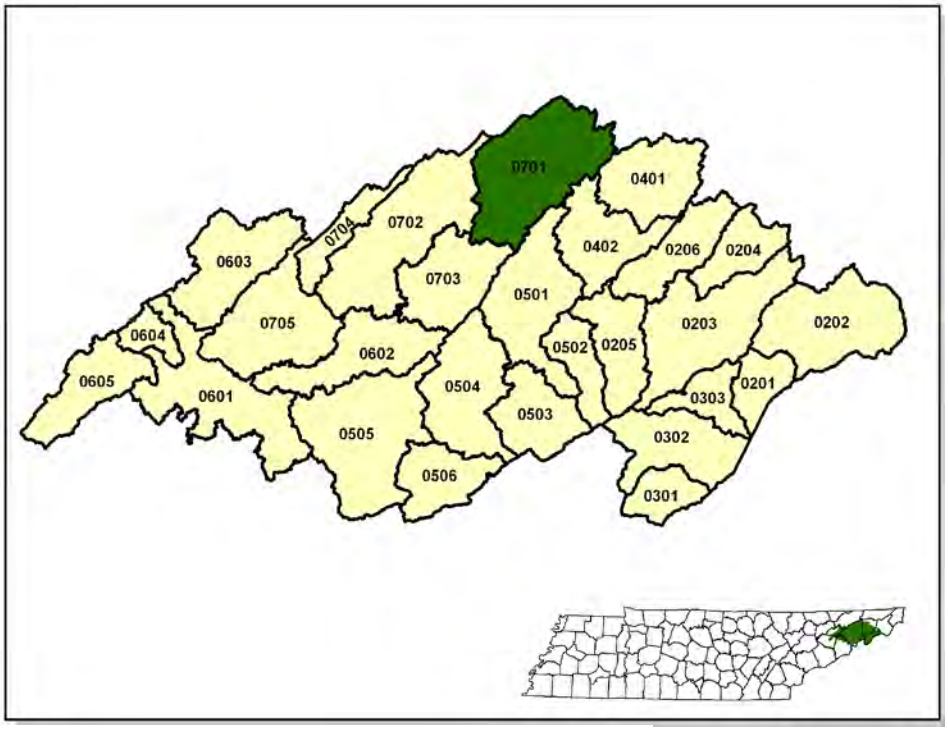


Figure 4-237. Location of Subwatershed 060101080701. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

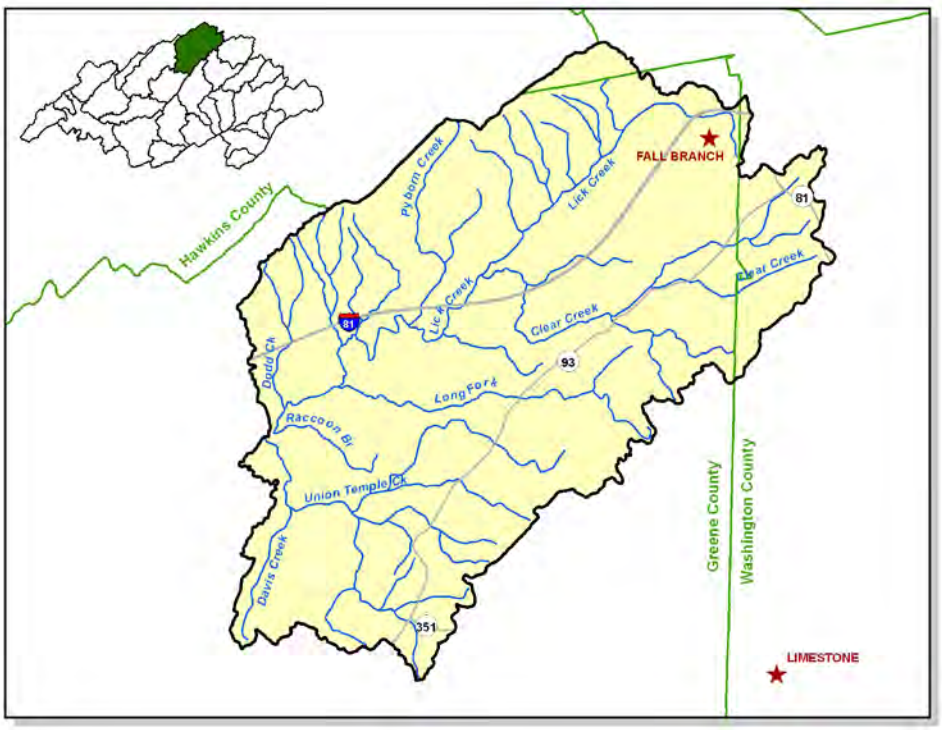


Figure 4-238. Locational Details of Subwatershed 060101080701.

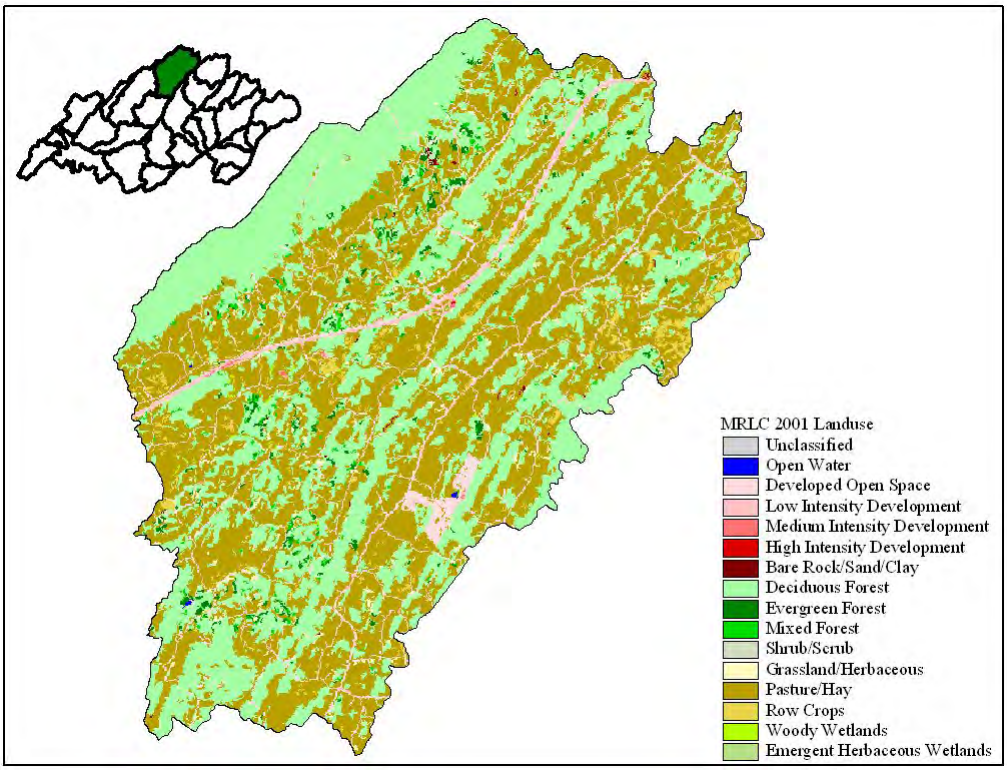


Figure 4-239. Illustration of Land Use Distribution in Subwatershed 060101080701.

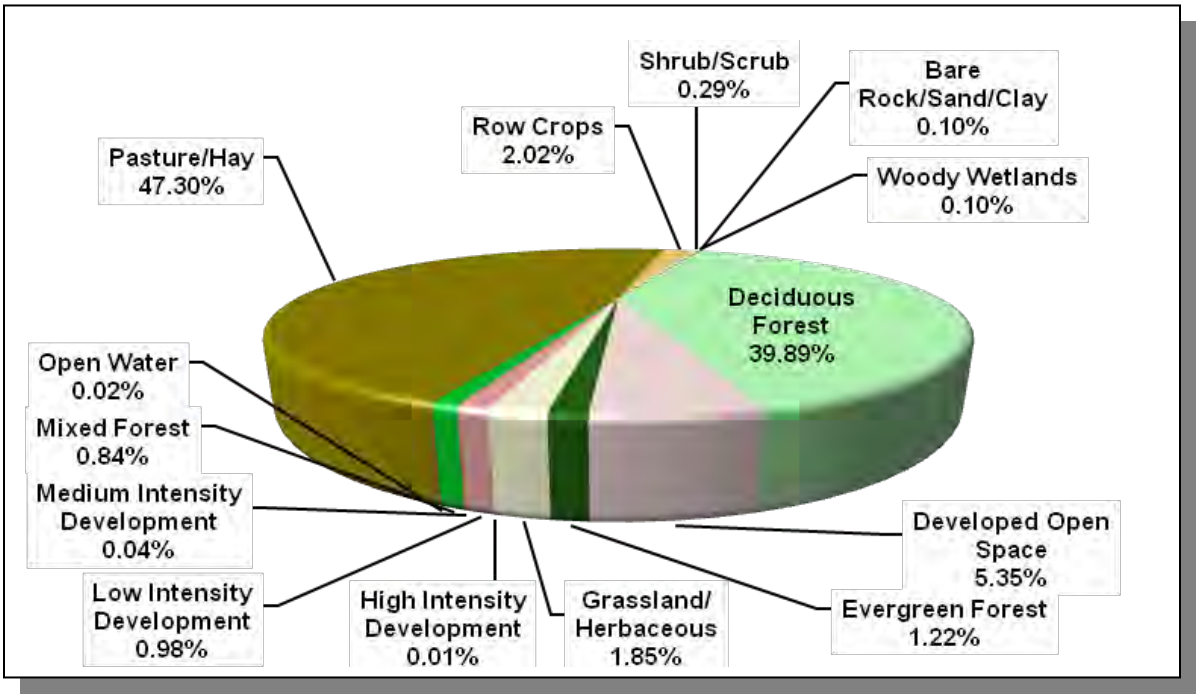


Figure 4-240. Land Use Distribution in Subwatershed 060101080701. *More information is provided in Appendix IV.*

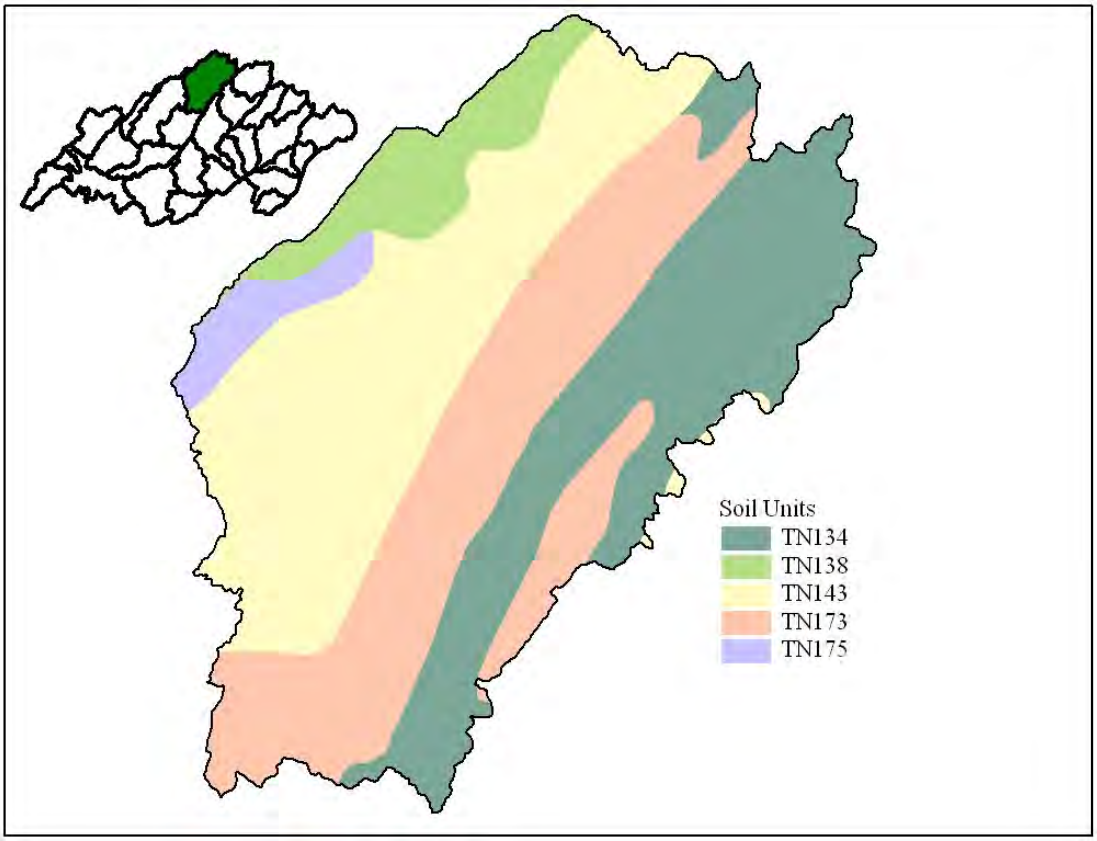


Figure 4-241. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080701.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN134	0.00	B	1.38	5.18	Loam	0.31
TN138	0.00	C	2.48	4.26	Sandy Loam	0.22
TN143	0.00	C	1.22	6.44	Loam	0.32
TN173	0.00	C	0.56	2.26	Loam	0.14
TN175	0.00	B	1.49	5.23	Loam	0.30

Table 4-146. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080701. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Greene	55,853	59,369	62,909	10.52	5,875	6,245	6,617	12.60
Hawkins	44,565	48,821	53,563	0.08	36	40	44	22.20
Washington	92,315	101,368	107,198	2.03	1,870	2,054	2,172	16.10
Total	**192,733**	**209,558**	**223,670**		**7,781**	**8,339**	**8,833**	**13.50**

Table 4-147. Population Estimates in Subwatershed 060101080701.

4.2.W.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080701.

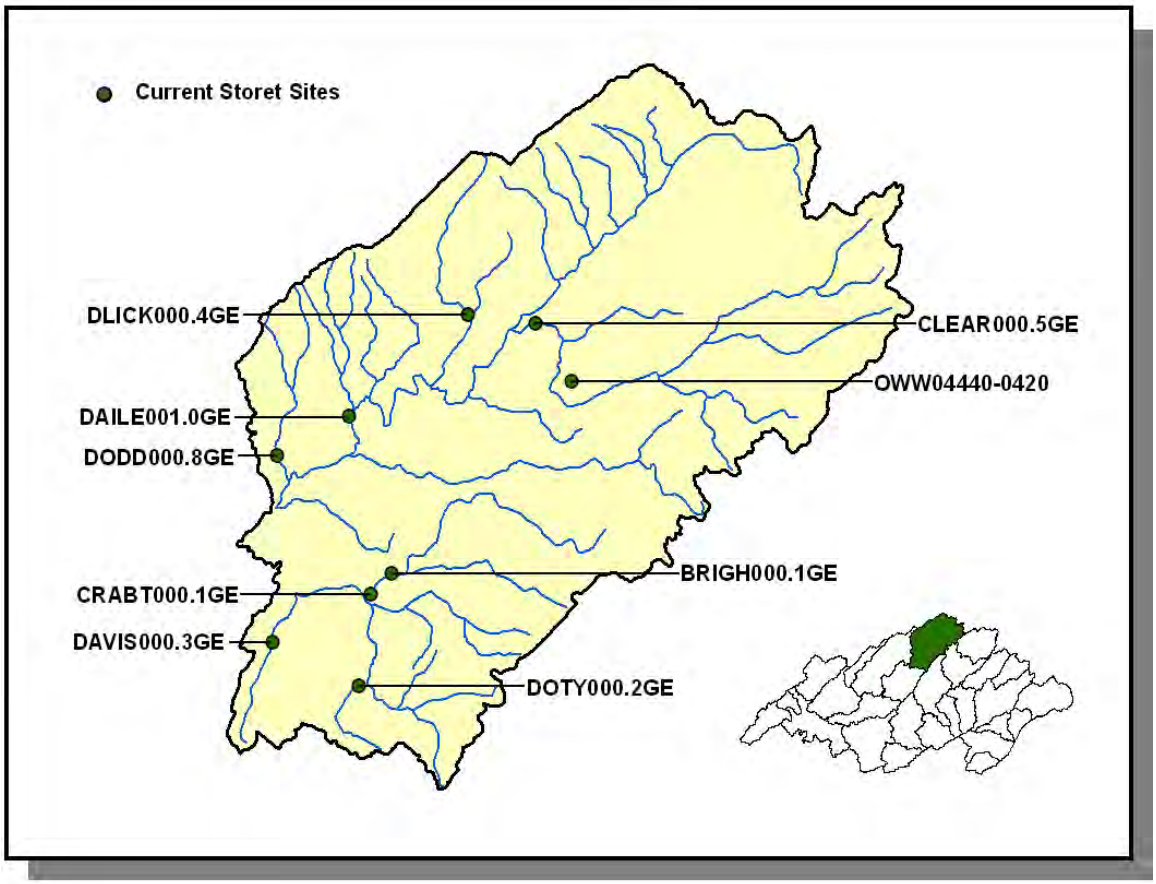


Figure 4-242. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080701. *More information, including site names and locations, is provided in Appendix IV.*

4.2.W.iii. Permitted Activities.

Figure 4-243. Location of Permits Issued in Subwatershed 060101080701. *More information, including the names of facilities, is provided in Appendix IV.*

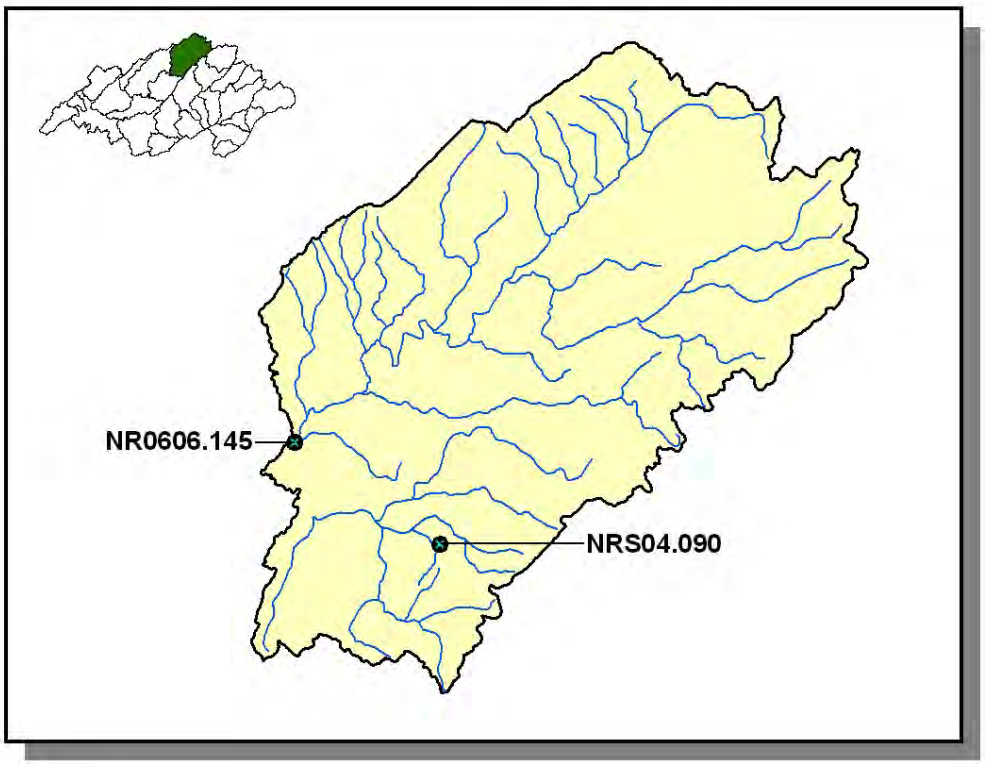


Figure 4-244. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080701. *More information is provided in Appendix IV.*

Figure 4-245. Location of CAFO (Concentrated Animal Feel Operation) Permit Sites in Subwatershed 060101080701. *More information, including the names of facilities, is provided in Appendix IV.*

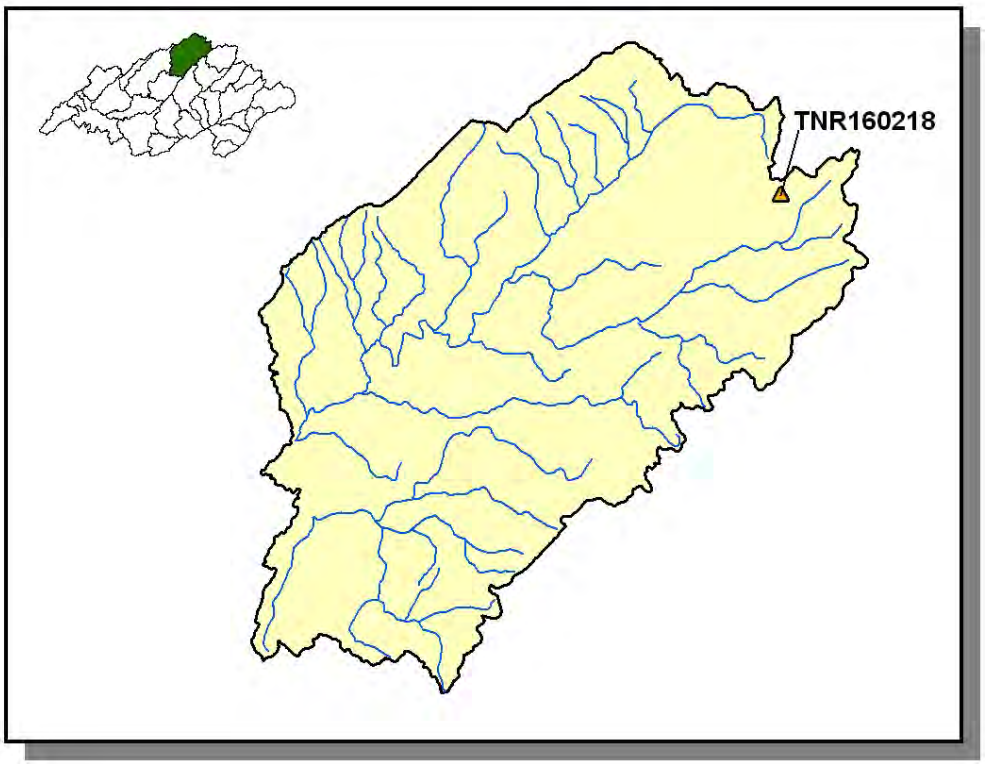


Figure 4-246. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080701. *More information is provided in Appendix IV.*

4.2.W.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Greene	33,962	72,582	7,282	1,190	495	226
Hawkins	18,796	36,429	903	1,079	442	243
Washington	23,073	53,186	5,190	38	262	353

Table 4-148. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Greene	180.0	171.8	2.0	10.5
Hawkins	177.4	177.4	0.4	2.1

Table 4-149. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	16.46
Tobacco (Row Crops)	14.57
Other Vegetable and Truck Crop	3.98
Farmsteads and Ranch Headquarters	1.53
Grass Forbs Legumes Mixed (Pastureland)	0.40
Grass (Pastureland)	0.37
Legume Grass (Hayland)	0.33
Legume (Hayland)	0.26
Grass (Hayland)	0.19

Table 4-150. Annual Estimated Total Soil Loss in Subwatershed 060101080701.

4.2.X. 060101080702 (Lick Creek, Middle).

4.2.X.i. General Description.

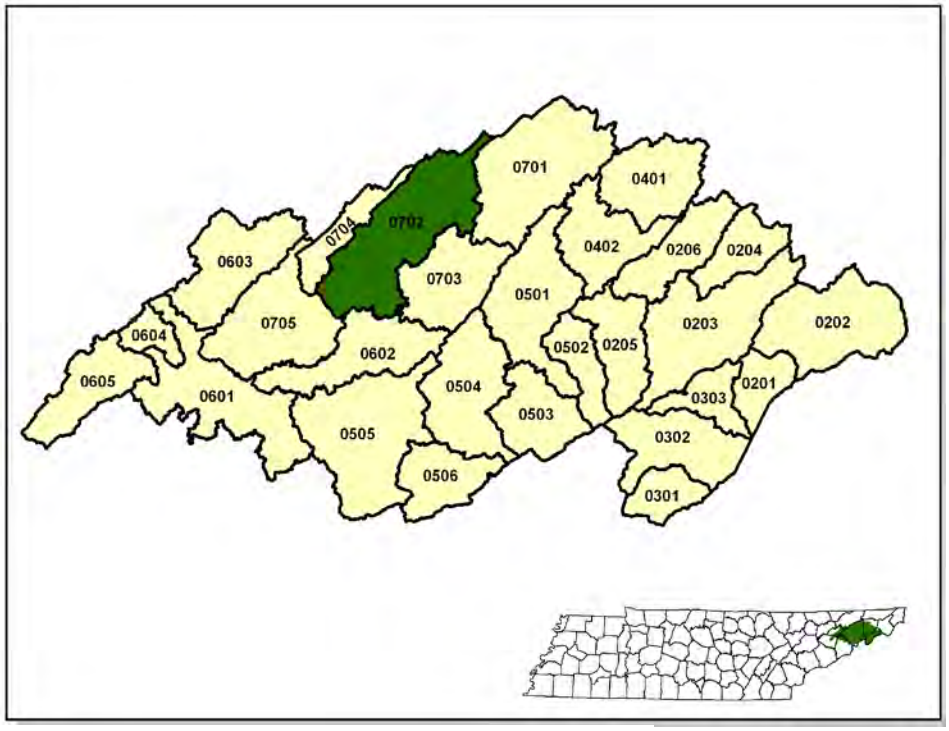


Figure 4-247. Location of Subwatershed 060101080702. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

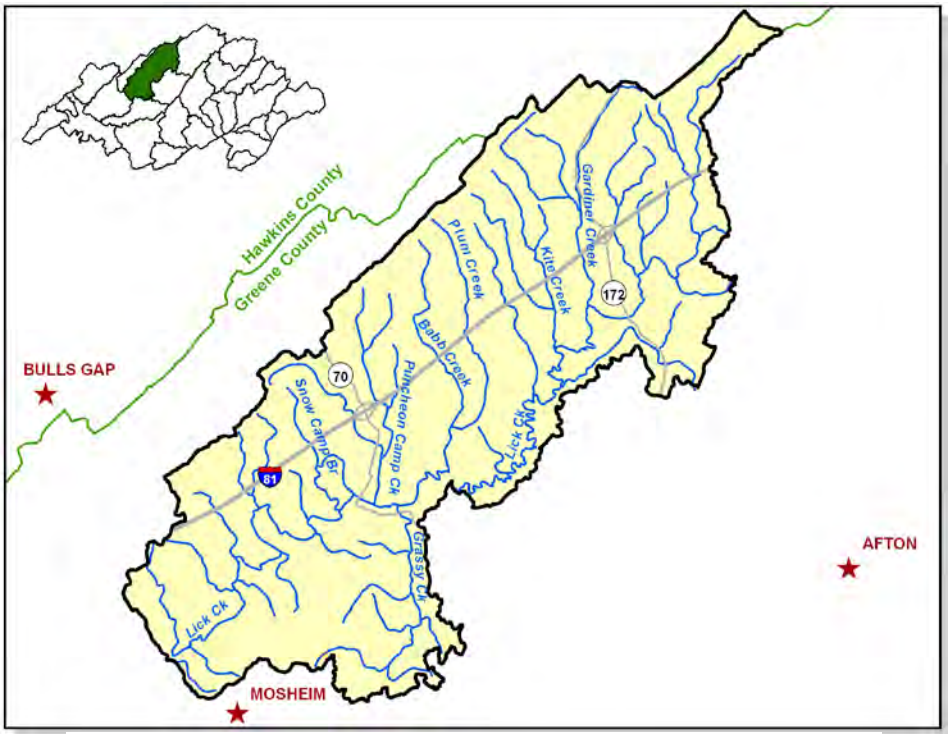


Figure 4-248. Locational Details of Subwatershed 060101080702.

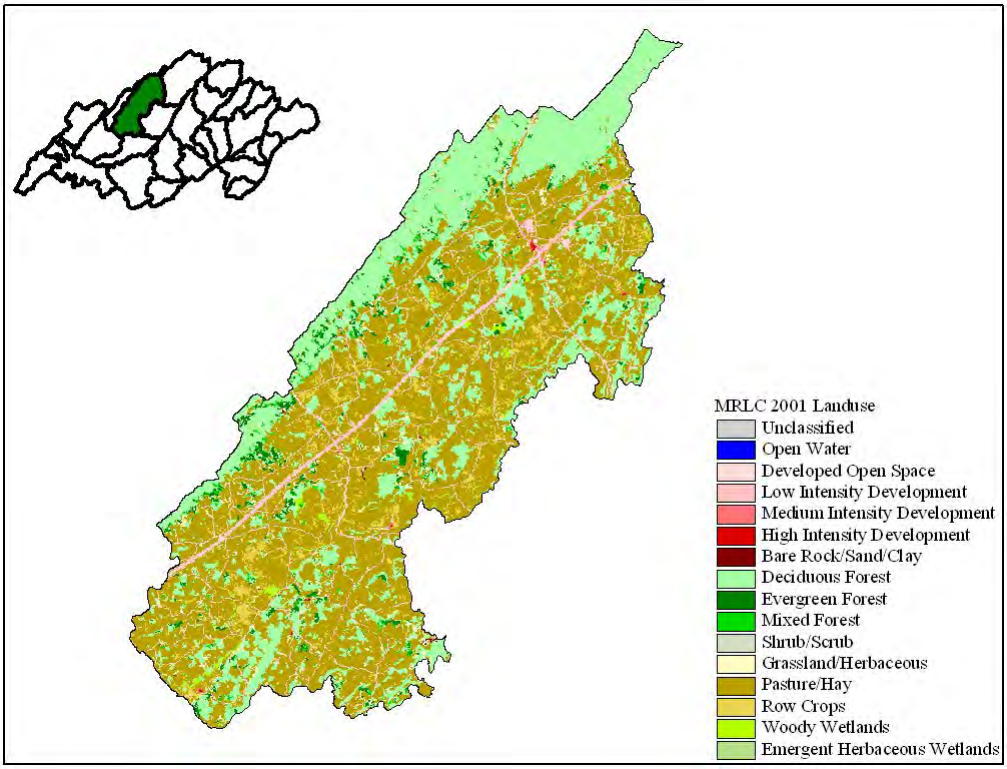


Figure 4-249. Illustration of Land Use Distribution in Subwatershed 060101080702.

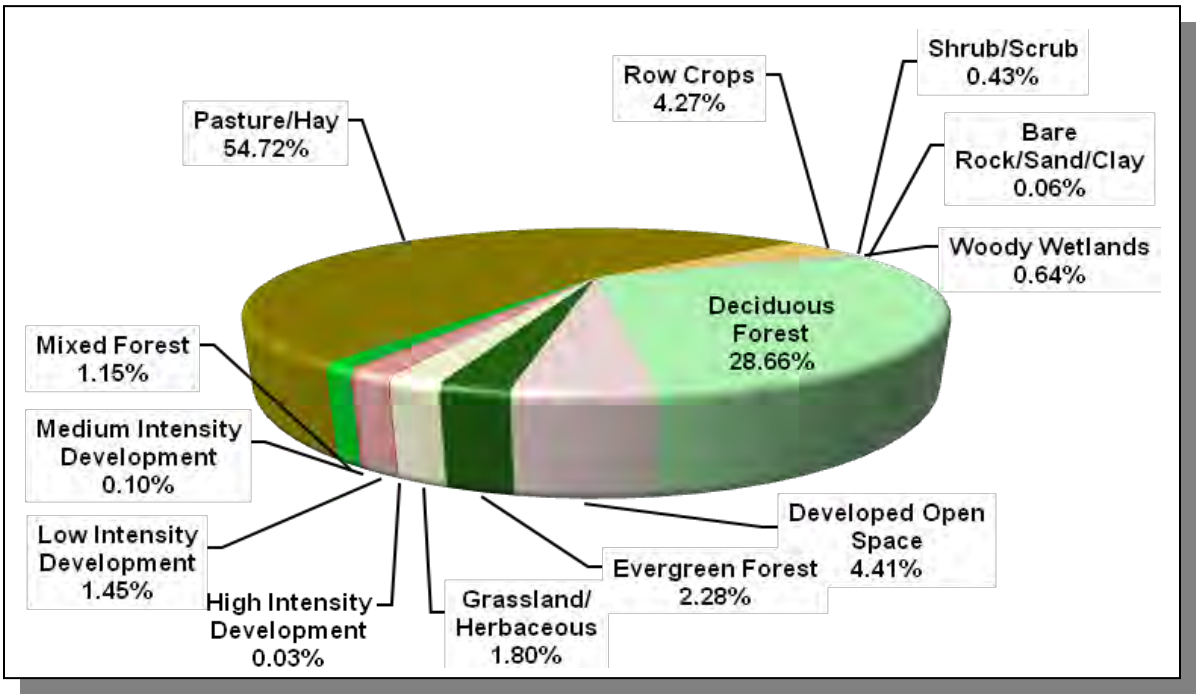


Figure 4-250. Land Use Distribution in Subwatershed 060101080702. *More information is provided in Appendix IV.*

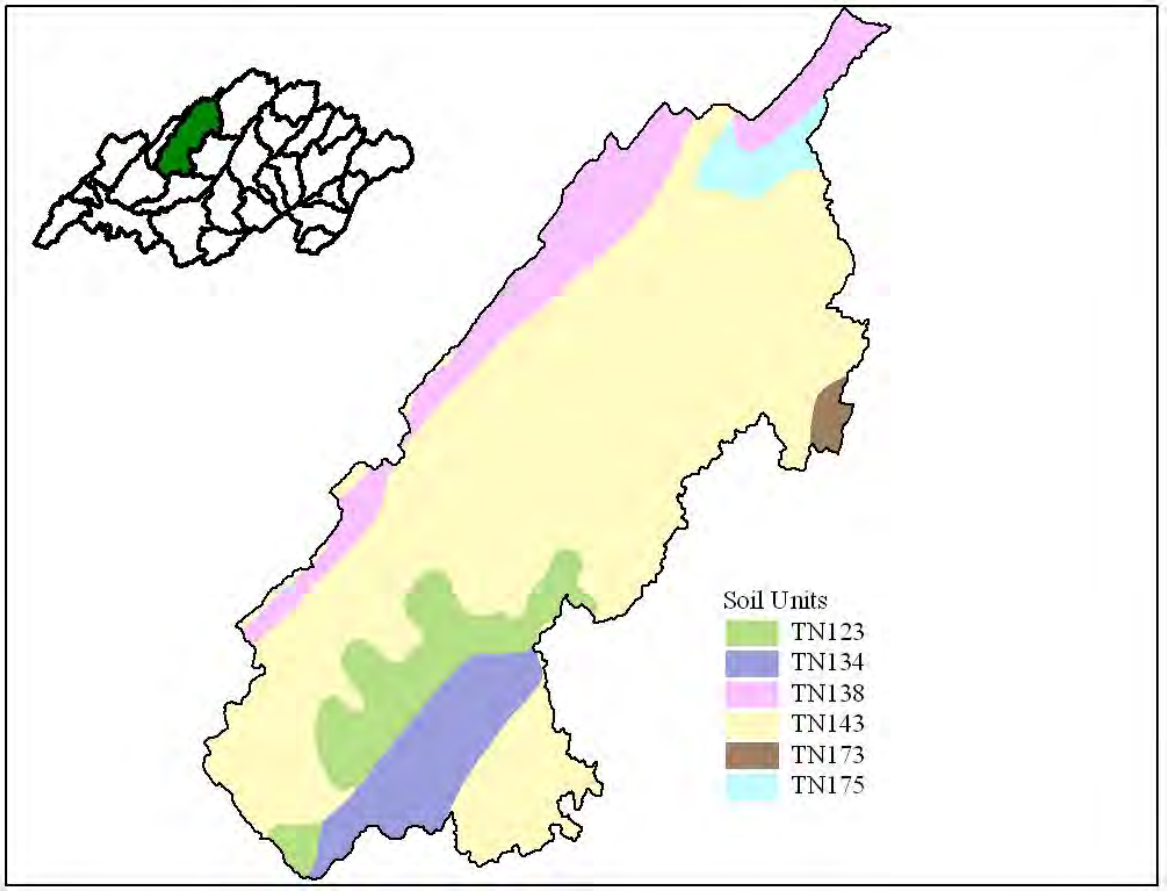


Figure 4-251. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080702.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN123	6.00	C	1.30	5.81	Silty Loam	0.37
TN134	0.00	B	1.38	5.18	Loam	0.31
TN138	0.00	C	2.48	4.26	Sandy Loam	0.22
TN143	0.00	C	1.22	6.44	Loam	0.32
TN173	0.00	C	0.56	2.26	Loam	0.14
TN175	0.00	B	1.49	5.23	Loam	0.30

Table 4-151. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080702. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Greene	55,853	59,369	62,909	12.18	6,803	7,231	7,662	12.60
Hawkins	44,565	48,821	53,563	0.03	12	13	15	25.00
Totals	**100,418**	**108,190**	**116,472**		**6,815**	**7,244**	**7,677**	**12.60**

Table 4-152. Population Estimates in Subwatershed 060101080702.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Baileyton	Greene	296	157	153	4	0
Mosheim	Greene	1,451	586	473	113	0
Total		**1,747**	**743**	**626**	**117**	**0**

Table 4-153. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 060101080702.

4.2.X.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080702.

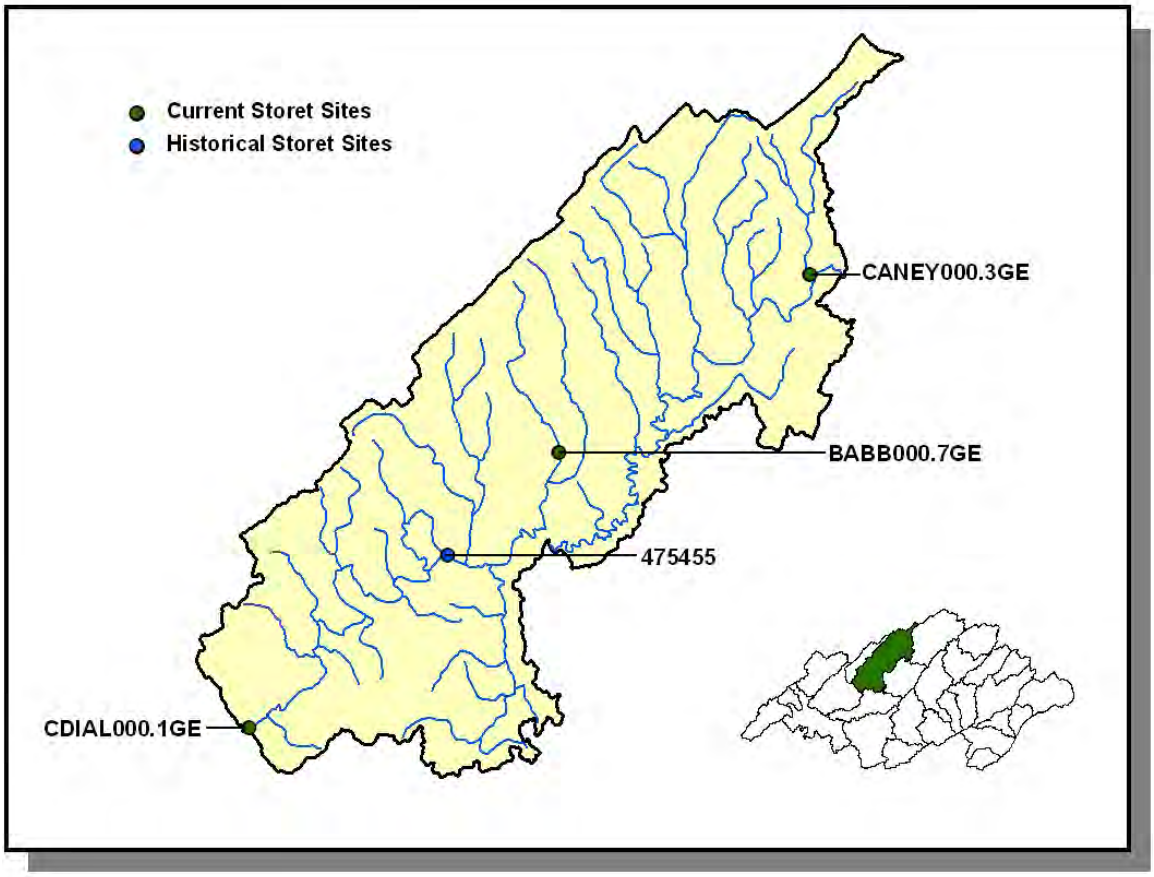


Figure 4-252. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080702. *More information, including site names and locations, is provided in Appendix IV.*

4.2.X.iii. Permitted Activities.

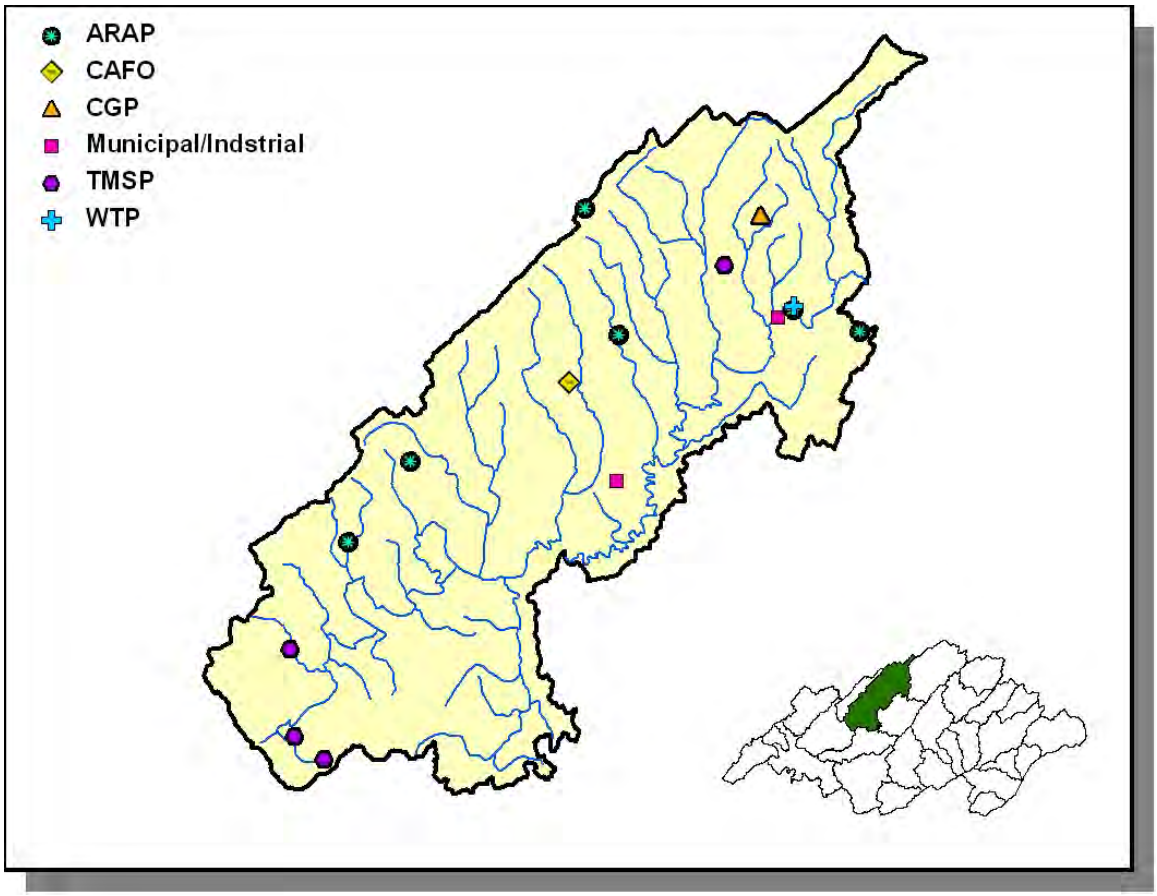


Figure 4-253. Location of Permits Issued in Subwatershed 060101080702. *More information, including the names of facilities, is provided in Appendix IV.*

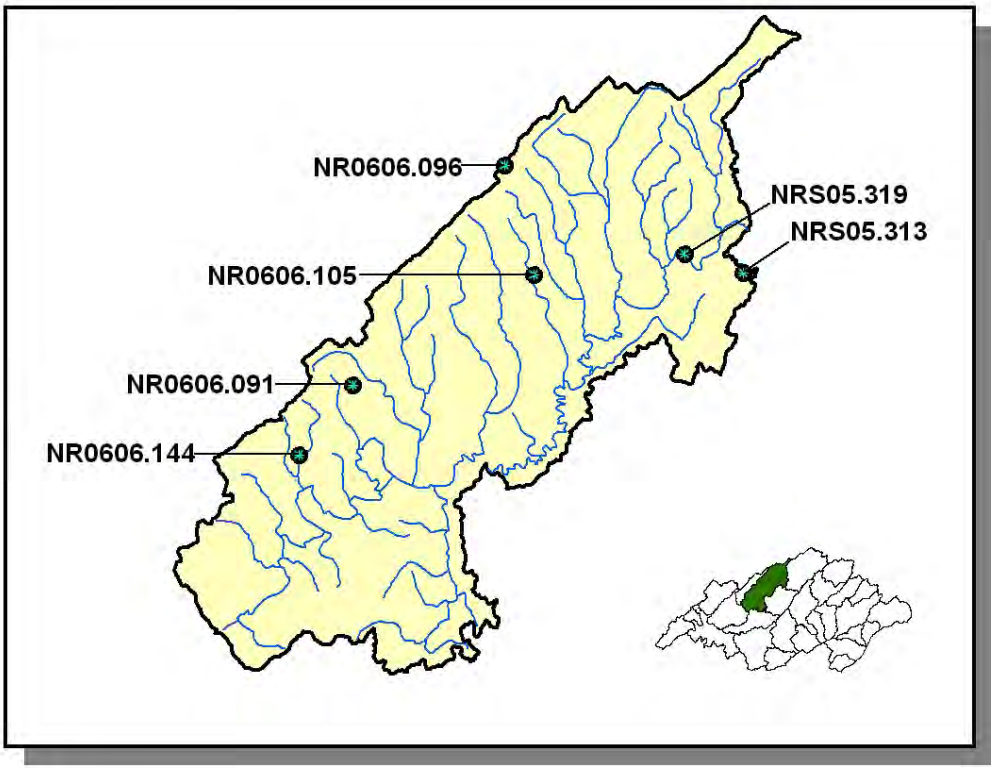


Figure 4-254. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080702. *More information is provided in Appendix IV.*

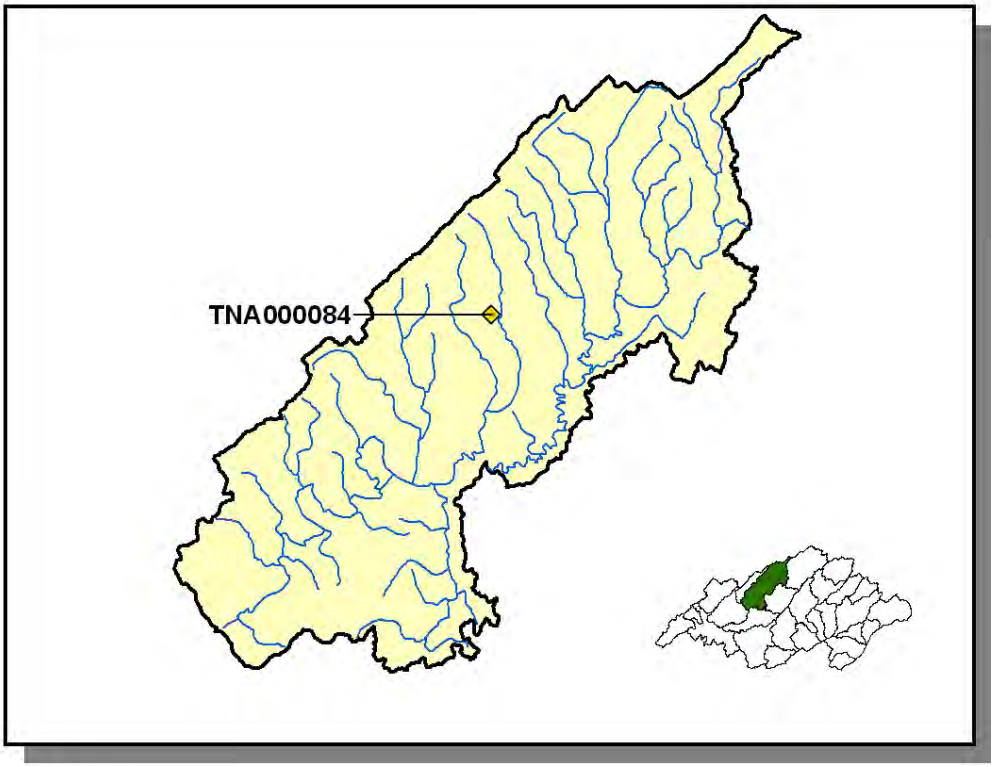


Figure 4-255. Location of CAFO (Concentrated Animal Feel Operation) Permit Sites in Subwatershed 060101080702. *More information, including the names of facilities, is provided in Appendix IV.*

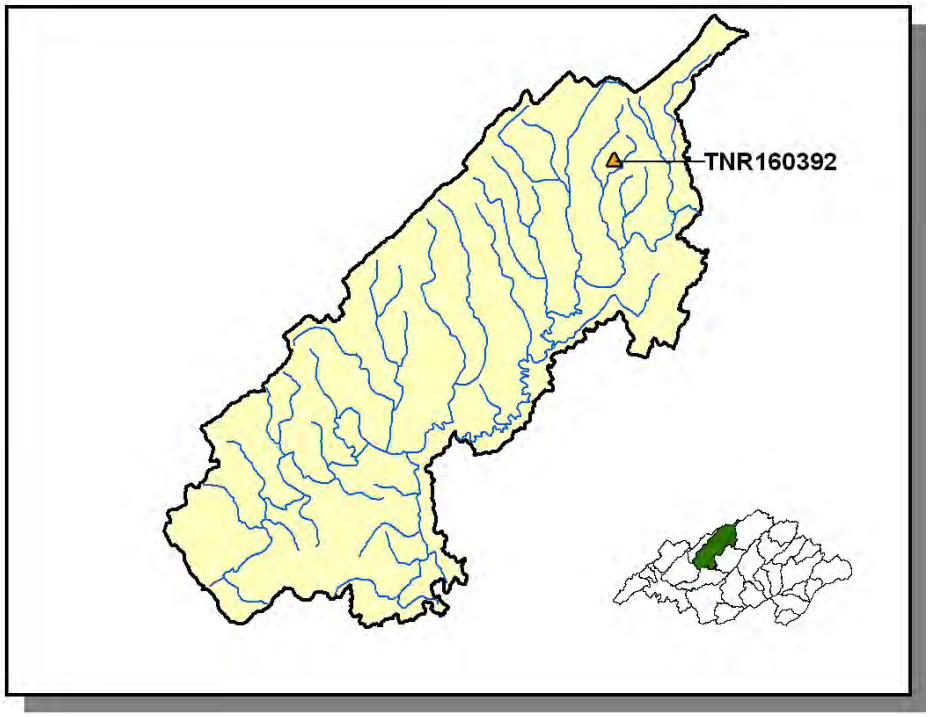


Figure 4-256. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080702. *More information is provided in Appendix IV.*

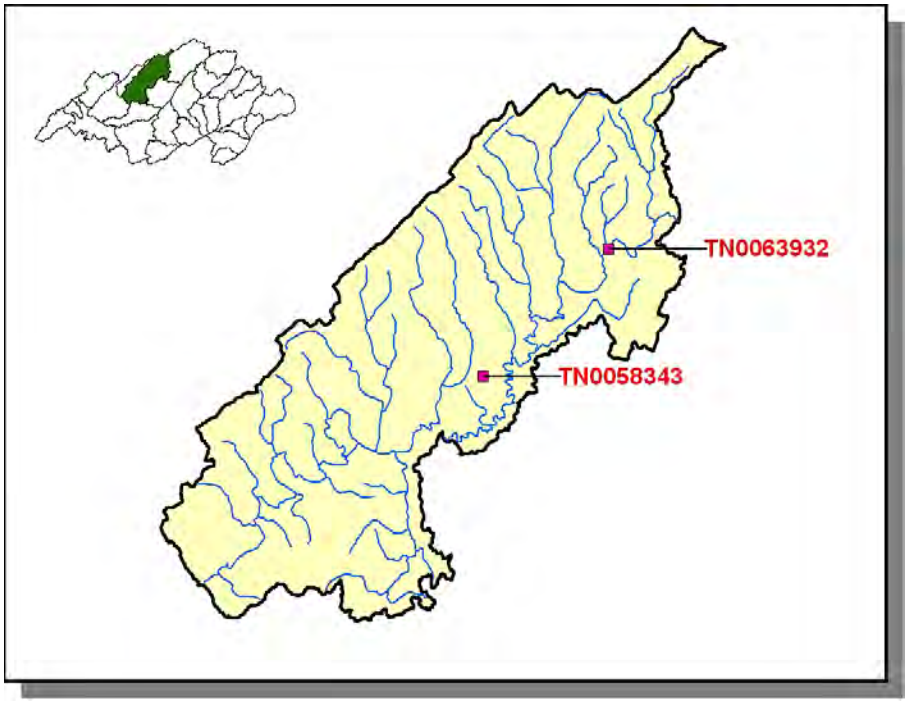


Figure 4-257. Location of Permitted Municipal and Industrial Facilities in Subwatershed 060101080702. *Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the names of facilities, is provided in Appendix IV.*

PERMIT #	7Q10	DISCHARGE FLOW
TN0058343	8.14	0.009
TN0063932	7.40	0.100

Table 4-154. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080702. *Data are in million gallons per day (MGD).Data were obtained from permit files.*

PERMIT #	BOD_5	BOD % REMOVAL	TRC	E. *coli*	NITROGEN TOTAL (AS N)	PHOSPHORUS TOTAL
TN0058343	X		X	X		
TN0063932	X	X	X	X	X	X

Table 4-155. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080702. *BOD_5, Biochemical Oxygen Demand (5-Day); TRC, Total Residual Chlorine.*

PERMIT #	DO	FLOW	SS	TSS	TSS % REMOVAL	pH
TN0058343	X	X	X	X		X
TN0063932	X	X	X	X	X	X

Table 4-156. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080702. *DO, Dissolved Oxygen; SS, Settleable Solids; TSS, Total Suspended Solids.*

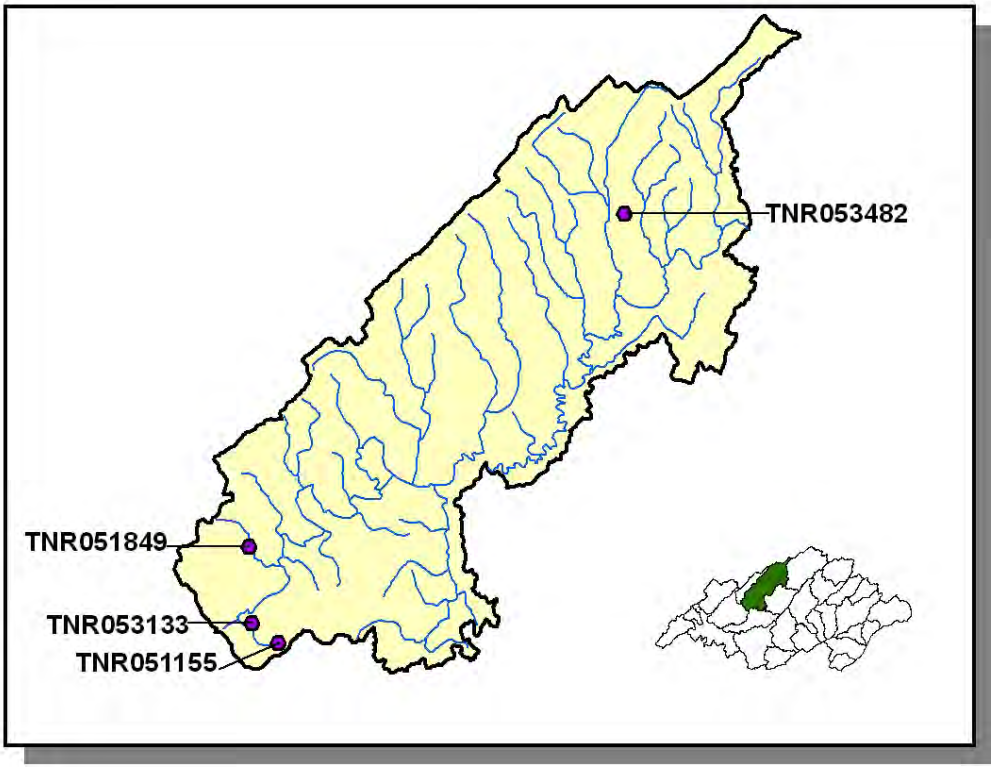


Figure 4-258. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080702. *More information is provided in Appendix IV.*

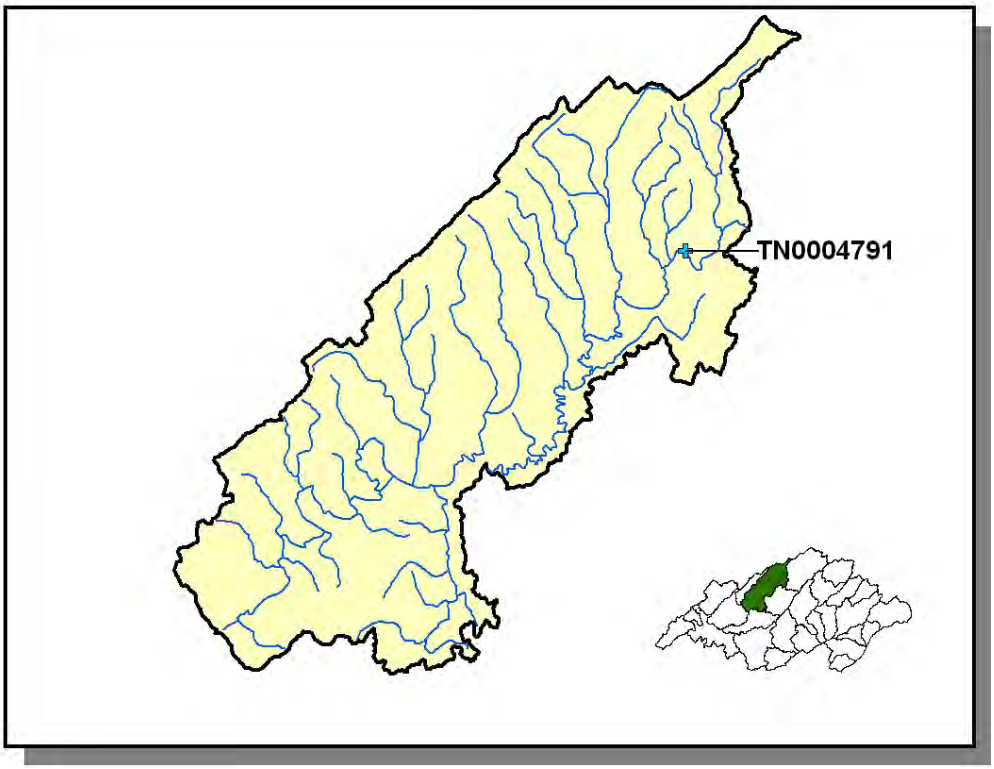


Figure 4-259. Location of Active Water Treatment Plant Facilities in Subwatershed 060101080702. *More information, including the names of facilities, is provided in Appendix IV.*

4.2.X.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Greene	33,962	72,582	7,282	1,190	495	226
Hawkins	18,796	36,429	903	1,079	442	243

Table 4-157. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Greene	180.0	171.8	2.0	10.5
Hawkins	177.4	177.4	0.4	2.1

Table 4-158. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	16.75
Tobacco (Row Crops)	15.36
Other Vegetable and Truck Crop	3.85
Farmsteads and Ranch Headquarters	1.67
Grass Forbs Legumes Mixed (Pastureland)	0.40
Grass (Pastureland)	0.35
Legume Grass (Hayland)	0.34
Legume (Hayland)	0.26
Grass (Hayland)	0.14
Corn (Row Crops)	16.75

Table 4-159. Annual Estimated Total Soil Loss in Subwatershed 060101080702.

4.2.Y. 060101080703 (Roaring Fork Creek).

4.2.Y.i. General Description.

Figure 4-260. Location of Subwatershed 060101080703. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

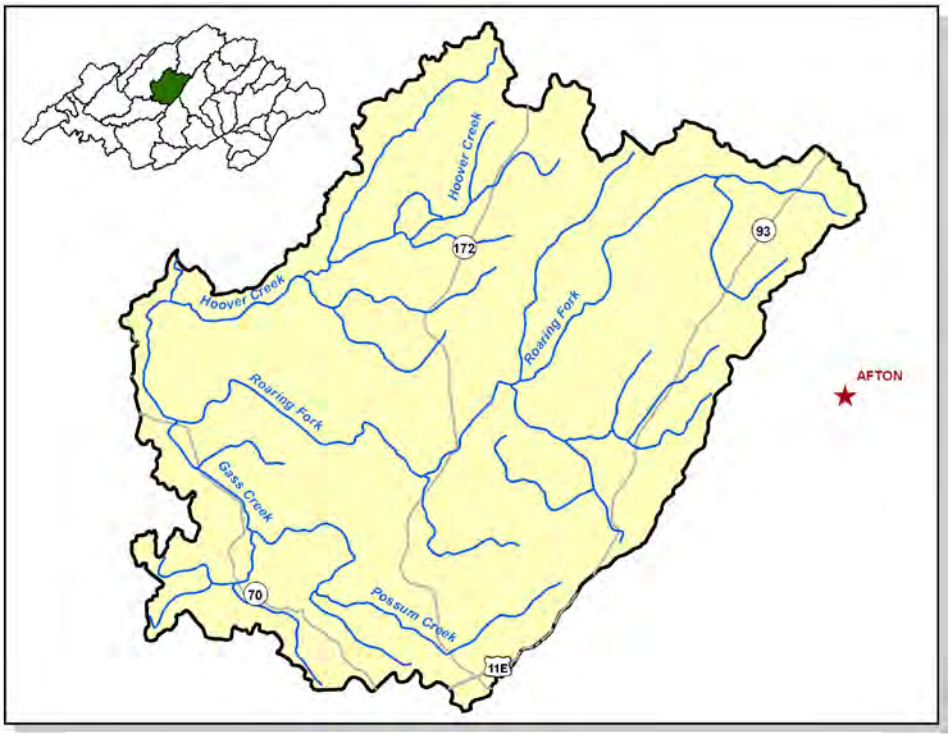


Figure 4-261. Locational Details of Subwatershed 060101080703.

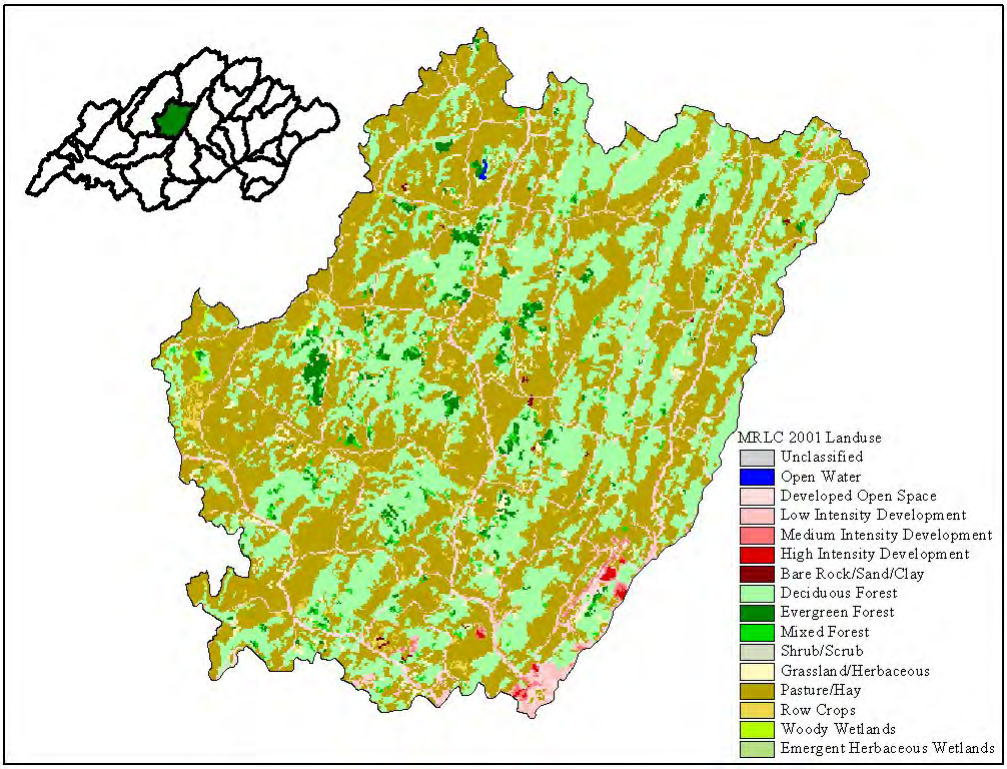


Figure 4-262. Illustration of Land Use Distribution in Subwatershed 060101080703.

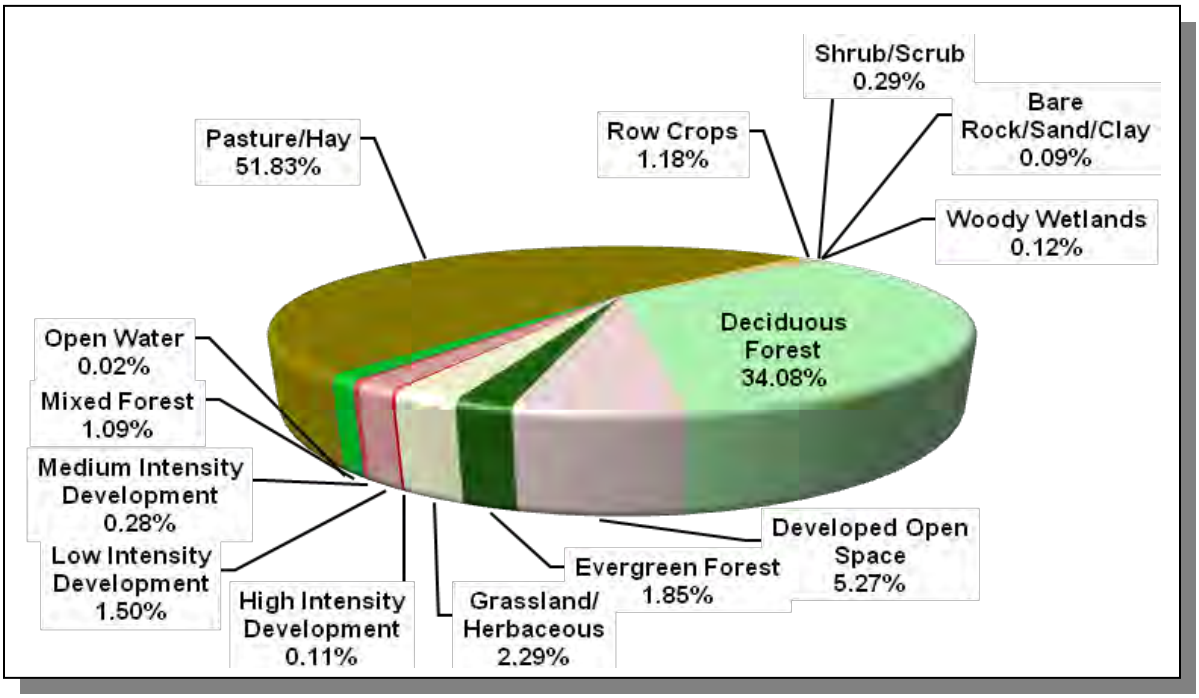


Figure 4-263. Land Use Distribution in Subwatershed 060101080703. *More information is provided in Appendix IV.*

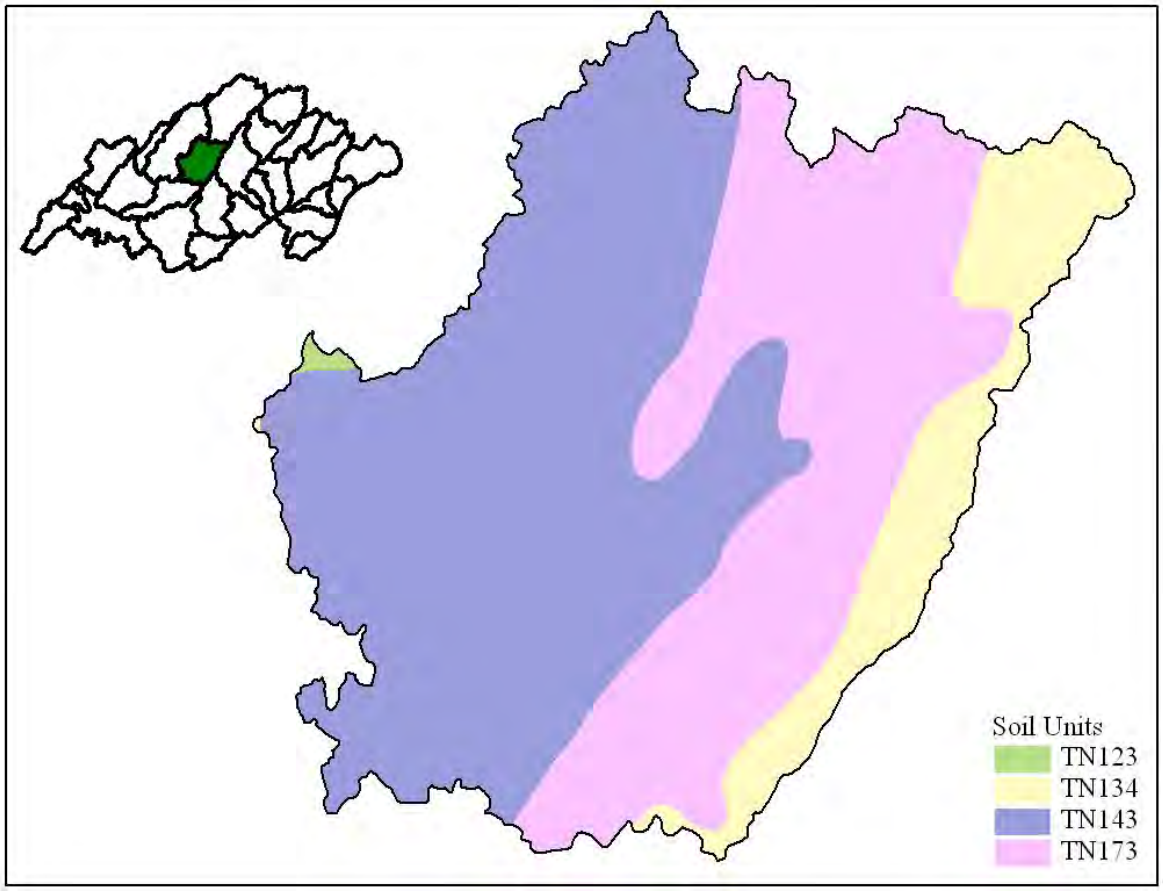


Figure 4-264. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080703.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN123	6.00	C	1.30	5.81	Silty Loam	0.37
TN134	0.00	B	1.38	5.18	Loam	0.31
TN143	0.00	C	1.22	6.44	Loam	0.32
TN173	0.00	C	0.56	2.26	Loam	0.14

Table 4-160. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080703. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Greene	55,853	59,369	62,909	6.71	3,749	3,985	4,222	12.60

Table 4-161. Population Estimates in Subwatershed 060101080703.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Greeneville	Greene	13,532	6,058	5,779	279	0

Table 4-162. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 060101080703.

4.2.Y.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080703.

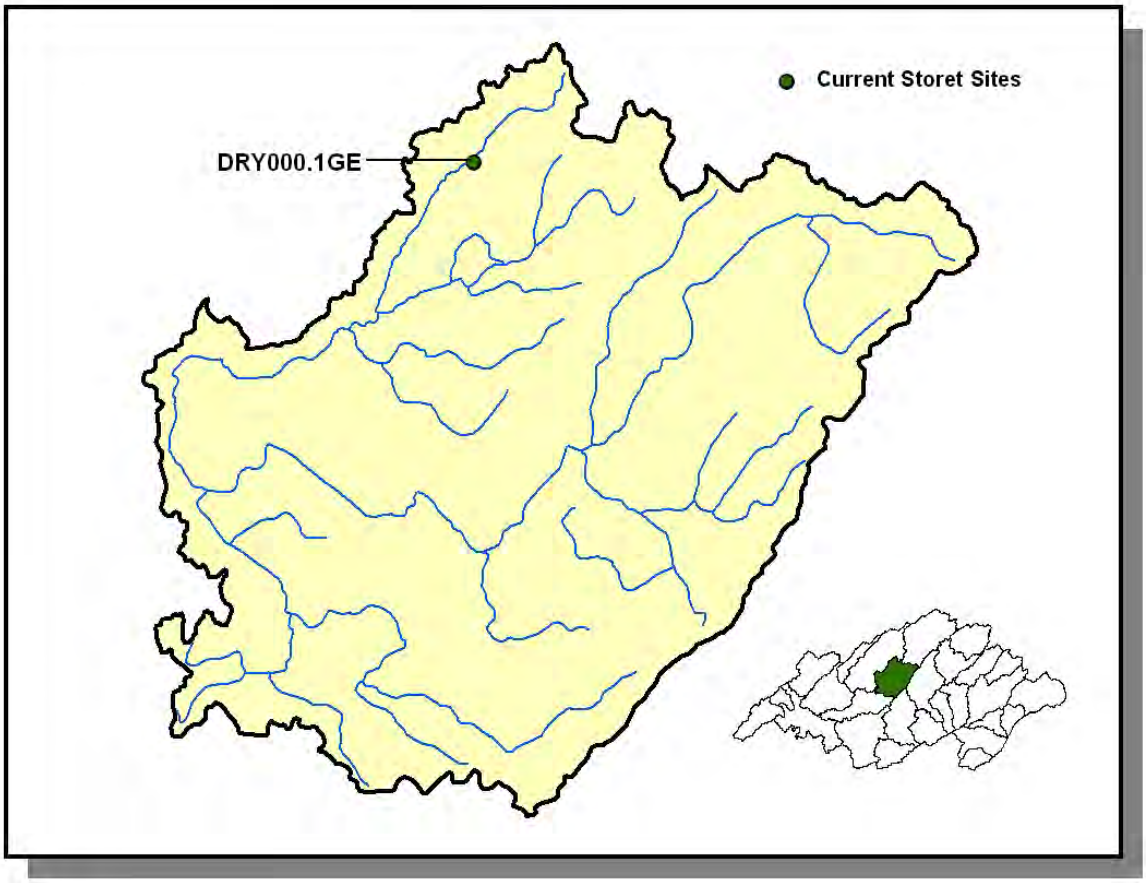


Figure 4-265. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080703. *More information, including site names and locations, is provided in Appendix IV.*

4.2.Y.iii. Permitted Activities.

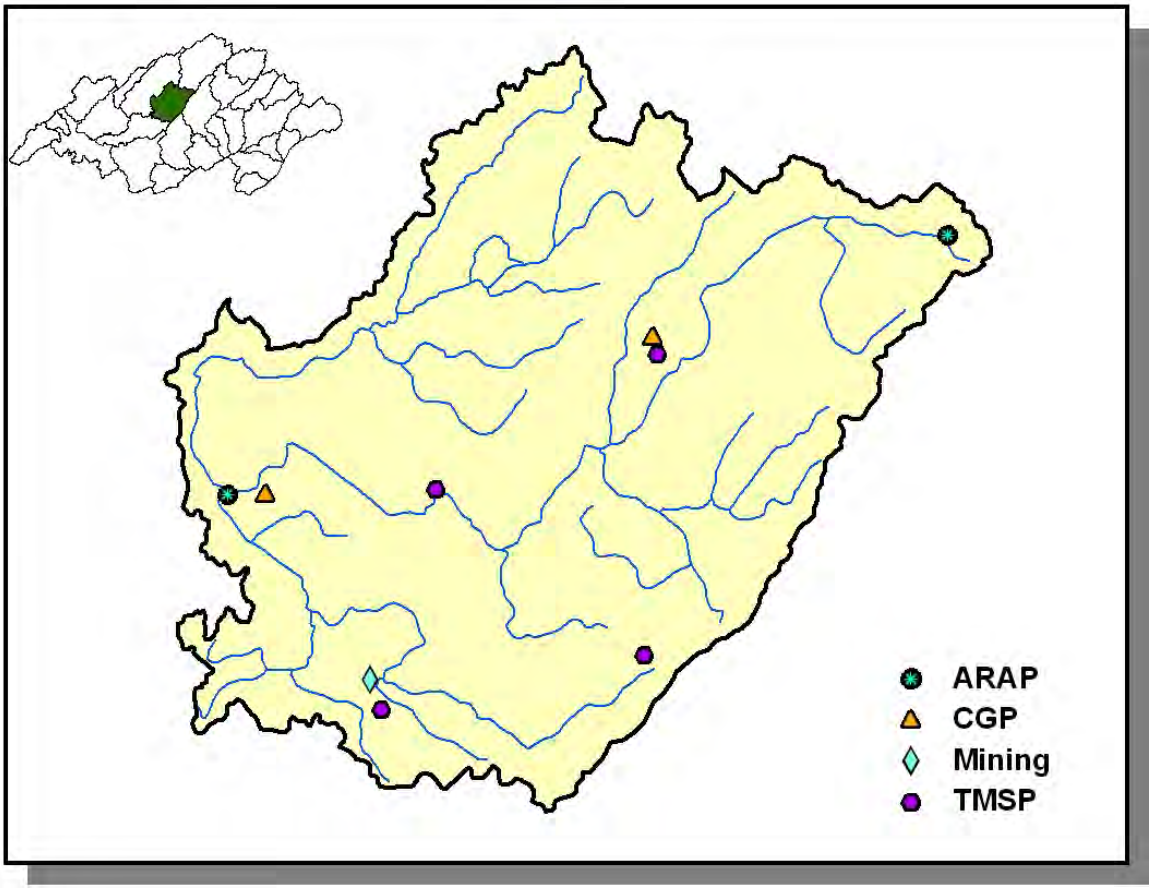


Figure 4-266. Location of Permits Issued in Subwatershed 060101080703. *More information, including the names of facilities, is provided in Appendix IV.*

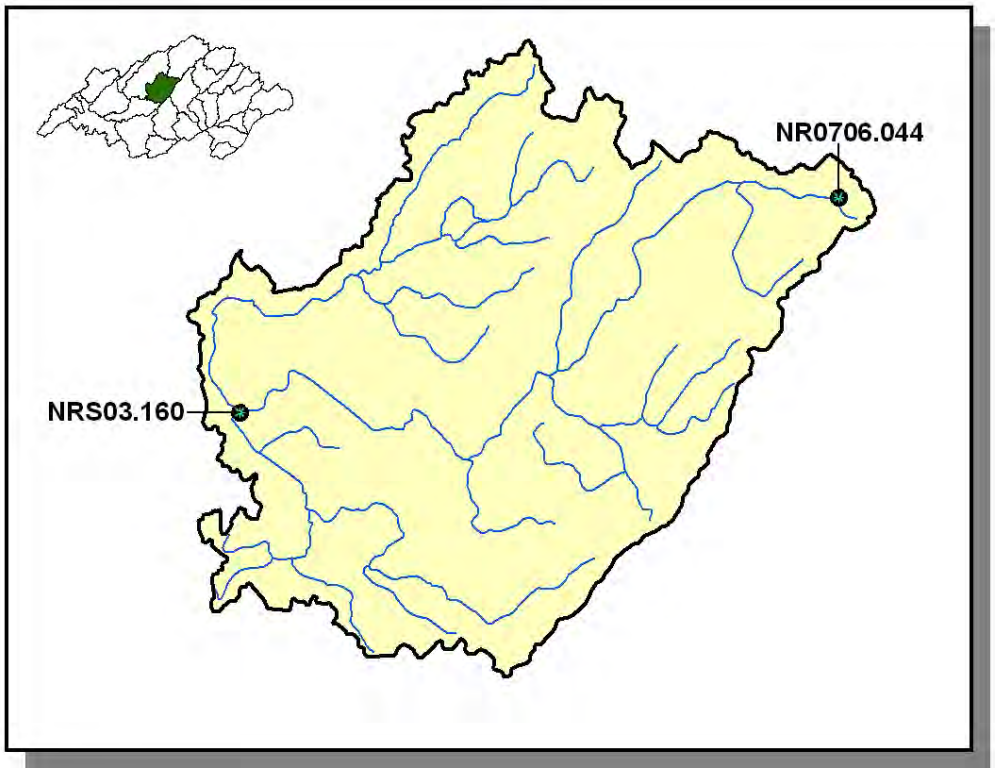


Figure 4-267. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080703. *More information is provided in Appendix IV.*

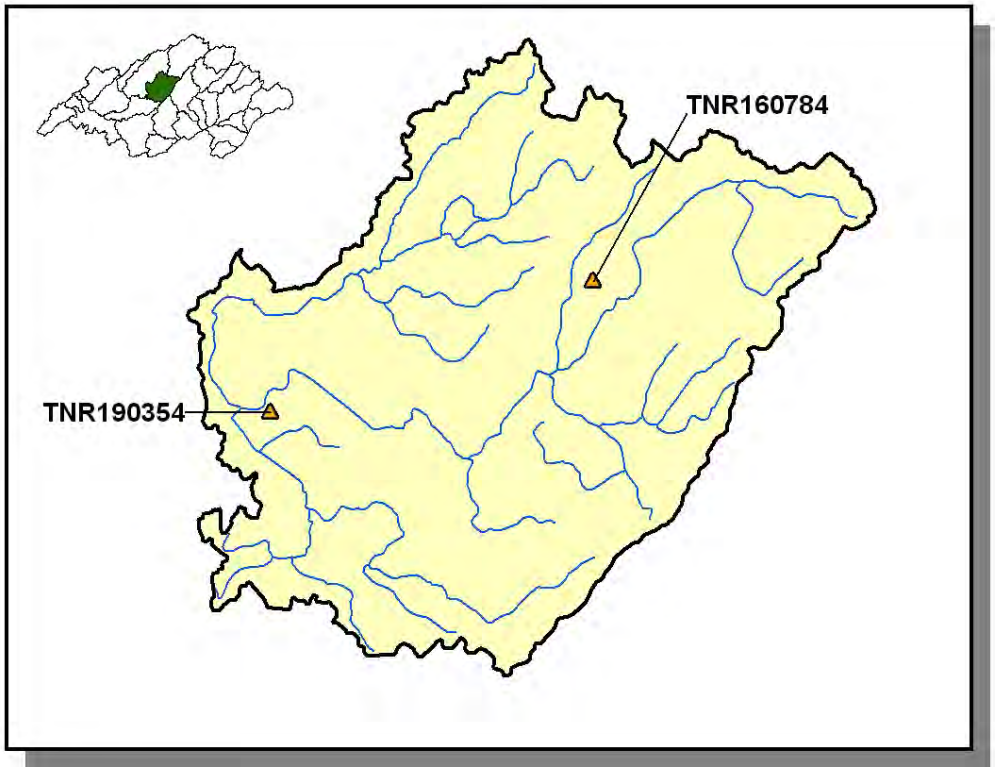


Figure 4-268. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080703. *More information is provided in Appendix IV.*

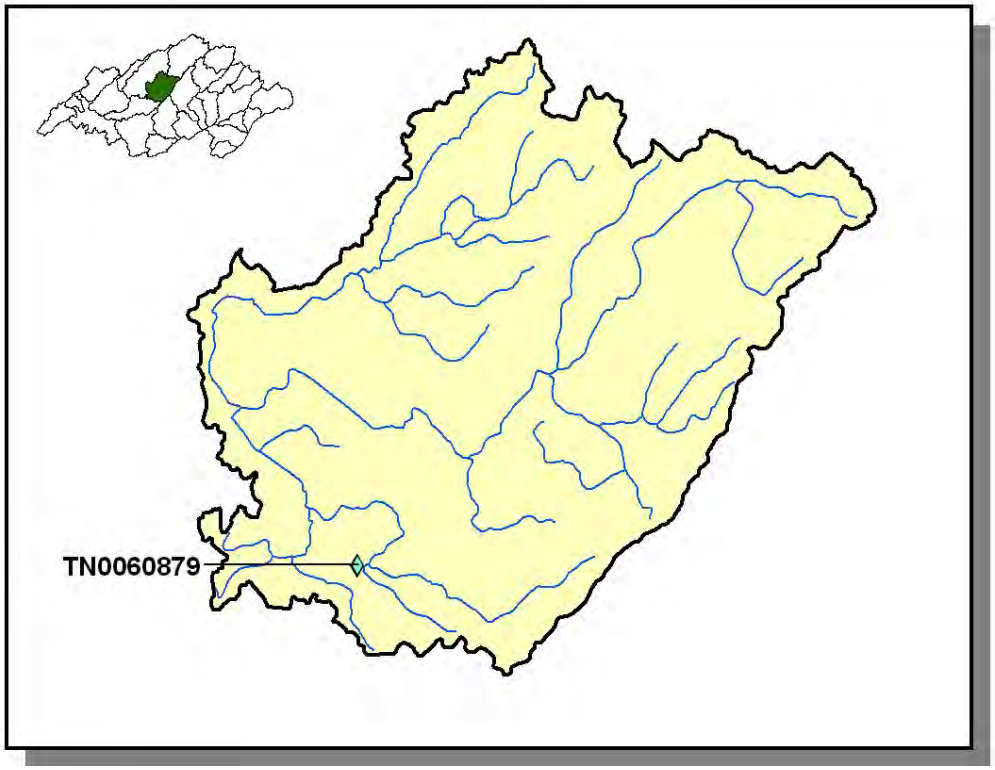


Figure 4-269. Location of permitted Mining facilities in Subwatershed 060101080703. *More information is provided in Appendix IV.*

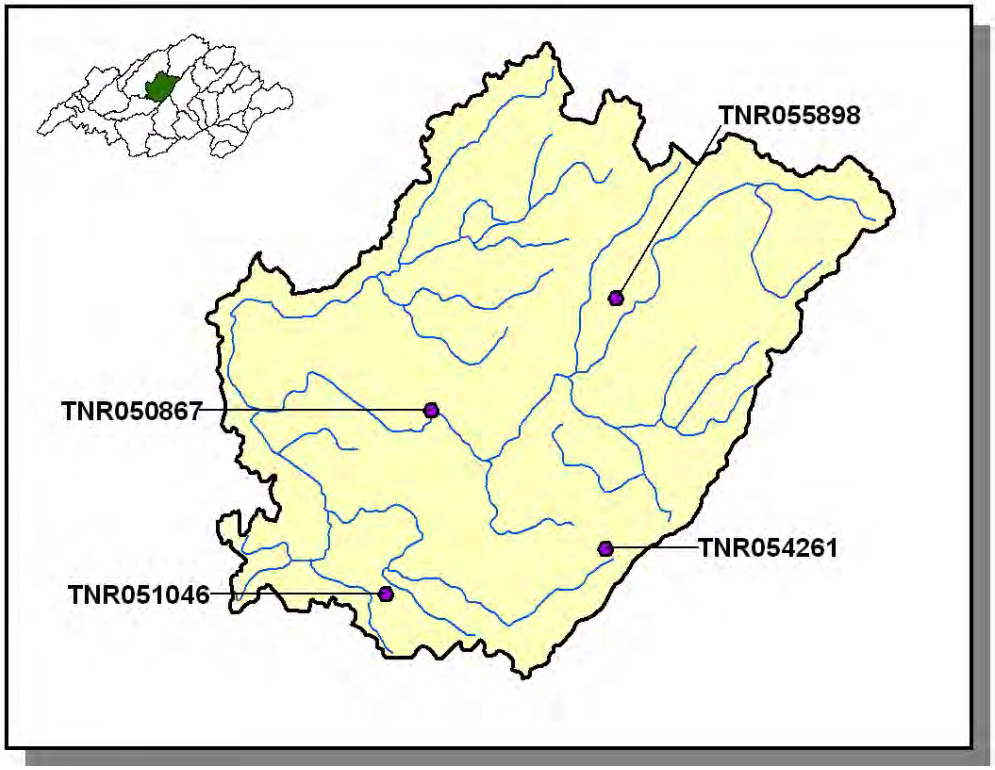


Figure 4-270. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 060101080703. *More information is provided in Appendix IV.*

4.2.Y.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Greene	33,962	72,582	7,282	1,190	495	226

Table 4-163. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Greene	180.0	171.8	2.0	10.5

Table 4-164. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	16.75
Tobacco (Row Crops)	15.36
Other Vegetable and Truck Crop	3.80
Farmsteads and Ranch Headquarters	1.67
Grass Forbs Legumes Mixed (Pastureland)	0.40
Grass (Pastureland)	0.35
Legume Grass (Hayland)	0.34
Legume (Hayland)	0.26
Grass (Hayland)	0.14
Corn (Row Crops)	16.75

Table 4-165. Annual Estimated Total Soil Loss in Subwatershed 060101080703.

4.2.Z 060101080704 (Gap Creek).

4.2.Z.i. General Description.

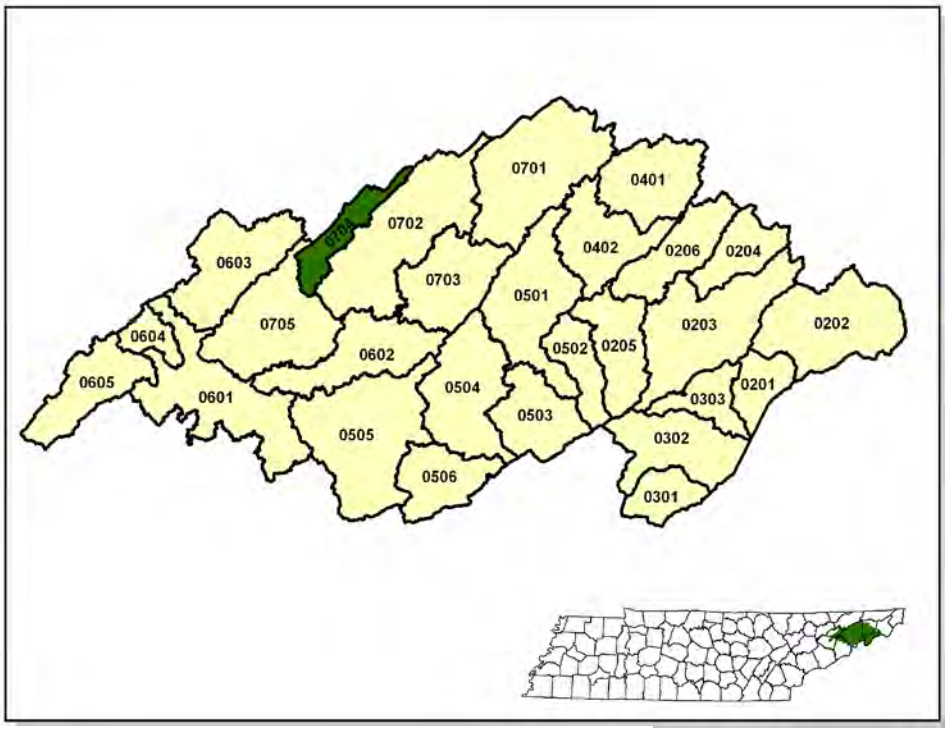


Figure 4-271. Location of Subwatershed 060101080704. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

Figure 4-272. Locational Details of Subwatershed 060101080704.

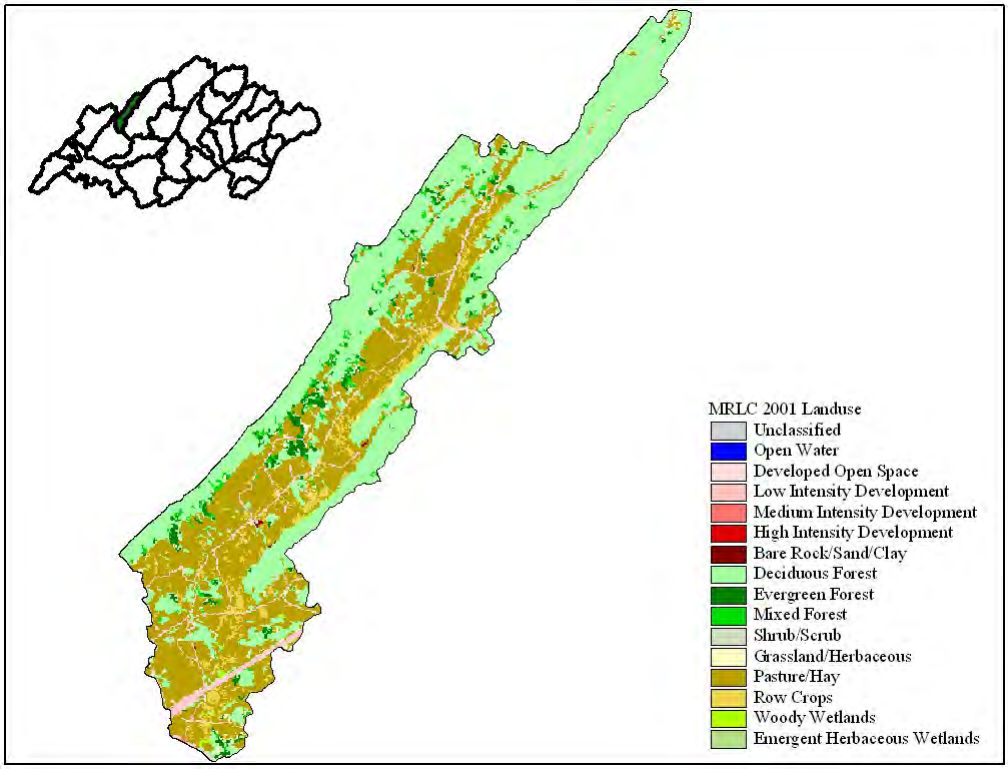


Figure 4-273. Illustration of Land Use Distribution in Subwatershed 060101080704.

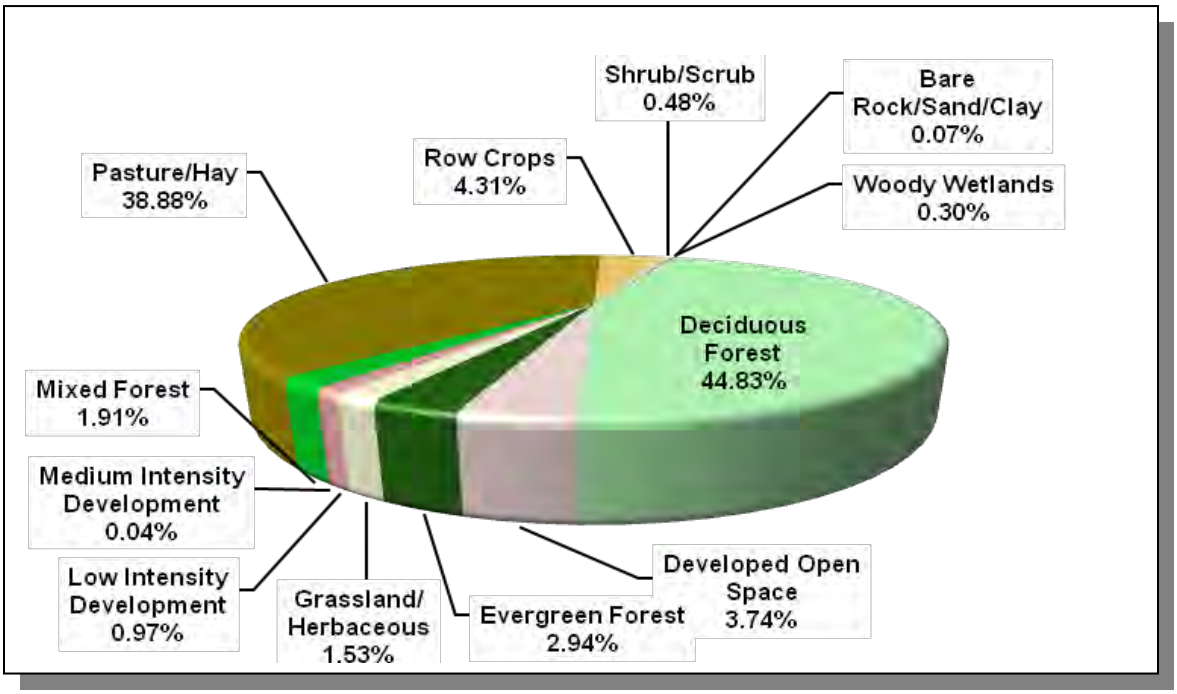


Figure 4-274. Land Use Distribution in Subwatershed 060101080704. *More information is provided in Appendix IV.*

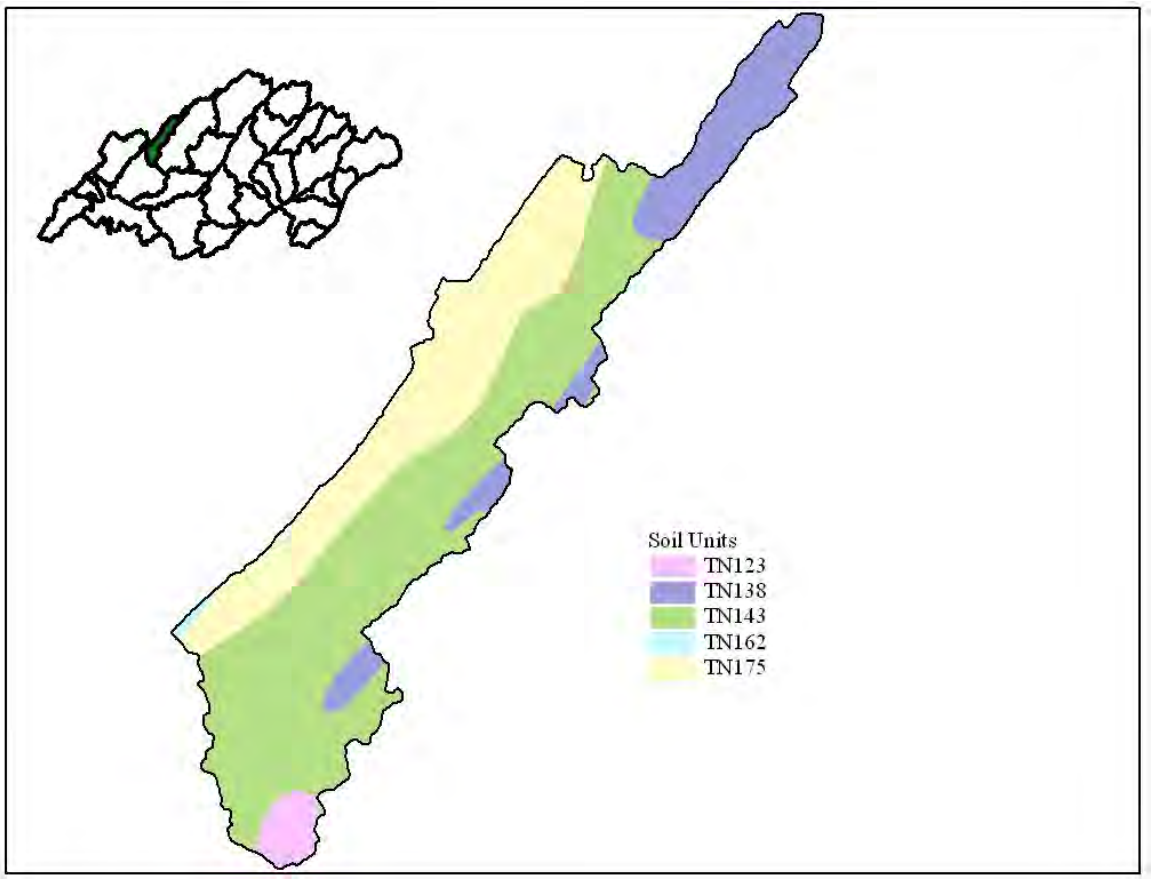


Figure 4-275. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080704.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN123	6.00	C	1.30	5.81	Silty Loam	0.37
TN138	0.00	C	2.48	4.26	Sandy Loam	0.22
TN143	0.00	C	1.22	6.44	Loam	0.32
TN162	0.00	C	1.52	6.20	Loam	0.36
TN175	0.00	B	1.49	5.23	Loam	0.30

Table 4-166. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080704. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Greene	55,853	59,369	62,909	2.99	1,668	1,773	1,879	12.60

Table 4-167. Population Estimates in Subwatershed 060101080704.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Mosheim	Greene	1,451	586	473	113	0

Table 4-168. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 060101080704.

4.2.Z.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 060101080704.

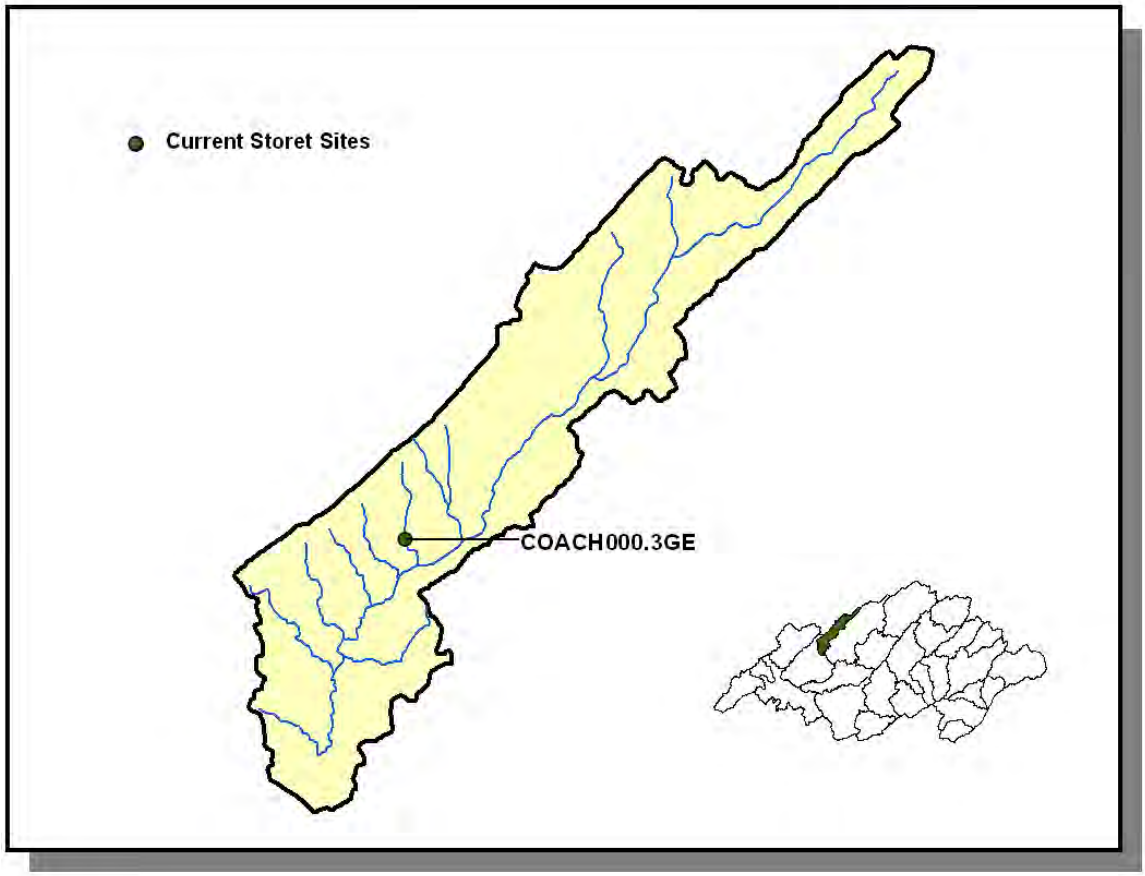


Figure 4-276. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080704. *More information, including site names and locations, is provided in Appendix IV.*

4.2.Z.iii. Permitted Activities.

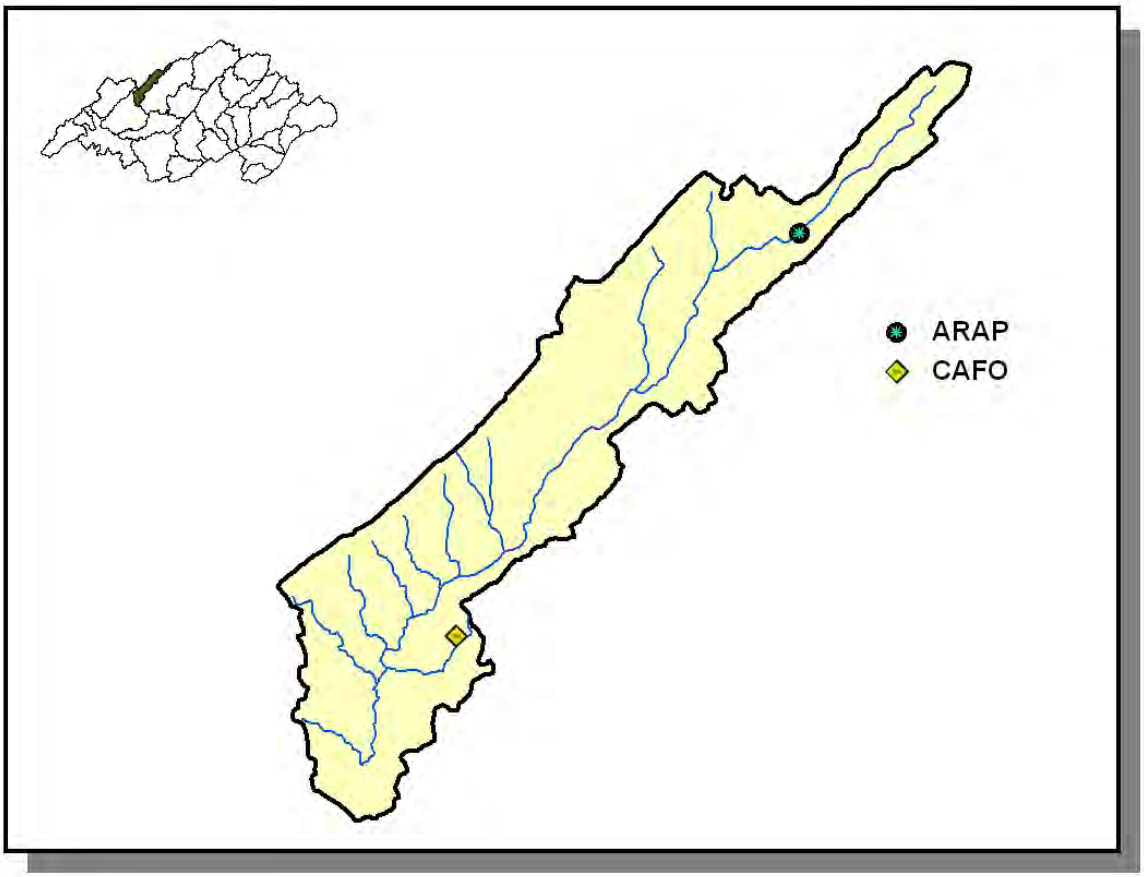


Figure 4-277. Location of Permits Issued in Subwatershed 060101080704. *More information, including the names of facilities, is provided in Appendix IV.*

Figure 4-278. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080704. *More information is provided in Appendix IV.*

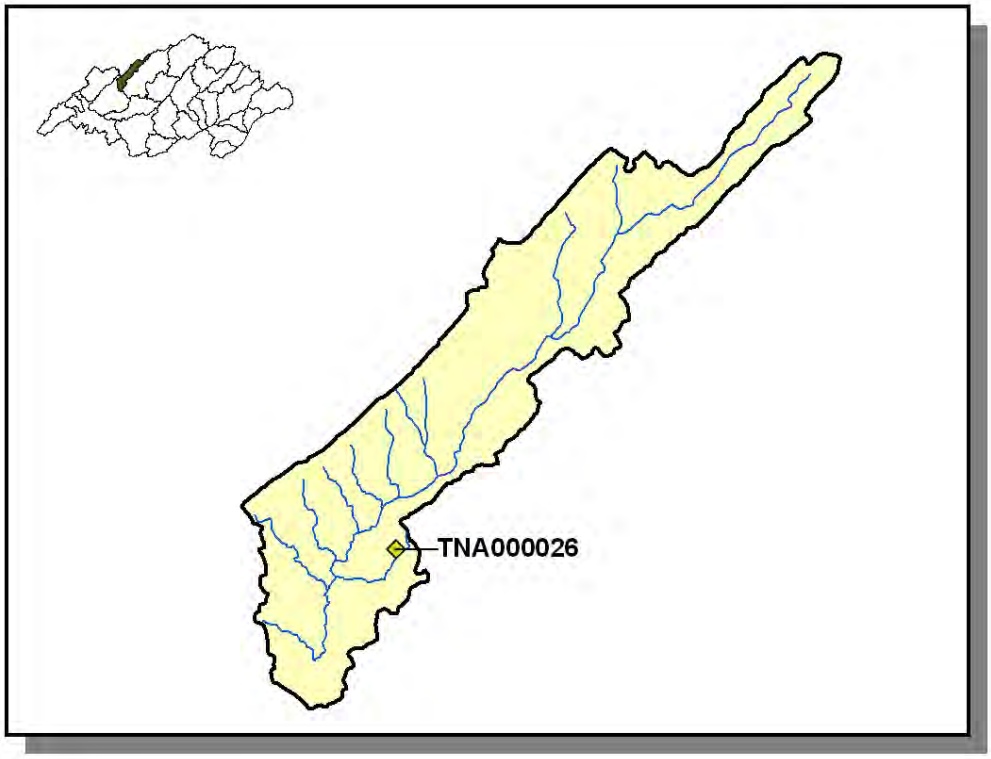


Figure 4-279. Location of CAFO (Concentrated Animal Feel Operation) Permit Sites in Subwatershed 060101080704. *More information, including the names of facilities, is provided in Appendix IV.*

4.2.Z.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Greene	33,962	72,582	7,282	1,190	495	226

Table 4-169. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Greene	180.0	171.8	2.0	10.5

Table 4-170. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	16.75
Tobacco (Row Crops)	15.38
Other Vegetable and Truck Crop	4.43
Farmsteads and Ranch Headquarters	1.64
Grass Forbs Legumes Mixed (Pastureland)	0.40
Grass (Pastureland)	0.35
Legume Grass (Hayland)	0.34
Legume (Hayland)	0.26
Grass (Hayland)	0.15

Table 4-171. Annual Estimated Total Soil Loss in Subwatershed 060101080704.

4.2.AA. 060101080705 (Lick Creek, Lower).

4.2.AA.i. General Description.

Figure 4-280. Location of Subwatershed 060101080705. *All Nolichucky River HUC-12 subwatershed boundaries in Tennessee are shown for reference.*

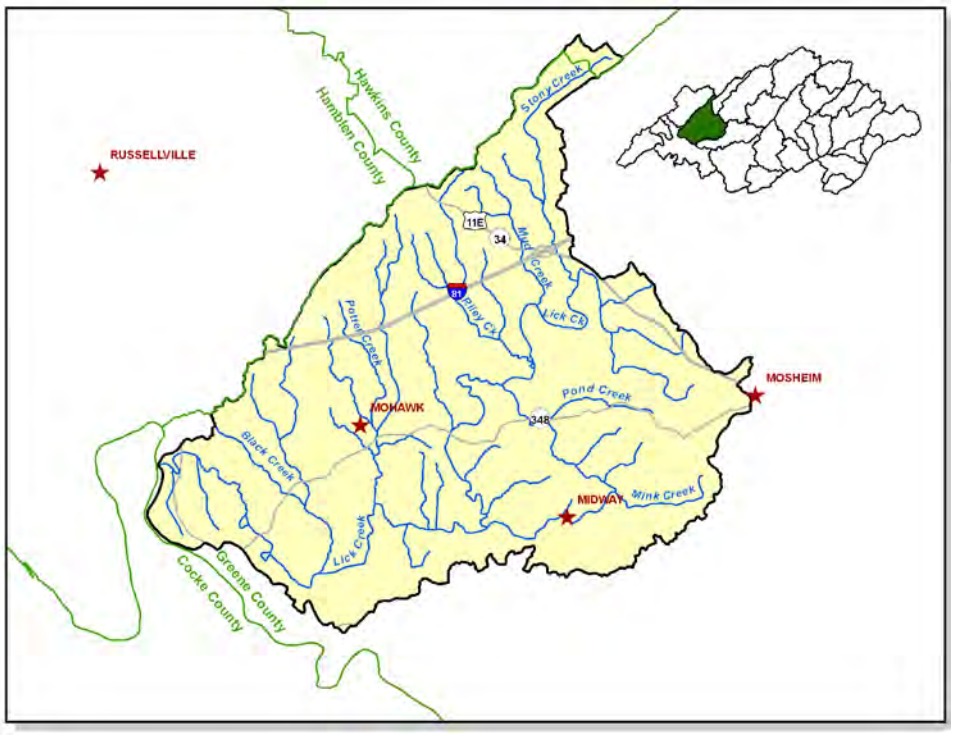


Figure 4-281. Locational Details of Subwatershed 060101080705.

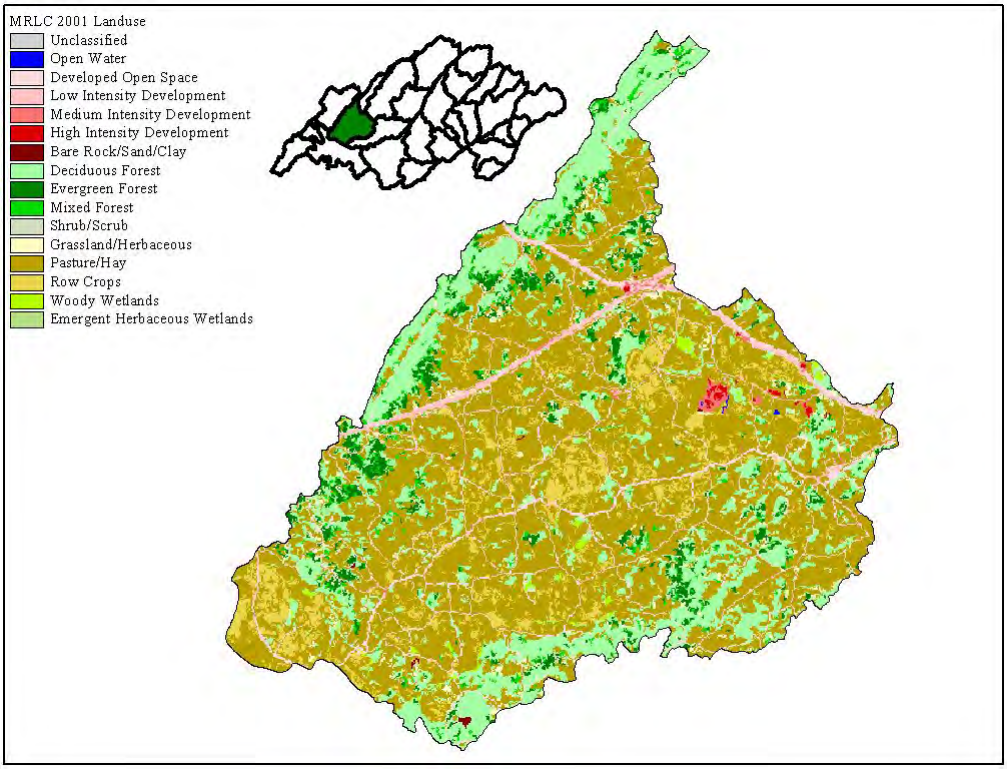


Figure 4-282. Illustration of Land Use Distribution in Subwatershed 060101080705.

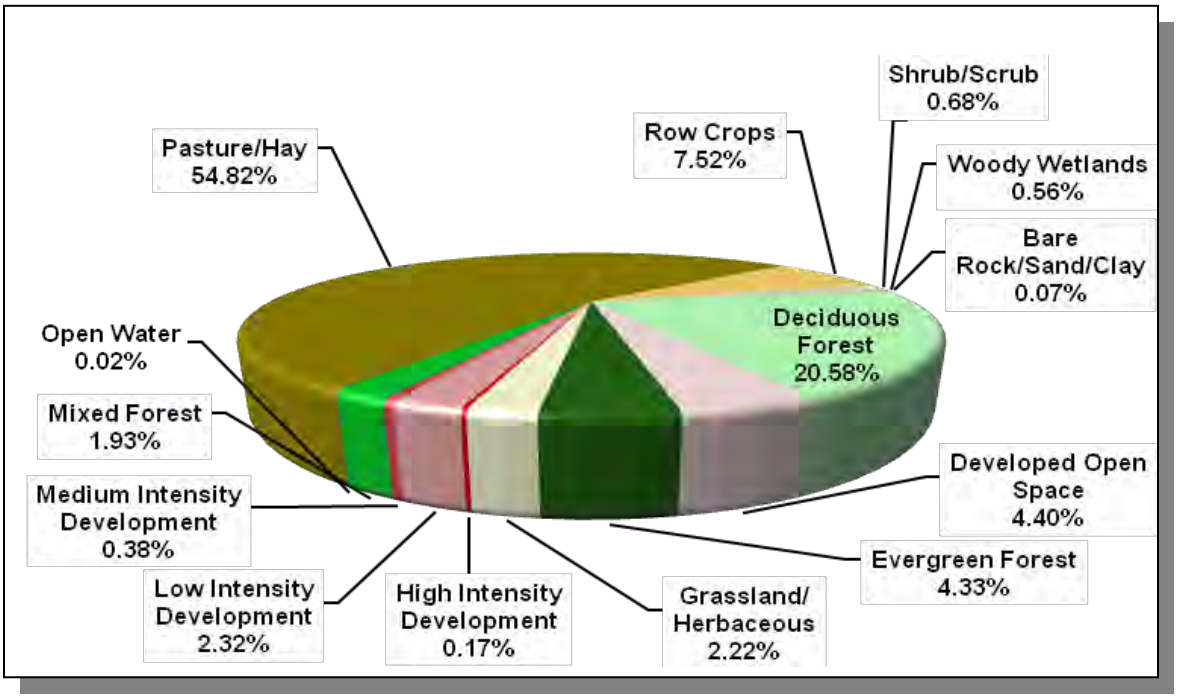


Figure 4-283. Land Use Distribution in Subwatershed 060101080705. *More information is provided in Appendix IV.*

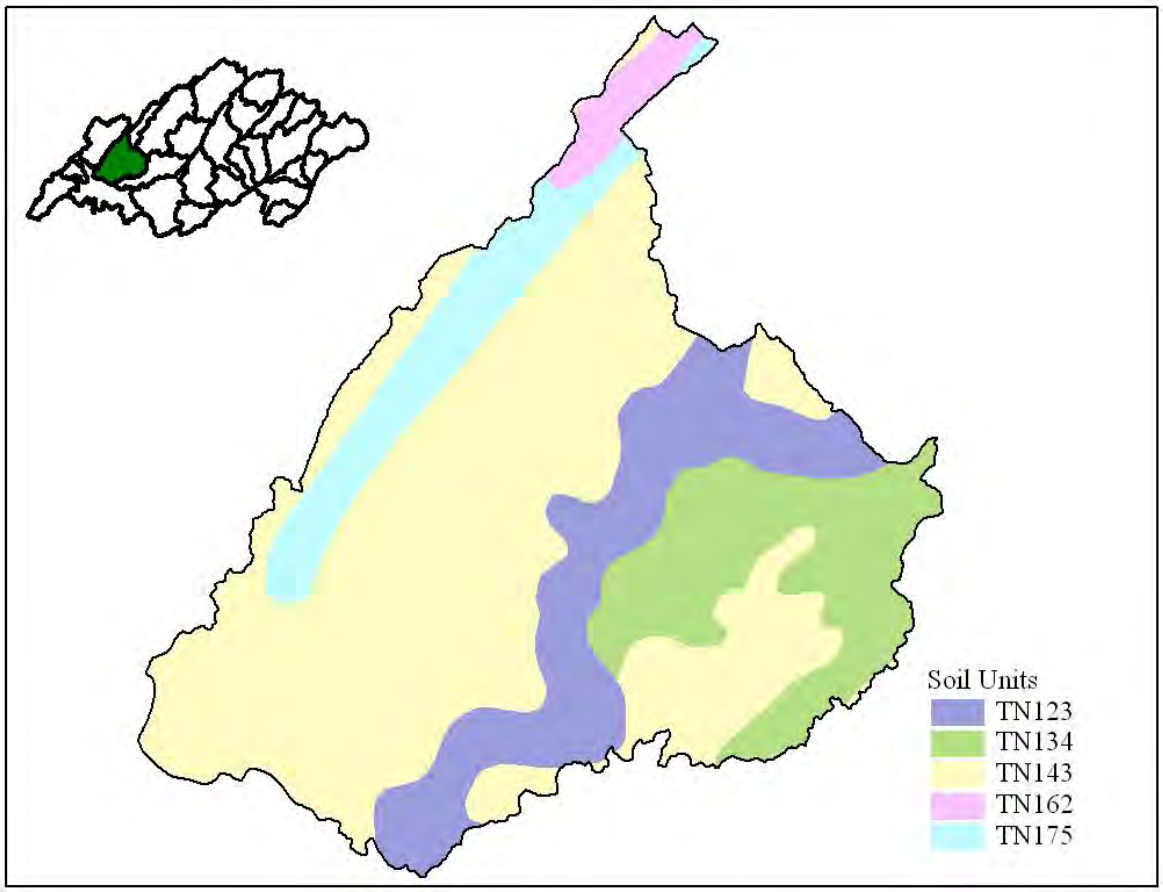


Figure 4-284. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080705.

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN123	6.00	C	1.30	5.81	Silty Loam	0.37
TN134	0.00	B	1.38	5.18	Loam	0.31
TN143	0.00	C	1.22	6.44	Loam	0.32
TN162	0.00	C	1.52	6.20	Loam	0.36
TN175	0.00	B	1.49	5.23	Loam	0.30

Table 4-172. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 060101080705. *The definition of "Hydrologic Group" is provided in Appendix IV.*

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	% of County in Watershed	1990	1997	2000	% Change (1990-2000)
Greene	55,853	59,369	62,909	8.85	4,943	5,254	5,567	12.60
Hawkins	44,565	48,821	53,563	0.14	62	68	75	21.00
Totals	**180,039**	**193,546**	**208,165**		**5,244**	**5,578**	**5,918**	**12.90**

Table 4-173. Population Estimates in Subwatershed 060101080705.

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Mosheim	Greene	1,451	586	473	113	0

Table 4-174. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 060101080705.

4.2.AA.ii. USGS Gaging Stations and STORET Sites.

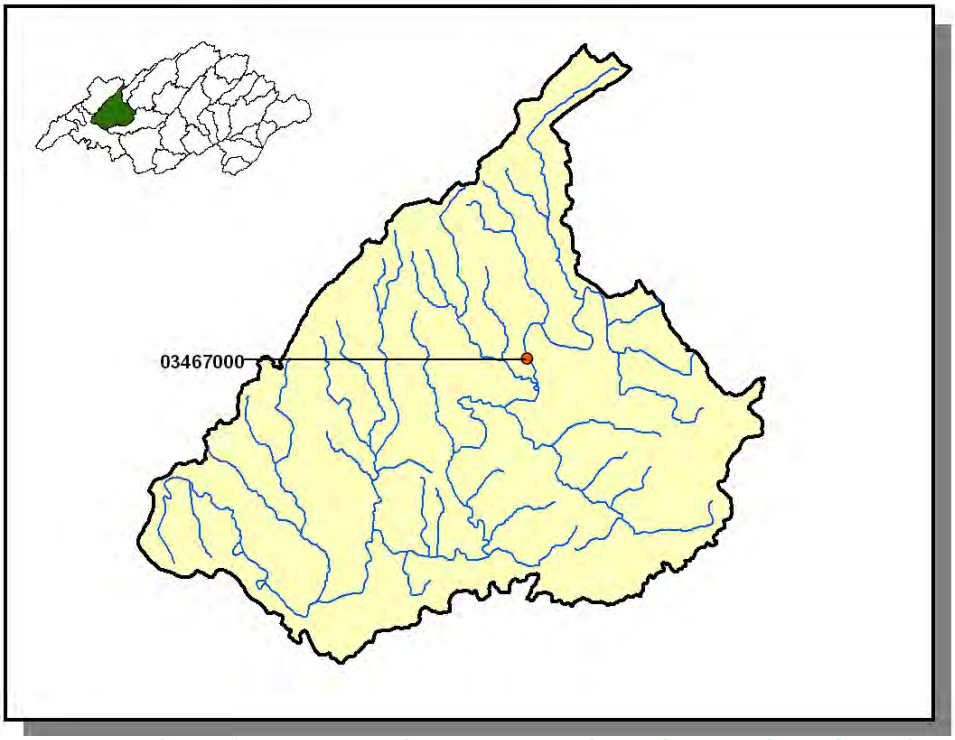


Figure 4-285. Location of USGS Continuous Record Gaging Stations in Subwatershed 060101080705. *More information is provided in Appendix IV.*

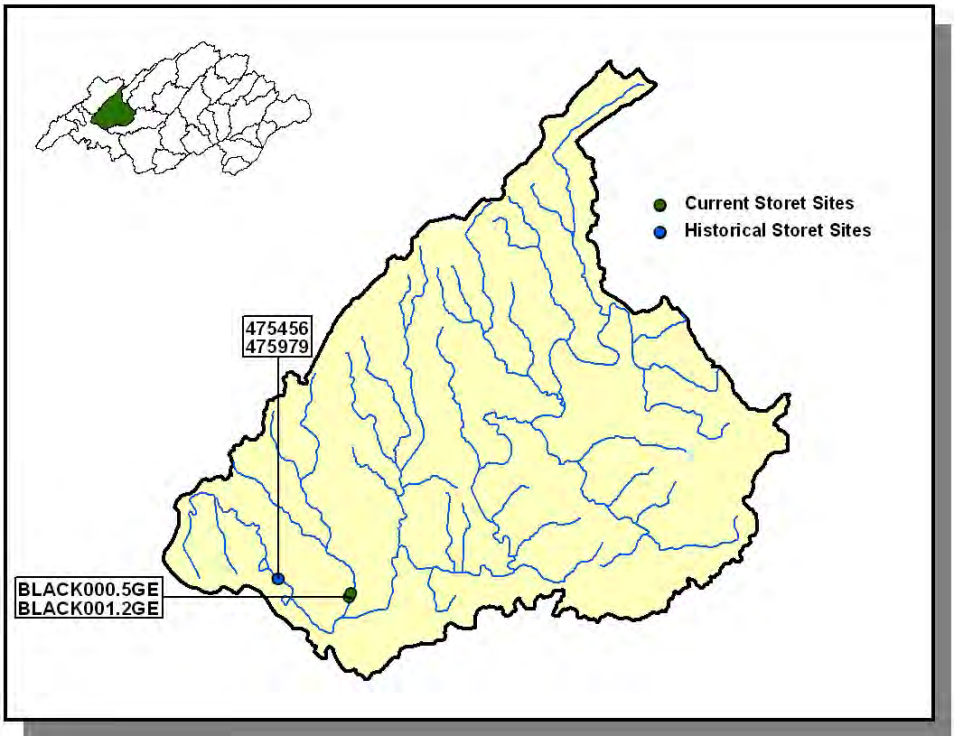


Figure 4-286. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 060101080705. *More information, including site names and locations, is provided in Appendix IV.*

4.2.AA.iii. Permitted Activities.

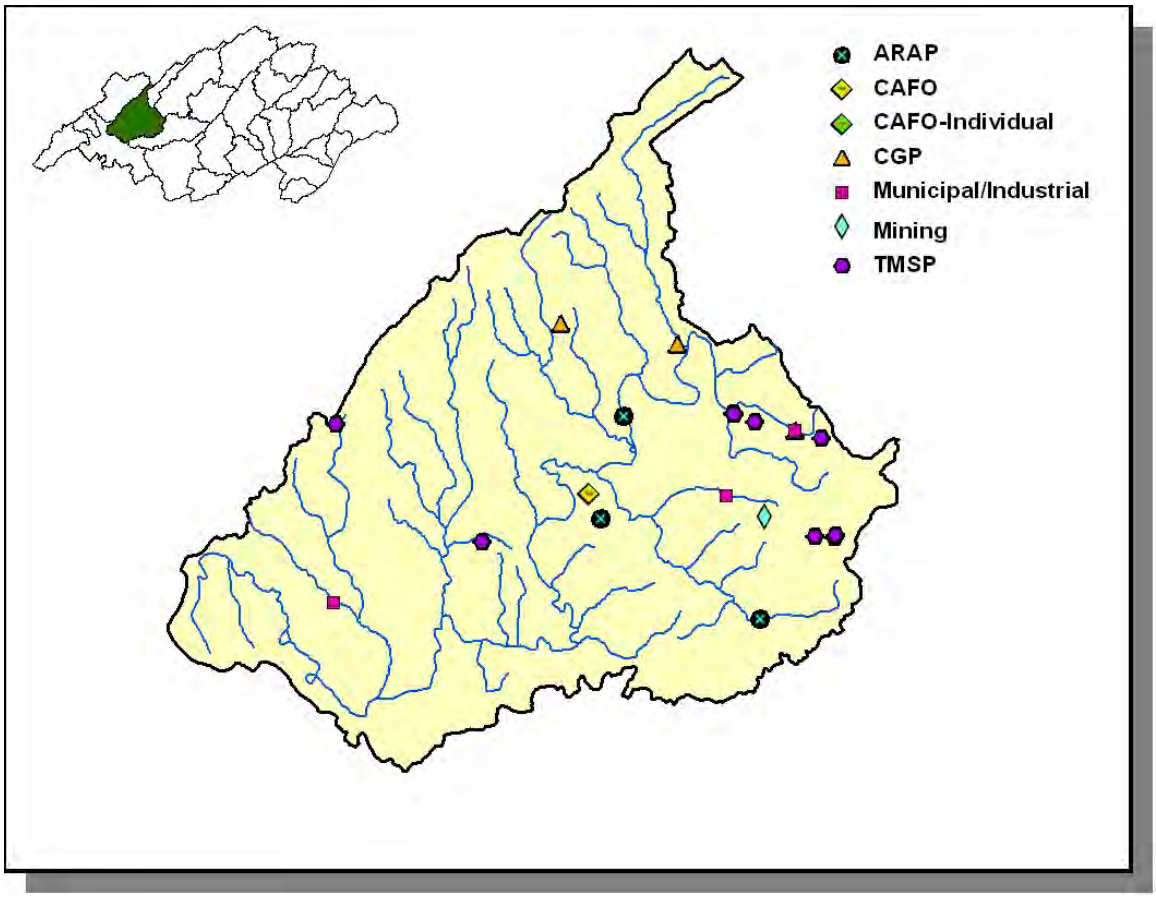


Figure 4-287. Location of Permits Issued in Subwatershed 060101080705. *More information, including the names of facilities, is provided in Appendix IV.*

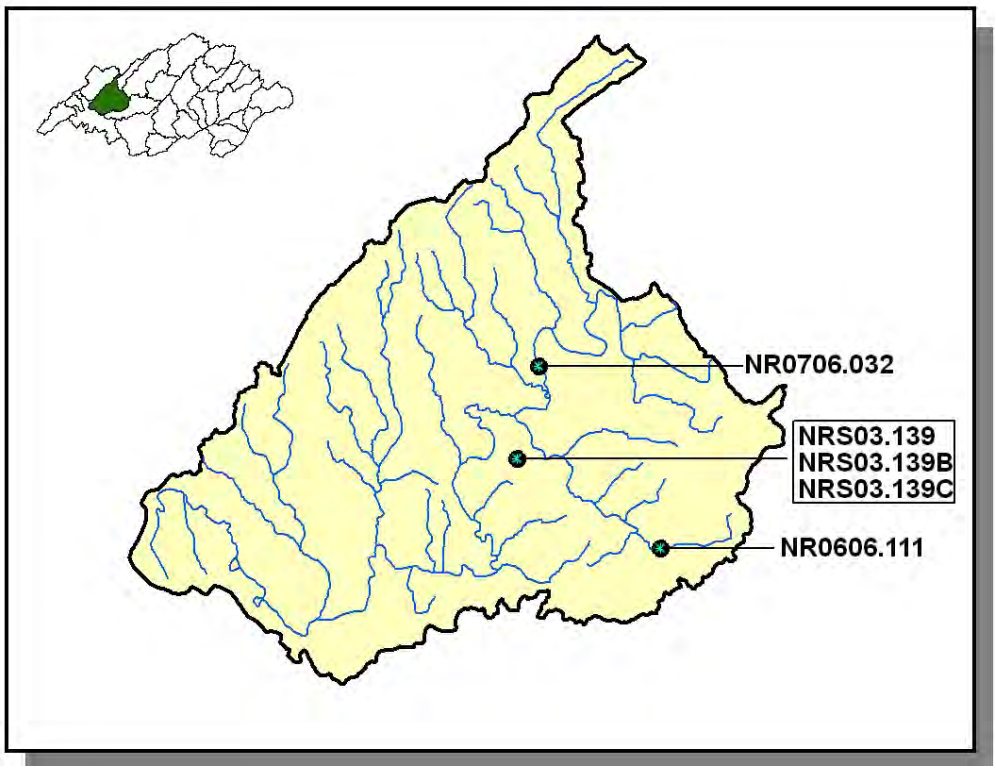


Figure 4-288. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 060101080705. *More information is provided in Appendix IV.*

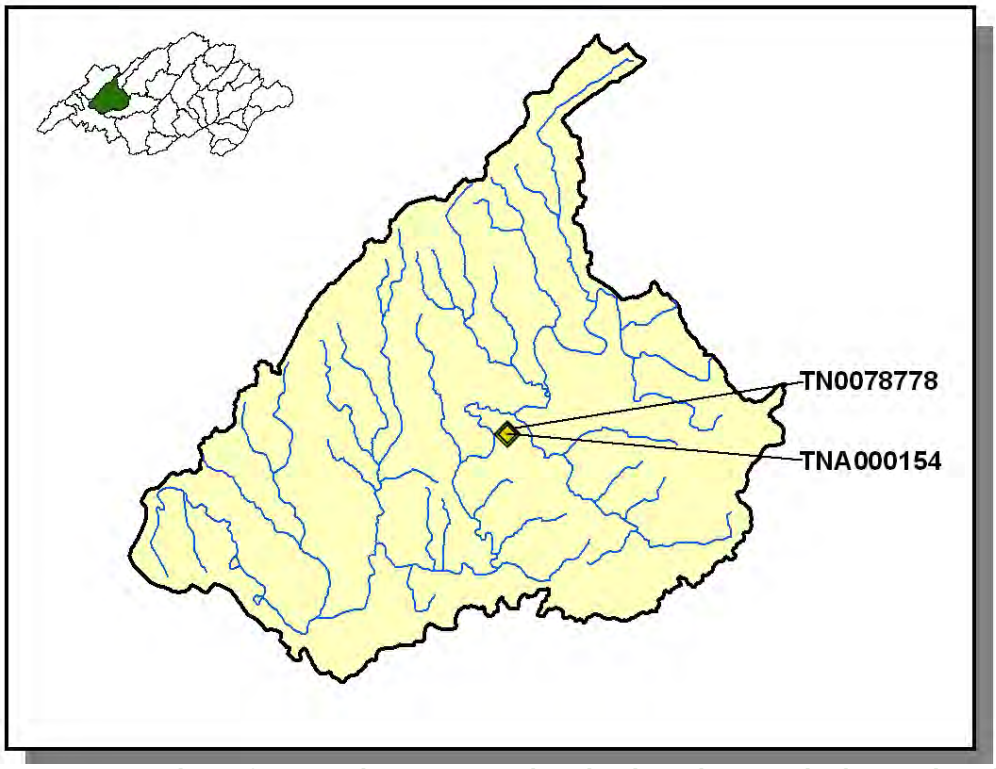


Figure 4-289. Location of CAFO (Concentrated Animal Feel Operation) Permit Sites in Subwatershed 060101080705. *More information, including the names of facilities, is provided in Appendix IV.*

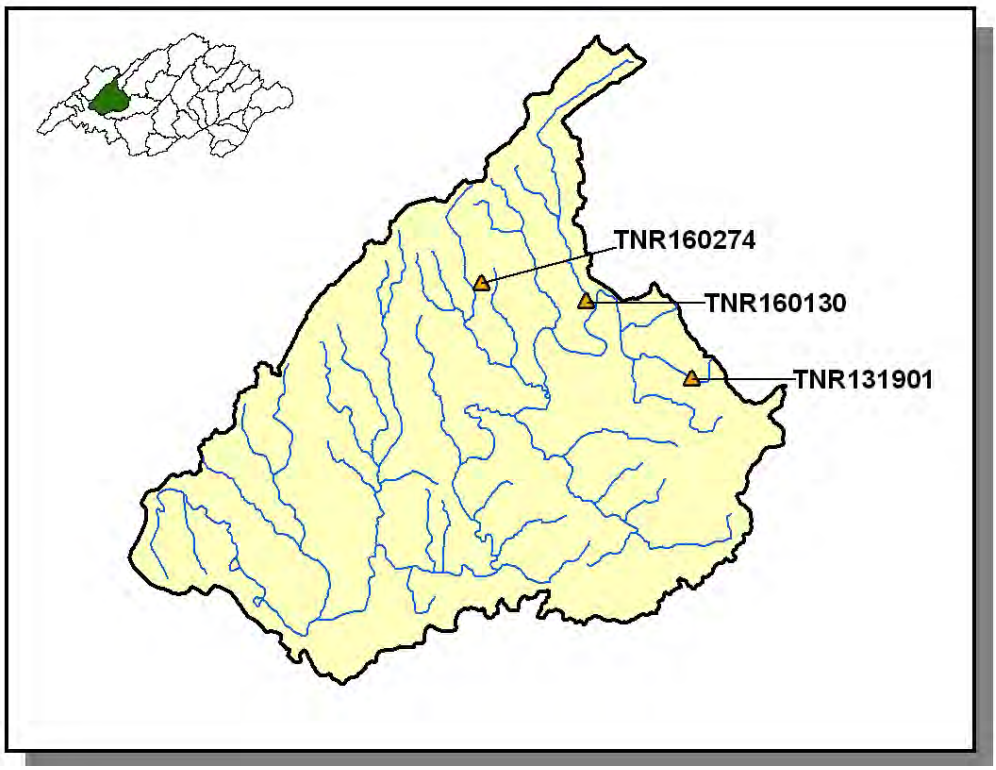


Figure 4-290. Location of CGP (Construction General Permit) Sites in Subwatershed 060101080705. *More information is provided in Appendix IV.*

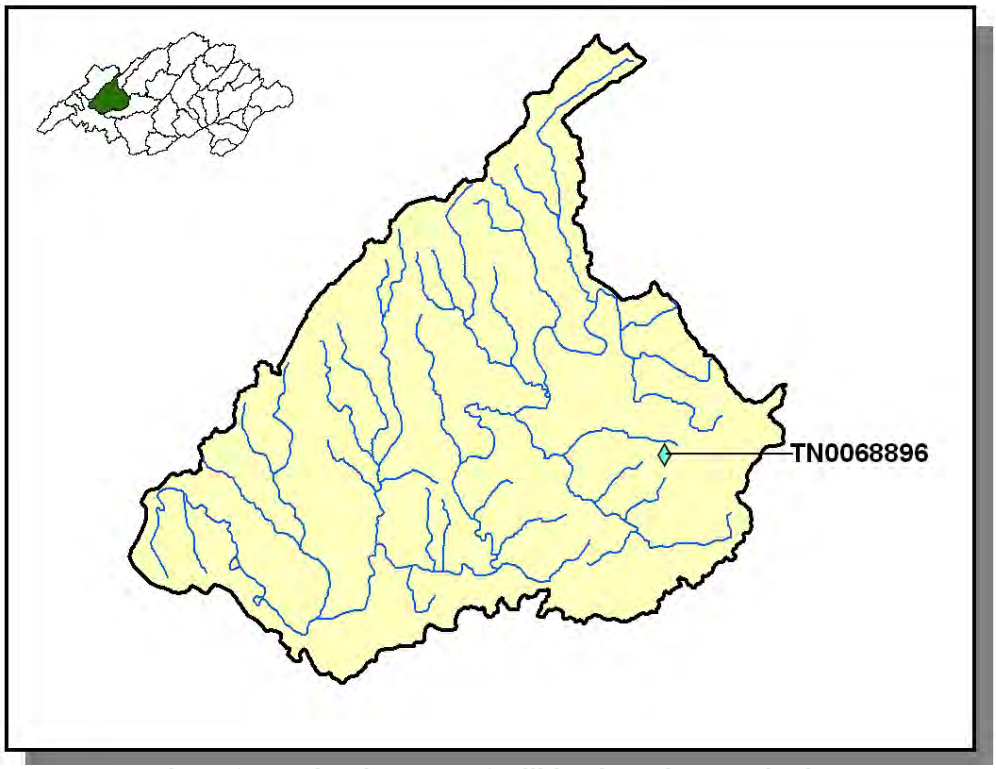
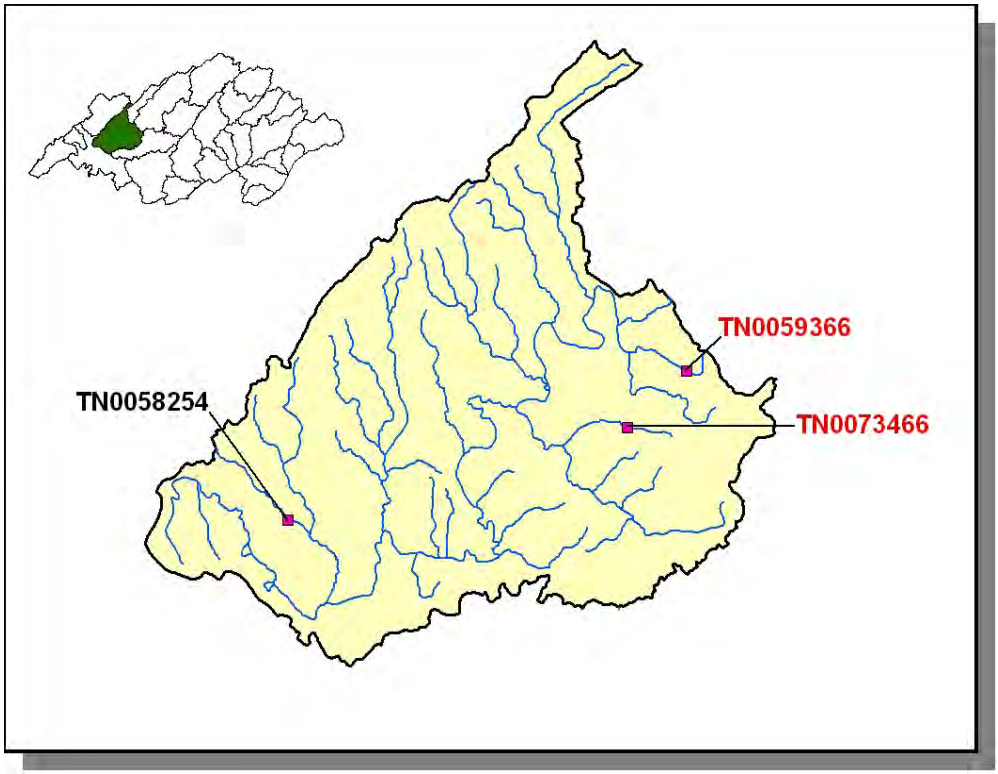


Figure 4-291. Location of permitted MINING facilities in Subwatershed 060101080705. *More information is provided in Appendix IV.*



4-292. Location of Permitted Municipal and Industrial Facilities in Subwatershed 060101080705. *Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the names of facilities, is provided in Appendix IV.*

PERMIT #	7Q10	DISCHARGE FLOW
TN0059366	8.1	0.975
TN0073466	0.0	0.006

Table 4-175. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080705. *Data are in million gallons per day (MGD).Data were obtained from permit files.*

PERMIT #	$CBOD_5$	TRC	E. *coli*	NITROGEN TOTAL (AS N)	PHOSPHORUS TOTAL
TN0059366	X	X	X	X	X
TN0073466		X			

Table 4-176. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080705. *$CBOD_5$, Carbonaceous Biochemical Oxygen Demand (5-Day); TRC, Total Residual Chlorine.*

PERMIT #	WET	DO	FLOW	SS	TSS	TSS % REMOVAL	pH
TN0059366	X	X	X	X	X	X	X
TN0073466							X

Table 4-177. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080705. *WET, Whole Effluent Toxicity; DO, Dissolved Oxygen; SS, Settleable Solids; TSS, Total Suspended Solids.*

PERMIT #	TRICHLORETHANE	DICHLOROETHANE	METHYLENE CHLORIDE	TOLUENE
TN0073466	X	X	X	X

Table 4-178. Organic Compound Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 060101080705.

4.2.AA.iv. Nonpoint Source Contributions.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Greene	33,962	72,582	7,282	1,190	495	226
Hawkins	18,796	36,429	903	1,079	442	243

Table 4-179. Summary of Livestock Count Estimates by County. *According to the 1997 Census of Agriculture (http://www.agcensus.usda.gov/), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.*

	INVENTORY		REMOVAL RATE	
County	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Greene	180.0	171.8	2.0	10.5
Hawkins	177.4	177.4	0.4	2.1

Table 4-180. Forest Acreage and Annual Removal Rates (1987-1994) by County.

CROPS	TONS/ACRE/YEAR
Corn (Row Crops)	16.55
Tobacco (Row Crops)	15.31
Wheat (Close Grown Cropland)	5.30
Other Vegetable and Truck Crop	4.17
Farmsteads and Ranch Headquarters	1.62
Grass Forbs Legumes Mixed (Pastureland)	0.41
Grass (Pastureland)	0.35
Legume Grass (Hayland)	0.33
Legume (Hayland)	0.26
Other Land in Farms	0.21
Grass (Hayland)	0.15
Aquaculture in a Crop Rotation	0.15

Table 4-181. Annual Estimated Total Soil Loss in Subwatershed 060101080705.

CHAPTER 5

WATER QUALITY PARTNERSHIPS IN THE NOLICHUCKY RIVER WATERSHED

5.1. BACKGROUND. The Watershed Approach relies on participation at the federal, state, local and nongovernmental levels to be successful. Two types of partnerships are critical to ensure success:

- Partnerships between agencies
- Partnerships between agencies and landowners

This chapter describes both types of partnerships in the Tennessee Portion of the Nolichucky River Watershed. The information presented is provided by the agencies and organizations described.

5.2. FEDERAL PARTNERSHIPS.

5.2.A. Natural Resources Conservation Service. The Natural Resources Conservation Service (NRCS), an agency of the U.S. Department of Agriculture, provides technical assistance, information, and advice to citizens in their efforts to conserve soil, water, plant, animal, and air resources on private lands.

Performance Results System (PRS) is a Web-based database application providing USDA Natural Resources Conservation Service, conservation partners, and the public fast and easy access to accomplishments and progress toward strategies and performance. The PRS may be viewed at http://prms.nrcs.usda.gov/prs. From the opening menu, select "Reports" in the top tool bar. You will select the time period that you are interested in and the conservation treatment of interest on the page that comes up. Depending on the time period of interest, you will have various report options to choose from, such as location, reporting period and program involved in the reporting. You may be required to "refresh" the page in order to get the current report to come up.

The data can be used to determine broad distribution trends in service provided to customers by NRCS conservation partnerships. These data do not show sufficient detail to enable evaluation of site-specific conditions (e.g., privately-owned farms and ranches) and are intended to reflect general trends.

Conservation Practice	Feet	Acres	Number
Conservation Buffers	64,155	64	
Erosion Control		6,434	
Irrigation Management		364	
Nutrient Management		20,590	
Pest Management		21,488	
Grazing / Forages	98,095	12,471	
Tree and Shrub Practices		4,482	
Tillage and Cropping		6,548	
Waste Management Systems			8
Wetlands			40
Wildlife Habitat Management			4,384
Water Supply	59,108		72

Table 5-1. Landowner Conservation Practices in Partnership with NRCS in the Tennessee Portion of the Nolichucky River Watershed. *Data are from PRMS for October 1, 2002 through September 30, 2006 reporting period. More information is provided in Appendix V.*

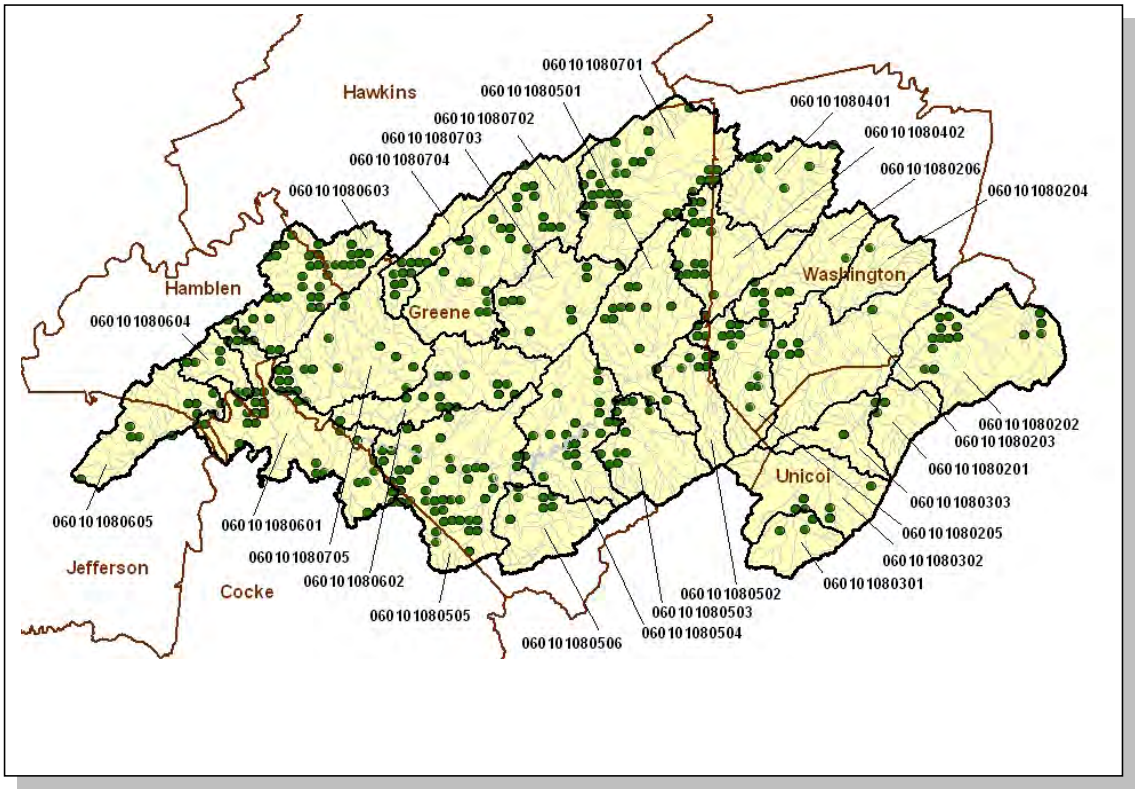


Figure 5-1. BMPs Installed by NRCS in the Nolichucky River Watershed in 2006 and 2007. Information was provided as part of Conservation Technical Assistance Grant 060701T47. *Best Management Practices applied in the watershed may be found in Appendix V.*

5.2.B. United States Geological Survey – Tennessee Water Science Center Programs. The United States Geological Survey (USGS) provides relevant and objective scientific information and data for public use in evaluation of the quantity, quality, and use of the Nation's water resources. National USGS water resource assessments include the National Streamflow Information Program (http://water.usgs.gov/nsip/), National Atmospheric Deposition Network (http://bqs.usgs.gov/acidrain/), the National Stream Quality Accounting Network (http://water.usgs.gov/nasqan/), and the National Water Quality Assessment Program (http://water.usgs.gov/nawqa). For a national overview of USGS water resources programs, please visit http://water.usgs.gov.

In addition to national assessments, the USGS also conducts hydrologic investigations and data collection in cooperation with numerous federal, state, and local agencies to address issues of national, regional, and local concern. Hydrologic investigations conducted by the USGS Tennessee Water Science Center address scientific questions pertaining to five general thematic topics:

1. Water Use and Availability,
2. Landforms and Ecology,
3. Watersheds and Land Use,
4. Occurrence, Fate, and Transport of Contaminants,
5. Floods and Droughts.

In support of these investigations, the USGS Tennessee Water Science Center records streamflow continuously at more than 100 gaging stations, makes instantaneous measurements of streamflow at numerous other locations as needed or requested, monitors ground-water levels statewide, and analyzes the physical, chemical, and biologic characteristics of surface and ground waters. In addition, the Water Science Center compiles annual water-use records for the State of Tennessee and collects a variety of data in support of National USGS baseline and other networks. More information pertaining to USGS activities in Tennessee can be accessed at http://tn.water.usgs.gov.

USGS Water Resources Information on the Internet. Real-time and historical streamflow, water-level, and water-quality data at sites operated by the USGS Tennessee Water Science Center can be accessed on-line at http://waterdata.usgs.gov/tn/nwis/nwis. Data can be retrieved by county, hydrologic unit code, or major river basin using drop-down menus on the web page. For specific information or questions about USGS streamflow data, contact Donna Flohr at (615)837-4730 or dfflohr@usgs.gov. Recent USGS Tennessee Water Science Center publications can be accessed by visiting http://tn.water.usgs.gov/pubpg.html. A searchable bibliographic database is also provided for locating other USGS reports and products addressing specific scientific topics.

5.2.C. U.S. Fish and Wildlife Service.

The mission of the U.S. Fish and Wildlife Service is working with partners to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people. Sustaining our nation's fish and wildlife resources is a task that can be accomplished only through the combined efforts of governments, businesses, and private citizens. The U.S. Fish and Wildlife Service (Service) works with state and federal agencies and tribal governments, helps corporate and private landowners conserve habitat, and cooperates with other nations to halt illegal wildlife trade. The Service also administers a Federal Aid Program that distributes funds annually to states for fish and wildlife restoration, boating access, hunter education, and related projects across America. The funds come from federal excise taxes on fishing, hunting, and boating equipment.

Endangered Species Program

Through the Endangered Species Program, the Service consults with other federal agencies concerning their program activities and their effects on endangered and threatened species. Other Service activities under the Endangered Species Program include the listing of rare species under the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended: 16 U.S.C. 1531 et seq.) and the recovery of listed species. Once listed, a species is afforded the full range of protections available under the ESA, including prohibitions on killing, harming, or otherwise taking a species. In some instances, species listing can be avoided by the development of Candidate Conservation Agreements, which may remove threats facing the candidate species, and funding efforts such as the Private Stewardship Grant Program.

Recovery is the process by which the decline of an endangered or threatened species is stopped and reversed, and threats to the species' survival are eliminated, so that long-term survival in nature can be ensured. The goal of the recovery process is to restore listed species to a point where they are secure and self-sustaining in the wild and can be removed from the endangered species list. Under the ESA, the Service and National Marine Fisheries Service were delegated the responsibility of carrying out the recovery program for all listed species.

In an effort to preclude the listing of rare species, the Service engages in proactive conservation efforts for unlisted species. The program covers not only formal candidates but also other rare species that are under threat. Early intervention preserves management options and minimizes the cost of recovery. The Service is working with multiple partners, including the United States Department of Agriculture, Natural Resources Conservation Service (NRCS), United States Geological Survey (USGS), Tennessee Valley Authority (TVA), Tennessee Wildlife Resources Agency (TWRA), Middle Nolichucky Watershed Association, Greene County Soil Conservation District, Conservation Fisheries, Inc. (CFI), and private landowners to preclude the need to list the chucky madtom (*Noturus* sp. cf. *elegans*), a candidate for Federal listing.

The USGS recently completed a distribution survey for the chucky madtom in Little Chucky Creek and its tributaries. Biologists from the Service, TVA, CFI, and TWRA annually collect this elusive species in hopes of acquiring brood stock for restoration efforts. The Service and several partners work to cultivate positive relationships with

private landowners and install best management practices aimed at protecting habitat and water quality in Little Chucky Creek. The Service also contributes funding to the Greene County Soil Conservation District's efforts to restore habitat for federally listed and candidate species by installing sediment control practices that improve water quality within the Nolichucky Watershed.

Utilizing funding provided through the Service's Landowner Incentives Program (LIP), TWRA and The Nature Conservancy (TNC) are working with private landowners to implement habitat restoration activities for rare species in the Nolichucky River Watershed. This relatively new program targets the restoration of suitable habitat for federally listed species as well as state listed rare species, many of which occur within this watershed.

In a partnership with TNC, TWRA, and Tennessee Department of Environment and Conservation (TDEC) Division of Natural Areas, the Service developed a State Conservation Agreement for Cave Dependent Species in Tennessee (SCA). The SCA targets unlisted but rare species and protects these species through a suite of proactive conservation agreements. The goal is to preclude the need to list these species under the ESA. This agreement covers middle and eastern Tennessee and will benefit water quality in many watersheds within the State.

The following federally endangered (E), threatened (T), and candidate (C) species occur in the Nolichucky River Watershed: chucky madtom (*Noturus crypticus*) (C); snail darter (*Percina tanasi*) (T); Appalachian elktoe (*Alasmidonta raveneliana*) (E); Cumberland bean (*Villosa trabalis*) (E); Cumberlandian combshell (*Epioblasma brevidens*) (E); fine-rayed pigtoe (*Fusconaia cuneolus*) (E); oyster mussel (*Epioblasma capsaeformis*) (E); pink mucket (*Lampsilis abrupta*) (E); rayed bean (*Villosa fabalis*) (C); rough rabbitsfoot (*Quadrula cylindrical strigillata*) (E); slabside pearlymussel (*Lexingtonia dolabelloides*) (C); spectaclecase (*Cumberlandia monodonta*) (C); gray bat (*Myotis grisescens*) (E); spruce-fir moss spider (*Microhexura montivaga*) (E); Blue Ridge goldenrod (*Solidago spithamaea*) (T); Roan Mountain bluet (*Hedyotis purpurea var. montana*) (E); rock gnome lichen (*Gymnoderma lineare*) (E); spreading avens (*Geum radiatum*) (E); and Virginia spiraea (*Spiraea virginiana*) (T). Federally designated critical habitat for the Cumberlandian combshell and oyster mussel exists in the Nolichucky River from River Mile 9.0, upstream from the Enka Dam in Cocke County, to the Susong Bridge at River Mile 14.0 in Greene County. For a complete listing of endangered and threatened species in Tennessee, please visit the Service's website at http://www.fws.gov/cookeville/

Partners for Fish and Wildlife Program

The U.S. Fish and Wildlife Service established the Partners for Fish and Wildlife Program to restore historic habitat types, which benefit native fishes and wildlife. The program adheres to the concept that restoring or enhancing habitats such as wetlands or other unique habitat types will substantially benefit federal trust species on private lands by providing food and cover or other essential needs. Federal trust species include threatened and endangered species, as well as migratory birds (e.g. waterfowl, wading birds, shorebirds, neotropical migratory songbirds).

Participation is voluntary and various types of projects are available. Projects include livestock exclusion fencing, alternate water supply construction, streambank stabilization, restoration of native vegetation, wetland restoration/enhancement, riparian zone reforestation, and restoration of in-stream aquatic habitats.

The Service is actively involved with the NRCS and private landowners in the Nolichucky River Watershed to restore and protect riparian habitats. Specific projects include the installation of livestock exclusion fencing, alternate water sources, heavy-use feeding pads, and hardened stream crossings.

HOW TO PARTICIPATE...

- Interested landowners contact a Partners for Fish and Wildlife Biologist to discuss the proposed project and establish a site visit.
- A visit to the site is then used to determine which activities the landowner desires and how those activities will enhance habitat for trust resources. Technical advice on proposed activities is provided by the Service, as appropriate.
- Proposed cost estimates are discussed by the Service and landowner.
- A detailed proposal which describes the proposed activities is developed by the Service biologist and the landowner. Funds are competitive, therefore the proposal is submitted to the Service's Ecosystem team for ranking and then to the Regional Office for funding.
- After funding is approved, the landowner and the Service co-sign a Wildlife Extension Agreement (minimum 10-year duration).
- Project installation begins.
- When the project is completed, the Service reimburses the landowner after receipts and other documentation are submitted according to the Wildlife Extension Agreement.

For more information regarding the Endangered Species and Partners for Fish and Wildlife programs, please contact the Cookeville Ecological Services Field Office at 931/528-6481 or visit their website at *http://www.fws.gov/cookeville/*

5.2.D. Tennessee Valley Authority (TVA). Tennessee Valley Authority's (TVA) goals for the 21st century are to generate prosperity for the Tennessee Valley by promoting economic development, supplying low-cost, reliable power, and supporting a thriving river system. TVA is committed to the sustainable development of the region and is engaged in a wide range of watershed protection activities to improve or protect water quality conditions.
TVA's watershed activities are conducted by 7 multidisciplinary Watershed Teams located throughout the Valley. These Watershed Teams help communities develop and implement protection and restoration activities in their local watersheds. In addition to water quality efforts, Watershed Teams carry out varied resource stewardship functions including management of TVA lands and shorelines, recreation, and resource management. These teams work in partnership with business, industry, government agencies, and community groups to manage, protect, and improve the quality of the Tennessee River and its tributaries. TVA also operates a comprehensive monitoring program to provide real-time information to the Watershed Teams and other entities about the conditions of these resources.

The following is a summary of TVA's resource stewardship and monitoring activities in the Nolichucky River watershed.

Monitoring

Stream Monitoring

Bacteriological Monitoring - Recreation is one of TVA's major objectives of the integrated river resource management system. TVA develops, maintains, and promotes public use of several recreational sites. Increased public knowledge about bacterial contamination has heightened the interest in bacteriological levels in recreational waters by both TVA and our stakeholders. Each summer, TVA tests about 250 swimming areas and informal water contact recreational sites throughout the Tennessee Valley for *Escherichia coli* (*E. coli*) bacteria. These sites include those operated by TVA and many operated by other agencies. The site list is reexamined annually by the appropriate watershed teams and other TVA organizations to ensure the most heavily used sites are monitored. Bacteriological water sampling is conducted between Memorial Day and Labor Day when people are most likely to be recreating. Data from this sampling effort is shared with states agencies.

More information about bacteriological monitoring can be obtained by visiting TVA's website at http://www.tva.gov/environment/ecohealth/ or by writing Kristy Gottfried at kgottfri@tva.gov.

Fish Flesh Toxic Contaminants - State agencies are responsible for advising the public of health risks from eating contaminated fish. TVA assists the states by collecting fish from TVA reservoirs and major tributary streams and checking the tissue for metals, pesticides, PCBs, and other chemicals that could affect human health.

More information on fish tissue monitoring can be obtained by visiting TVA's website at http://www.tva.gov/environment/ecohealth/ or by writing Jason Yarbrough at jyarbrough@tva.gov.

Bioassessment

Conditions of water resources in streams are measured using three independent methods; Index of Biotic Integrity (IBI), number of mayfly, stonefly, and caddisfly taxa (EPT), and Habitat Assessment. Not all of these tools are used at each stream sample site.

Stream assessments support TVA's Watershed Operations that consists of seven watershed teams charged with protecting and restoring water quality in the Tennessee Valley. TVA's objective is to characterize the quality of water resources within a watershed, which is referenced by its 11-digit Hydrologic Unit Code (HUC). Assessments are used to prioritize HUCs for stream restoration projects, monitor stream restoration project success and measure TVA's Resource Stewardship's environmental performance.

Sites are typically located in the lower end of sub-watersheds and at intervals on the mainstem to integrate the effects of land use. Eight hundred and sixty-nine stream stations are sampled to assess ecological condition of 547 eleven digit HUCs of the Tennessee Valley. Sites are typically sampled every five years to keep a current picture of watershed condition.

IBI - The index of biotic integrity (IBI) assesses the quality of water resources in flowing water by examining a stream's fish assemblage. Fish are useful in determining long-term (several years) effects and broad habitat conditions because they are relatively long-lived and mobile. Twelve metrics address species richness and composition, trophic structure (structure of the food chain), fish abundance, and fish health. Each metric reflects the condition of one aspect of the fish assemblage and is scored against reference streams in the region known to be of very high quality. Potential scores for each of the twelve metrics are 1-poor, 3-intermediate, or 5-the best to be expected. Scores for the 12 metrics are summed to produce the IBI for the site.

EPT - The number and types of aquatic insects, like fish, are indicative of the general quality of the environment in which they live. Unlike fish, aquatic insects are useful in determining short-term and localized impacts because they are short-lived and have limited mobility. The method TVA uses involves only qualitative sampling and field identification of (Ephemeroptera (mayflies), (Plecoptera, (stoneflies), and (Trichoptera (caddisflies) to the family taxonomic level. The score for each site is simply the number of EPT families. Higher EPT scores are indicative of high quality streams because these insect larvae are intolerant of poor water quality.

Habitat Assessment - The quality and quantity of habitat (physical structure) directly affect aquatic communities. Habitat assessments are done at most stream sampling sites to help interpret IBI and EPT results. If habitat quality at a site is similar to that found at a good reference site, any impacts identified by IBI and EPT scores can reasonably be attributed to water quality problems. However, if habitat at the sample site differs considerably from that at a reference site, lower than expected IBI and EPT scores might be due to degraded habitat rather than water quality impacts.

The habitat assessment method used by TVA (modified EPA protocol) compares observed instream, channel, and bank characteristics at a sample site to those expected at a similar high-quality stream in the region. Each of the stream attributes listed below is given a score of 1 (poorest condition) to 4 (best condition). The habitat score for the

sample site is simply the sum of these attributes. Scores can range from a low of 10 to a high of 40.

1. Instream cover (fish)
2. Epifaunal substrate
3. Embeddedness
4. Channel Alteration
5. Sediment Deposition
6. Frequency of Riffle
7. Channel Flow Status
8. Bank vegetation protection - Left bank and right bank, separately
9. Bank stability - Left bank and right bank, separately
10. Riparian vegetation zone width - Left bank and right bank, separately

Details about Stream Bioassessment (sites and scores) can be obtained by writing Charles Saylor at Tennessee Valley Authority, PO Box 920, Ridge Way Road, Norris, TN 37828 or calling him at 865-632-1779. Email him at cfsaylor@tva.gov.

Outreach Efforts

Nolichucky River 06010108

Greene County, TN- Tennessee Growth Readiness Workshop Series
The Tennessee Growth Readiness Initiative (TGRI) is an educational program that focuses on teaching local officials, and other decision makers about the sources and impacts of nonpoint source pollution, how different land uses affect water quality, and what communities can do to protect water quality.

Conservation Day on Little Chucky Creek
The program provides children with a hands-on experience and connection to the outdoors. It is our goal that this experience will foster a desire to help protect streams and that the students will become involved in stream conservation as the future adults of their community. The students spend time at four stations: aquatic insects, fish community, water quality, and watershed education. Each station focuses on the importance of a healthy stream both for the ecosystem and human health.

Details about Outreach Activities can be obtained by writing the Holston-Cherokee-Douglas Watershed Team, 3726 E. Morristown Blvd., Morristown, TN, 37813 or calling Dana Ball at 423-585-2128 or emailing Dana at dmball@tva.gov.

5.2.E. USDA – Forest Service. The USDA Forest Service manages approximately 645,000-acres in Tennessee (Cherokee National Forest (CNF)). This ownership includes about 91,000 acres within the Nolichucky River Watershed in Tennessee. The general mission of the Forest Service is to achieve an ecological and sustainable, multiple use approach to land management that meets the diverse needs of people. In order to achieve this mission, a watershed-based approach to ecosystem management has been adopted.

A variety of management activities occur within the Nolichucky River watershed on national forest lands. Some of these include:

Ecosystem Management and Restoration. Prescribed burning and vegetation treatments are used to meet a variety of ecosystem-based management objectives. Periodically, prescribed fire is used to reduce hazardous fuel loads and improve wildlife habitat conditions within the watershed on CNF lands. Thinning and regeneration cuts are also used on selected areas where timber harvest is necessary to achieve restoration or wildlife habitat objectives. The southern pine beetle has impacted pine forest types within this watershed in the recent past. The Hemlock Wooly Adelgid is currently infesting hemlock trees in this watershed and other areas in Tennessee. Efforts are currently underway to provide for the conservation of the hemlock through a variety of means to suppress the Hemlock Wooly Adelgid on a local basis.

Recreation Management. A variety of recreation uses occur on National Forest lands within this watershed. Hiking, whitewater boating, fishing, camping, horse use, scenic viewing and hunting are some of the many uses. Developed and dispersed recreation opportunities are provided.

Inventory and Monitoring. There are 47 perennial streams capable of supporting fish and approximately double that number of perennial and intermittent streams that support other aquatic organisms in the Nolichucky River Watershed on National Forest system lands. Three-pass electro-fishing and instream habitat surveys are conducted on some of these streams. Since 1997, thirty-six surveys have been conducted in the Nolichucky River Watershed. A total of 42 species of fish have been documented in these streams. One federally listed species, Appalachian elktoe mussel, is documented on National Forest lands in this watershed.

The instream habitat surveys document physical characteristics in the stream. Degraded conditions are identified and corrected as needed. The most frequently documented degradation is a lack of large wood in the stream channel. Log structures have been installed to alleviate a portion of this problem.

Other Management Activities. A variety of additional management activities occur within the Nolichucky River watershed on national forest lands. These include:

- Collaborative planning with a variety of other federal, state and local agencies and private individuals to identify and prioritize watershed improvement needs on public and private lands
- Watershed improvements including road and trail decommissioning to reduce soil loss and sediment yield
- Environmental education programs with school, scouting and other groups

Further information about the Cherokee National Forest can be found on its homepage at http://www.fs.fed.us/r8/cherokee/.

5.3. STATE PARTNERSHIPS.

5.3.A. TDEC Division of Water Supply. The Source Water Protection Program, authorized by the 1996 Amendments to the Safe Drinking Water Act, outline a comprehensive plan to achieve maximum public health protection. According to the plan, it is essential that every community take these six steps:

1) Delineate the drinking water source protection area
2) Inventory known and potential sources of contamination within these areas
3) Determine the susceptibility of the water supply system to these contaminants
4) Notify and involve the public about threats identified in the contaminant source inventory and what they mean to their public water system
5) Implement management measures to prevent, reduce or eliminate threats
6) Develop contingency planning strategies to deal with water supply contamination or service interruption emergencies (including natural disaster or terrorist activities).

Source water protection has a simple objective: to prevent the pollution of the lakes, rivers, streams, and ground water (wells and springs) that serve as sources of drinking water before they become contaminated. This objective requires locating and addressing potential sources of contamination to these water supplies. There is a growing recognition that effective drinking water system management includes addressing the quality and protection of the water sources.

Source Water Protection has a significant link with the Watershed Management Program goals, objectives and management strategies. Watershed Management looks at the health of the watershed as a whole in areas of discharge permitting, monitoring and protection. That same protection is important to protecting drinking water as well. Communication and coordination with a multitude of agencies is the most critical factor in the success of both Watershed Management and Source Water Protection.

Watershed management plays a role in the protection of both ground water and surface water systems. Watershed Management is particularly important in areas with karst (limestone characterized by solution features such as caves and sinkholes as well as disappearing streams and springs), since the differentiation between ground water and surface water is sometimes nearly impossible. What is surface water can become ground water in the distance of a few feet and vice versa.

Source water protection is not a new concept, but an expansion of existing wellhead protection measures for public water systems relying on ground water to now include surface water. This approach became a national priority, backed by federal funding, when the Safe Drinking Water Act amendments (SDWA) of 1996 were enacted. Under this Act, every public drinking water system in the country is scheduled to receive an assessment of both the sources of potential contamination to its water source of the threat these sources may pose by the year 2003 (extensions were available until 2004). The assessments are intended to enhance the protection of drinking water supplies within existing programs at the federal, state and local levels. Source water assessments were mandated and funded by Congress. Source water protection will be

left up to the individual states and local governments without additional authority from Congress for that progression.

Tennessee's Wellhead Protection Rules were revised as of October 29, 2005 to include requirements for similar protection for public water systems using surface water sources under the heading of Drinking Water Source Protection Rule (1200-5-1-.34) in addition to the previous requirements for wellhead protection for public water systems using ground water sources. The rule addresses surface or ground water withdrawals in the vicinity of public water sources as well as potential contaminant sources threatening public water sources to reflect the amended prohibitions in the 2002 Amendments to the Tennessee Safe Drinking Water Act, TCA 68-221-771. There are additional reporting requirements of potential contaminant source inventories and emergency response for the public water systems as well. The Division of Water Supply will be able to use the Drinking Water Source Protection Rule to work in complimentary fashion with the Division of Water Pollution Control and other Departmental agencies in activities to protect public water sources.

As a part of the Source Water Assessment Program, public water systems are evaluated for their susceptibility to contamination. These individual source water assessments with susceptibility analyses are available to the public at: http://www.state.tn.us/environment/dws as well as other information regarding the Source Water Assessment Program and public water systems.

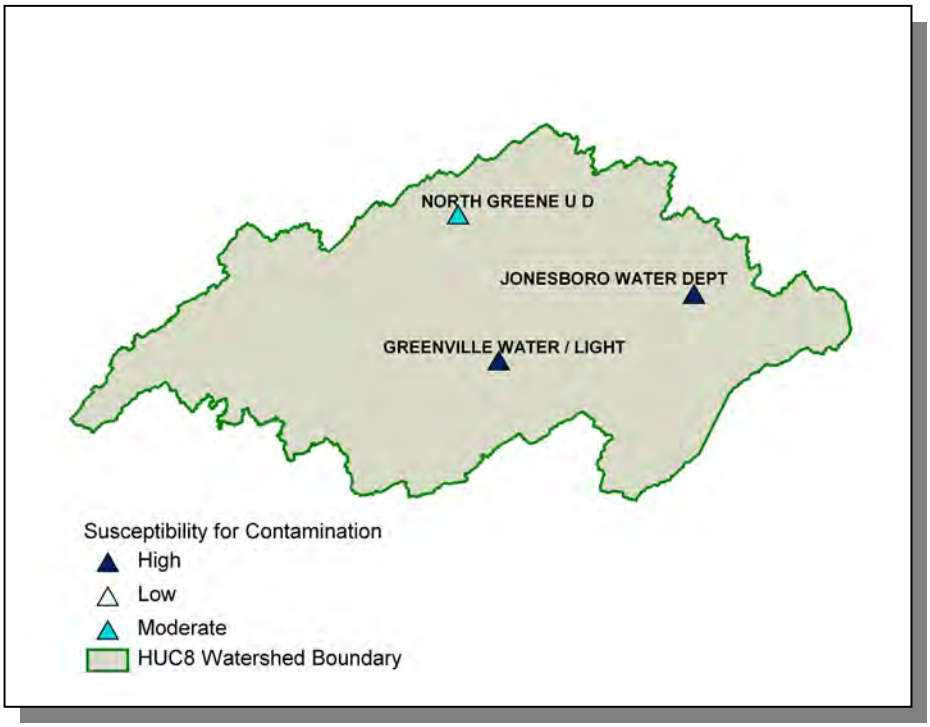


Figure 5-2. Public Water Systems Susceptible to Contamination in the Tennessee Portion of the Nolichucky River Watershed.

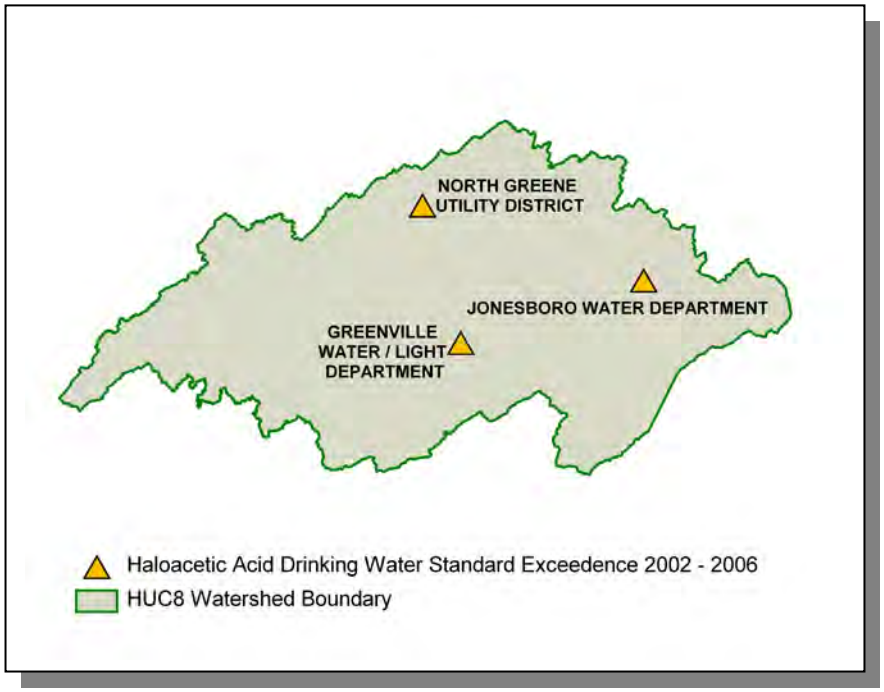


Figure 5-3. Exceedences of the Haloacetic Acid Drinking Water Standard in the Tennessee Portion of the Nolichucky River Watershed.

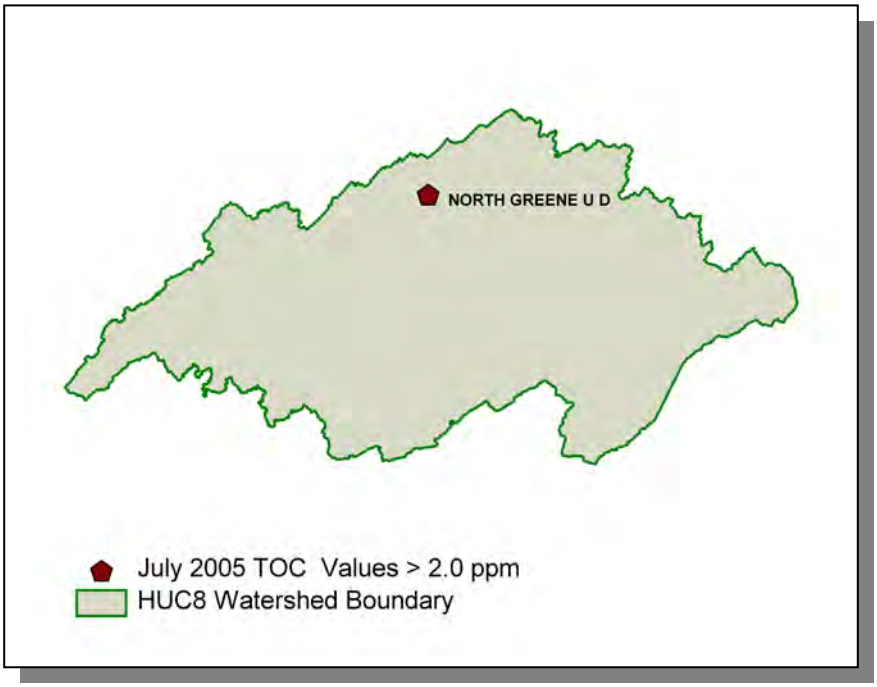


Figure 5-4. July 2005 Raw Water Total Organic Carbon (TOC) Analysis in the Tennessee Portion of the Nolichucky River Watershed.

For further discussion on ground water issues in Tennessee, the reader is referred to the Ground Water Section of the 305(b) Water Quality Report at:

http://state.tn.us/environment/dws/pdf/2006gw305b.pdf

5.3.B. TDEC Clean Water State Revolving Fund Program. The Division of Water Pollution Control and the Division of Water Supply jointly administer the state's Clean Water State Revolving Fund Program. Amendment of the Federal Clean Water Act in 1987 created the Clean Water State Revolving Fund (SRF) Program to provide low-interest loans to cities, counties, and utility districts for the planning, design, and construction of wastewater facilities. The U.S. Environmental Protection Agency awards annual capitalization grants to fund the program and the State of Tennessee provides a twenty-percent funding match. TDEC has awarded loans totaling over $675 million since the creation of the SRF Program. SRF loan repayments are returned to the program and used to fund future SRF loans.

SRF loans are available for planning, design, and construction of wastewater facilities, or any combination thereof. Eligible projects include new construction or upgrading/expansion of existing facilities, including wastewater treatment plants, pump stations, force mains, collector sewers, interceptors, elimination of combined sewer overflows, and nonpoint source pollution remedies.

SRF loan applicants must pledge security for loan repayment, agree to adjust user rates as needed to cover debt service and fund depreciation, and maintain financial records that follow governmental accounting standards. SRF loan interest rates range from zero percent to market rate, depending on the community's per-capita income, taxable sales, and taxable property values. Most SRF loan recipients qualify for interest rates between 2 and 4 percent. Interest rates are fixed for the life of the term of the loan. The maximum loan term is 20 years or the design life of the proposed wastewater facility - whichever is shorter.

The SRF Program maintains a Priority Ranking System and Priority List for funding the planning, design, and construction of wastewater facilities. The Priority Ranking List forms the basis for funding eligibility determinations and allocation of Clean Water SRF loans. Each project's priority rank is generated from specific priority ranking criteria and the proposed project is then placed on the Project Priority List. Only projects identified on the Project Priority List may be eligible for SRF loans. The process of being placed on the Project Priority List must be initiated by a written request from the potential SRF loan recipient or their engineering consultant. SRF loans are awarded to the highest priority projects that have met SRF technical, financial, and administrative requirements and are ready to proceed.

Since SRF loans include federal funds, each project requires development of a Facilities Plan, an environmental review, opportunities for minority and women business participation, a State-approved sewer use ordinance and Plan of Operation, and interim construction inspections.

For further information about Tennessee's Clean Water SRF Loan Program, contact the Clean Water SRF Loan Program by telephone at (615) 532-0445 or visit their Web site at http://tennessee.gov/environment/srf.

5.3.C. Tennessee Department of Agriculture. The Tennessee Department of Agriculture's Water Resources Section administers the federal Section 319 Nonpoint Source Program and the Agricultural Resources Conservation Fund Program. Both of these are grant programs which award funds to various agencies, non-profit organizations, and universities that undertake projects to improve the quality of Tennessee's waters and/or educate citizens about the many problems and solutions to water pollution. Both programs fund projects associated with what is commonly known as "nonpoint source pollution."

The Tennessee Department of Agriculture's Nonpoint Source Program (TDA-NPS) has the responsibility for management of the federal Nonpoint Source Program, funded by the US Environmental Protection Agency through the authority of Section 319 of the Clean Water Act. This program was created in 1987 as part of the reauthorization of the Clean Water Act, and it established funding for states, territories and Indian tribes to address NPS pollution. Nonpoint source funding is used for installing Best Management Practices (BMPs) to stop known sources of NPS pollution, training, education, demonstrations, and water quality monitoring. The TDA-NPS Program is a non-regulatory program, promoting voluntary, incentive-based solutions to NPS problems. The TDA-NPS Program funds three types of programs:

- BMP Implementation Projects. These projects aid in the improvement of an impaired waterbody, or prevent a non-impaired water from becoming listed on the 303(d) List.

- Monitoring Projects. Up to 20% of the available grant funds are used to assist the water quality monitoring efforts in Tennessee streams, both in the state's 5-year watershed monitoring program, and also in performing before-and-after BMP installation, so that water quality improvements can be verified. Some monitoring in the Nolichucky River Watershed was funded under an agreement with the Tennessee Department of Agriculture, Nonpoint Source Program (U.S. Environmental Protection Agency Assistance Agreement C99944674-04-0 and C99944674-05-0).

- Educational Projects. The intent of educational projects funded through TDA-NPS is to raise the awareness of landowners and other citizens about practical actions that can be taken to eliminate nonpoint sources of pollution to the waters of Tennessee.

The Tennessee Department of Agriculture Agricultural Resources Conservation Fund Program (TDA-ARCF) provides cost-share assistance to landowners across Tennessee to install BMPs that eliminate agricultural nonpoint source pollution. This assistance is provided through Soil Conservation Districts, Resource Conservation and Development Districts, Watershed Districts, universities, and other groups. Additionally, a portion of the TDA-ARCF is used to implement information and education projects statewide, with the focus on landowners, producers, and managers of Tennessee farms and forests.

Participating contractors in the program are encouraged to develop a watershed emphasis for their individual areas of responsibility, focusing on waters listed on the Tennessee 303(d) List as being impaired by agriculture. Current guidelines for the

TDA-ARCF are available. Landowners can receive up to 75% of the cost of the BMP as a reimbursement.

Since January of 1999, the Department of Agriculture and the Department of Environment and Conservation have had a Memorandum of Agreement whereby complaints received by TDEC concerning agriculture or silviculture projects would be forwarded to TDA for investigation and possible correction. Should TDA be unable to obtain correction, they would assist TDEC in the enforcement against the violator. More information forestry BMPs is available at:

http://www.state.tn.us/agriculture/forestry/bmpmanual.html

The complaint form is available at:

http://www.state.tn.us/environment/wpc/forms/wqlogging_cn1274.doc

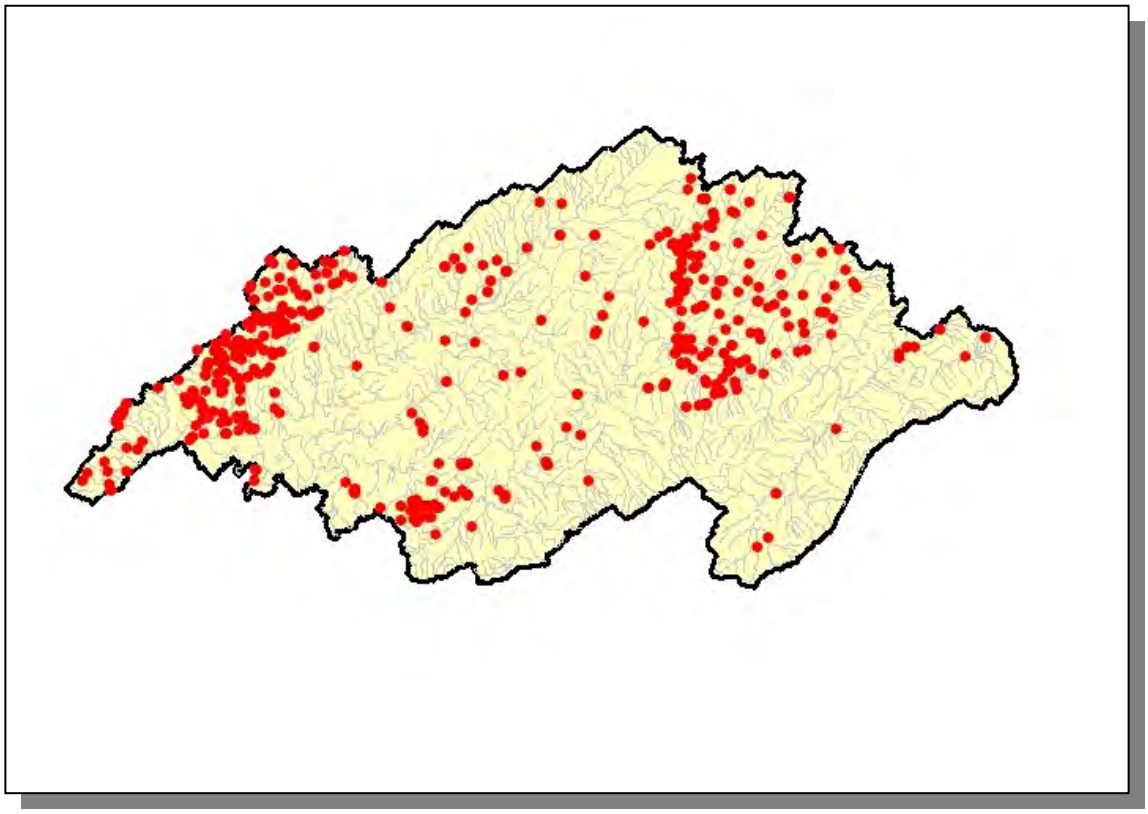


Figure 5-5. Location of BMPs installed from 2002 through 2006 in the Tennessee Portion of the Nolichucky River Watershed with Financial Assistance from the Tennessee Department of Agriculture's Nonpoint Source and Agricultural Resources Conservation Fund Grant Programs. *More information is provided in Appendix V.*

5.3.D. Tennessee Wildlife Resources Agency. The Tennessee Wildlife Resources Agency (TWRA) conducts a variety of activities related to watershed conservation and management. Fish management activities include documentation of fish and aquatic life through stream sampling and stocking of both warm water and cold-water sportfish. Fish data are managed in the Geographic Information System (GIS) project called Tennessee Aquatic Database System (TADS). TWRA nongame and endangered species projects include restoration of special status fish, aquatic life, and riparian wildlife. The Agency conducts a variety of freshwater mussel management, conservation, and restoration projects including the propagation and reintroduction of species once common in Tennessee streams. TWRA has been involved in riparian conservation projects since 1991 in partnership with state and federal agencies and conservation groups.

The Tennessee Aquatic Database System (TADS)

The Tennessee Aquatic Database System (TADS) originated in the mid-1980's as a geographically referenced fisheries database maintained on ESRI's GIS Arc/Info software. It consists of mapping coverages of streams, rivers and reservoirs along with relatable fisheries data files. These database files include stream and river fish distributions, sample site data, and Index of Biotic Integrity (IBI) data. The fish inventory data file contains over 15,000 records of fish occurrences from over 3,600 sample sites across the state. Fish data is referenced by river reach and a point coverage generated by latitude and longitude. Physical and chemical data and habitat evaluations from most of the sample sites have been entered into a database.

TWRA Fisheries stream survey data were consolidated, updated and entered into a Microsoft Access database to create the Tennessee Aquatic Database System 07 (TADS07), an updated version of the TADS. TADS07 contains fisheries stream survey data from 1987 to 2005.

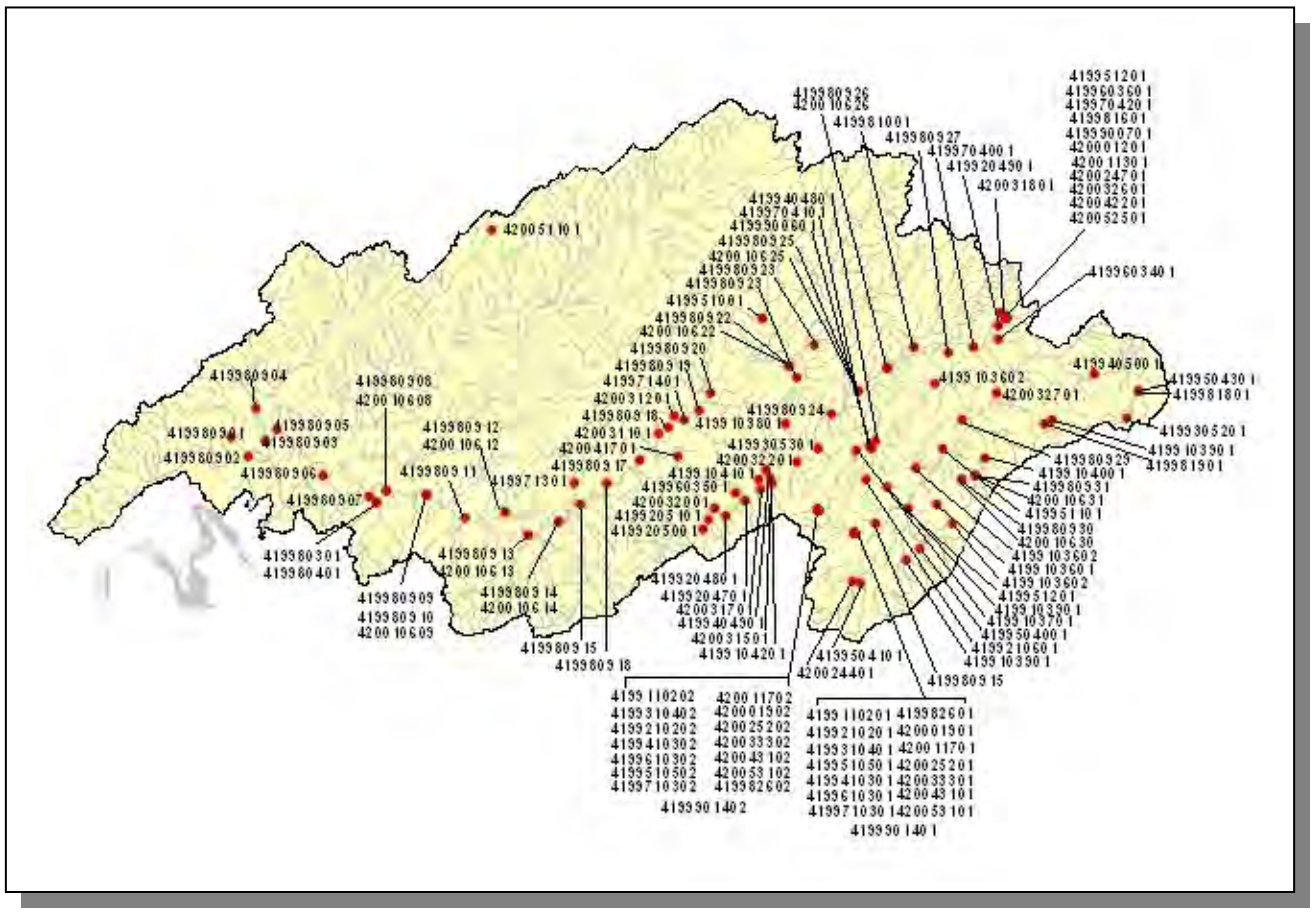


Figure 5-6. Location of TWRA TADS Sampling Sites in the Tennessee Portion of the Nolichucky River Watershed from 1987-2005. *More information is provided in Appendix V.*

Tennessee State Wildlife Action Plan (SWAP)

The Tennessee State Wildlife Action Plan (SWAP), formerly known as the Comprehensive Wildlife Conservation Strategy (CWCS), was developed by the Tennessee Wildlife Resources Agency with assistance from The Nature Conservancy in 2005. Congress mandated that each state and territory in the United States develop a SWAP as a requirement for continued receipt of federal State Wildlife Grant funding. These plans require the completion of 8 key elements of wildlife planning: 1) a list of animal species of greatest conservation need, 2) information about the distribution and abundance of species targets, 3) locations and relative conditions of key habitats, 4) descriptions of problems affecting target species and their habitats, 5) descriptions of conservation actions and priorities for conserving target species and habitats, 6) details for monitoring target species, conservation actions, and adaptive management, 7) discussion of plans to review the SWAP at specific intervals, and 8) information about coordination and implementation of the SWAP with major stakeholders. In Tennessee, the SWAP was integrated into a spatial model using Geographic Information Systems (GIS) and other database technology. Priority aquatic, terrestrial, and subterranean areas for conservation were identified across the state. Priorities were determined in the

GIS model based upon relative differences in species rarity, population viability, and potential mobility of species across habitat units.

Priority problems affecting species and needed conservation actions are detailed across each region of the state. For complete information about the Tennessee SWAP, please visit: http://www.state.tn.us/twra/cwcs/cwcsindex.html to read or download the full report.

For information on these and other water resources related activities, please contact your Regional TWRA office at the following phone numbers:

West Tennessee (Region I)	1-800-372-3928
Middle Tennessee (Region II)	1-800-624-7406
Cumberland Plateau (Region III)	1-800-262-6704
East Tennessee (Region IV)	1-800-332-0900

TDD services are available at 615-781-6691.
TWRA's website is http://www.state.tn.us/twra.

5.3.E. North Carolina Division of Water Quality

Basinwide Planning in North Carolina

The North Carolina Department of Environment and Natural Resources (NCDENR), Division of Water Quality's (DWQ) Planning Section prepare the basinwide water quality plans for each of the seventeen major river basins across the state. Basinwide planning is a watershed-based approach to restoring and protecting North Carolina's surface waters. Preparation of a basinwide plan is a five-year process and includes:

Phase I: Data collection and identification of goals
Phase II: Data analysis and coordination of stakeholders to identify and prioritize water quality issues in that river basin
Phase III: Preparation of the basinwide water quality plan (includes public review and comments), issuance of NPDES permits, and implementation of recommendations

While these plans are prepared by DWQ, their implementation and the protection of water quality entail the coordinated efforts of many agencies, local governments, and stakeholder groups across the state. The first cycle of plans was completed in 1998.

The goals of basinwide planning are to:

- Identify water quality problems and restore full use to impaired waters.
- Identify and protect high value resource waters.
- Protect unimpaired waters while allowing reasonable economic growth.

DWQ accomplishes these goals through the following objectives:

- Collaborate with other agencies to develop appropriate management strategies.
- Assure equitable distribution of waste assimilative capacity.
- Evaluate cumulative effects of pollution.
- Improve public awareness and involvement.
- Regulate point and nonpoint sources of pollution where other approaches are unsuccessful.

French Broad RiverBasin (including the Nolichucky River) in North Carolina

The basin is composed of three major drainage areas: the Upper French Broad River (HUC 06010105), the Pigeon River (HUC 06010106), and the **Nolichucky River (HUC 06010108)**. All three rivers individually flow northwest into Tennessee.

Specific watershed information in North Carolina can be found in the French Broad River Basinwide Water Quality Plan (April 2005). The plan is available on the DWQ Web site (www.ncwaterquality.org/basinwide/index.htm).

Water Quality Stressors and Sources in the French Broad River Basin

Many of the stressors related to water quality impairment in the basin include habitat degradation, fecal coliform bacteria, and altered watershed hydrology (i.e., impervious surfaces, stormwater runoff). Water quality stressors are identified when impacts have been noted to biological (fish and benthic) communities or water quality standards have been violated. In many cases, identifying stressors is challenging because direct measurements of the stressor may be difficult or prohibitively expensive. DWQ staff use field observations from sample sites, special studies, and data from ambient monitoring stations to identify stressors. It is important to identify stressors and potential sources of stressors so that water quality programs can target limited resources to address these issues.

Sources of stressors are most often associated with land use in a watershed, as well as the quality and quantity of any treated wastewater that may be entering a stream. Sources of stressors most often come from a watershed where the hydrology is altered enough to allow the stressor to be easily delivered to a stream during a rain event along with unnaturally large amounts of water. DWQ identifies the source of a stressor as specifically as possible depending on the amount of information available in a watershed. Most often, the source is based on the predominant land use in a watershed. Stressors sources identified in the French Broad River basin during this assessment period include urban or impervious surface areas, construction sites, road building, agriculture, and forestry. Point source discharges are also considered a water quality stressor source. More information about water quality stressors and sources can be found in the French Broad River Basinwide Water Quality Plan. The plan is available on the DWQ Web site (www.ncwaterquality.org/basinwide/index.htm).

Contact Information:

Michelle Raquet
Environmental Specialist
NCDENR DWQ
Planning Section – Basinwide Planning Unit
1617 Mail Service Center
Raleigh, NC 27699
Phone: 919-733-5083 ext. 367
Email: michelle.raquet@ncmail.net

5.4. LOCAL INITIATIVES.

5.4.A. Greene County Soil Conservation District

Greene County Soil Conservation District is a non-profit 501-(3)(c) corporation organized under the laws of the state of Tennessee for the purpose of assisting members of the county manage and improve natural resources (soil, water, air, plants, and animals) for the betterment of all citizens of the county. The Conservation District is directed by a five-member board that meets once each month to review projects and technical assistance request from county citizens. All project funding and project payments are approved by the board.

Greene County, located in East Tennessee, in the Nolichucky River Watershed, has a total of 56 named creeks that are assessed as impaired on the 2006 303(d) list of impaired streams.

Over the last four years a concerted effort has been made to reduce this number by installing agricultural Best Management Practices (BMPs) such as exclusion fencing, heavy use areas, and livestock watering systems. Approximately $500,000 of cost share funds have been obtained from the Tennessee Department of Agriculture (TDA) ARCF/303(d) fund, U.S. Fish and Wildlife Partners fund, Tennessee Wildlife Resources Agency (TWRA) funds, and Tennessee Valley Authority (TVA) partners fund. A considerable amount of BMPs have been installed, much of it on a small watershed basis, but none of the streams have been removed from the 303(d) list.

During calendar 2006 a small grant was obtained from the TDA 319 program to develop a five-year program for a small watershed. Our hope is that we can concentrate enough effort and funding in this one watershed to be able to see significant improvements within the five-year program.

Our initial effort was to find other agencies that would participate with the District for evaluation, design, construction, and monitoring. To that end, we met with the following groups: Biology and Technology Department of Tusculum College, 4-H and Future Farmers of America (FFA) programs in the county, and other agencies that may have input to the program. Those agencies included: USFWS, TVA, and TWRA regarding identity of any Threatened & Endangered species in the watershed. We also discussed IBI information and Rule of Thumb guidance with TDEC and TVA.

As a result of these discussions, we were able to enter into agreements with USFWS, TVA and TWRA for their assistance in identifying Threatened & Endangered species and review of some of the BMPs. Also, Natural Resources Conservation Service (NRCS) engineering and technical staff will be assisting with implementing watershed work.

The major problem in the watershed was determined to be flash flooding resulting from runoff of impervious surfaces at the shopping areas along highway 11E and the campus of Tusculum College. The first year of activity in the watershed is planned to work on stormwater retention and general runoff control of parking surfaces and building roofs. It is believed that these flood control measures will have the largest impact on flash flooding in the watershed.

The District held a stakeholders meeting with landowners, Tusculum College Administration and Faculty and city/county officials to layout plans for the development of the watershed plan and how it will be implemented.

Students at Tusculum College were invited to be involved in surveying College Creek for watershed problems. Four classes, a total of 120 students and 15 faculty members, were provided one hour of classroom instruction in methods of surveying creeks for problems associated with creek impairment. The Tusculum Students participated in the College Creek survey on Tusculum Students Honor Memory of 'Nettie' With Volunteer Service Day. Nettie Day is in Honor of Nettie McCormick, wife of Cyrus McCormick, who was an early benefactor of the college. The entire reach of the creek was walked, damaged areas photographed, GPS readings taken, and stream width and bank depth were recorded at each damaged area.

A second presentation was made to the stakeholders of the watershed at a meeting at Tusculum College to present the findings of the creek survey. The materials were presented to approximately 20 people including College representatives, residents of the watershed, Town of Tusculum Government, NRCS and a local civil engineering firm. Questions were asked and answered and a significant buy-in was expressed by those in attendance. In fact a landowner adjoining the creek asked for the engineering company helping us evaluate detention areas along the creek to design a rainwater collection cistern and rain garden combination for his site.

The resultant 319 Grant Proposal submitted for College Creek will include the following four major BMP categories.

1. Stormwater detention areas (3 in 2007 with additional ones in the later years).
2. Created wetlands (initially on the college campus but planned for other locations as well).
3. Design of a rainwater gathering and storage system at Tusculum College for athletic field irrigation (to be installed in 2008, 2009 and 2010). This concept of gathering rain water for non-consumption uses will be encouraged throughout the watershed and included in each year of the program.
4. Approximately 6 miles of streambank restoration (mainly bioengineered but some rock re-enforcement) – some in each year of the five-year program.
5. Livestock exclusion fencing and alternate watering systems (some in each year of the five year program).

The activities of the District concerning watershed work in Greene County have received considerable publicity through the local newspaper and TV stations. The awareness of the community concerning impaired streams has continued to increase with each project completed. It is anticipated that some money may start to become available from local foundations in the coming years.

During 2007 two additional 319 watershed plans will be written encompassing approximately 17,000 acres of the county and the Town of Greeneville. The College Creek and the two additional watersheds drain approximately 2/3 of the stormwater from Greeneville (approximately 20,000 acres) and causes considerable damage from street contamination and flood scouring of stream banks. The goal is to restore all three watersheds by 2015.

For more information about the Greene County Soil Conservation District project please contact:

Paul Hayden, Soil Conservationist
Greene County Soil Conservation District
214 North College Street, Suite 200
Greeneville, Tennessee 37743
Phone: Office 423-638-4771 ext 3 or email at paul.hayden@tn.nacdnet.net

5.4.B. The Upper Nolichucky Watershed Alliance The mission of the Upper Nolichucky Watershed Alliance (UNWA) is to protect and enhance the watershed by monitoring conditions, educating stakeholders, and building cooperative partnerships that enable us to implement progressive, innovative solutions to water quality issues. Our vision is healthy and biologically diverse water resources, supported by both public and private stakeholders who cooperate to protect and enhance the watershed.

UNWA is a non-profit volunteer-driven organization that monitors creeks and streams as well as portions of the Nolichucky River in Washington and Unicoi counties in east Tennessee. The core of our alliance is a group of dedicated citizen monitors from Greene, Sullivan, Washington, and Unicoi counties who are dedicated to preserving and enhancing the ecological health of the Nolichucky River and its tributaries.

The heart of UNWA's work is the water quality monitoring completed by a diverse corps of citizen volunteers whose work is crucial to UNWA's success. Volunteer monitors are trained by environmental professionals to use the acclaimed Virginia Save Our Streams sampling protocol. UNWA volunteer monitors also receive annual Quality Assurance/Quality Control certification at their field sites. The organization conducts biological and chemical field monitoring studies to get a more detailed understanding of the status of the watershed. Education and outreach efforts include sponsorship of public meetings and special events, training workshops, water quality education programs, and stream clean-ups.

UNWA was incorporated as a non-profit organization by the State of Tennessee in 2001. UNWA relies on the support of its members and generous individuals and corporations to provide critical manpower and funding that supports our monitoring and education efforts.

UNWA successes to date include:

- Annual stream cleanup of Little Limestone Creek in Jonesborough
- Quarterly biological monitoring of selected creeks and streams with data published on the SAMAB web site
- Water chemistry studies at selected sites
- Participation in the "Water Resource Benefit Study for Unicoi County" performed by Equinox Environmental of Asheville, NC
- Conduct visual stream assessments of impaired creeks and streams in the watershed to establish protection priorities
- Collaborative partnerships with agencies including The Town of Jonesborough, Tennessee Department of Environment & Conservation's Division of Water Pollution

Control, Tennessee Izaak Walton League, Tennessee Wildlife Resources Agency, local chambers of commerce, the Environmental Club of David Crockett High School, educational organizations like the Cedar Creek Learning Center and Buffalo Mountain Camp, and several local outdoor adventure businesses

For more information contact:

UNWA
P.O. Box 56
Erwin, TN 37650

Email: UNWAmail@aol.com

5.4.C. The Middle Nolichucky Watershed Alliance. The Middle Nolichucky Watershed Alliance (MNWA) is a nonprofit organization dedicated to improving the water quality of the Nolichucky River through increasing public awareness about the sources of water pollution and the importance of each community member in protecting streams, rivers, and lakes. The Middle Nolichucky Watershed Alliance (MNWA) became a non-profit, member corporation with 501(c)(3) tax-exempt status from the Internal Revenue Service in May 2002. The alliance is comprised of citizens interested in their community, local agency personnel, as well as state and federal representatives, which provide technical support for projects.

Throughout the year, the MNWA sponsors a variety of events to increase public awareness regarding water quality in Greene County, such as educational programs, stream assessments, stream clean-ups, sharing information through local media, and obtaining grants and other resources to address nonpoint pollution problems. The MNWA is funded by grants and donations. In addition, we partner with other local groups to support community efforts for watershed improvement.

MNWA successes to date:

- Sponsored the TN Growth Readiness Workshop Series for Greene County and its municipalities
- Assisted in the development of the EPA 319 Watershed Action Plan for Little Chucky Creek
- Supported Town of Greeneville's Stormwater Outreach Efforts by providing an information card for homeowners
- Worked with Greene County Soil Conservation District to help fund agricultural BMPs
- Formed a Technical Advisory Committee consisting of local, state, and federal agencies (US Fish and Wildlife Service, Tennessee Wildlife Resource Agency, Greene County Soil District, etc.)
- Annual canoe floats on the Nolichucky River

- Annual stream clean-ups
- Adult and student education programs on water quality issues, such as community presentations and annual programs, i.e. conservation camp and a stream monitoring day for students
- Monthly meetings

For more information about the MNWA or its programs:

Middle Nolichucky Watershed Alliance
P.O. Box 145
Greeneville, TN 37744

Website: www.middlenolichuckywatershedalliance.org

E-mail: nolichuckyinfo@yahoo.com

5.4.D. The Smoky Mountain Resource Conservation and Development (RC&D) Council.

COUNCIL OVERVIEW

The Smoky Mountain Resource Conservation and Development (RC&D) Area encompasses both the Smoky Mountains of East Tennessee, as well as parts of the French Broad, Nolichucky, Little Tennessee, and Lower French Broad River Basins. The counties included in this RC&D area are as follows: Blount, Cocke, Hamblen, Jefferson, Knox, and Sevier. The area includes approximately 1,629,440 acres – including parts of the Great Smoky Mountains National Park and the Cherokee National Forest. The area is bordered by the mountains of North Carolina along the southeast, by Greene County (TN) on the northeast, by the Lower French Broad River to the north, and by Anderson, Roane, and Loudon counties to the west. The area has a very diverse land use and geology. This is a rugged, rural landscape that is dominated by the Appalachian Mountains. The severely dissected ridges and narrow valleys that formed the western frontier of early America continue to influence transportation, commerce, agriculture, and land use.

The population of the six county region is approximately 712,171 according to an estimated figure obtained by the US Census Bureau in 2002. Farming enterprises include beef cattle, tobacco, dairy, poultry, and specialty crops. The vast majority of farmers are part-time within this region. Most jobs are in a variety of service trades (16.7%) and manufacturing facilities (21.3%). The average per capita income for the area in 1999 was $17,970, with the median household income calculated to be $33,460 per year. Unemployment across the area was calculated at a rate of 5.7%.

The Smoky Mountain RC&D Area received its charter in June 1997, as well as successfully obtained its 501(c)(3) tax status with the Internal Revenue Service. At this point, the Council consisted of only five counties (Blount, Cocke, Hamblen, Jefferson, and Sevier). The Council's borders were expanded to include Knox County in late 2004.

In addition, the Smoky Mountain RC&D Council has received grants from the USDA Forest Service, Tennessee Department of Agriculture, Tennessee Valley Authority, US

Fish & Wildlife Service, Tennessee Arts Commission, and the USDA – Rural Development. The funds generated from these grantors have been (and will be) used to initiate and complete projects that will help to meet the goals and objectives of our council.

MISSION STATEMENT

The mission of the Smoky Mountain RC&D Council and its programs is to empower residents to improve their quality of life through economic and community development while sustaining the natural resources of the area.

COUNCIL GOALS

Goal A: Expand sustainable economic development while conserving the area's natural resources.

Goal B: Promote new and innovative entrepreneurial opportunities to individuals within the RC&D Area.

Goal C: Educate individuals within the area on the importance of clean drinking water, as well as on the value of teaching water quality – in general terms.

Goal D: Reach 25% of the RC&D Area population with educational programs by 2010, which will empower them with the knowledge and desire to improve their quality of life.

5.4.E. The Appalachian Resource Conservation and Development Council. The mission of the Appalachian RC&D Council is to conserve natural resources and improve rural economies through community leadership and enhanced educational opportunities.

The Appalachian RC&D Council assists in administering the USDA Resource Conservation and Development Program, which is a unique combination of private enterprise and federal assistance that encourages economic growth through development, conservation, and planned utilization of natural resources across the council area and Tennessee. Just a few services the RC&D Program is providing in our community are conservation education, farmland protection, providing technical assistance, ensuring community services, establishing sustainable development, encouraging natural resource protection, and communicating local Issues.

The Appalachian RC&D Council is quite active with numerous watershed area groups in our six county region. Along with TVA, the Appalachian RC&D Council started the Upper and Middle Nolichucky and Upper Holston Watershed Alliances and have provided considerable support to them as well as to the Boone Watershed Partnership.

For more information on the Appalachian RC&D Council and its programs, contact Roy Settle, NRCS-RC&D Coordinator at 423-753-4441 ext. 4 or roy@appalachianrcd.org or visit the web site www.appalachianrcd.org.

CHAPTER 6

RESTORATION STRATEGIES IN THE NOLICHUCKY RIVER WATERSHED

6.1. BACKGROUND.

The Watershed Water Quality Management Plan serves as a comprehensive inventory of resources and stressors in the watershed, a recommendation for control measures, and a guide for planning activities in the next five-year watershed cycle and beyond. Water quality improvement will be a result of implementing both regulatory and nonregulatory programs.

In addition to the NPDES program, some state and federal regulations, such as the TMDL and ARAP programs, address point and nonpoint issues. Construction and MS4 storm water rules (implemented under the NPDES program) have transitioned from Phase 1 to Phase 2. More information on storm water rules may be found at: http://www.state.tn.us/environment/wpc/stormh2o/.

This Chapter addresses point and nonpoint source approaches to water quality problems in the Tennessee portion of the Nolichucky River Watershed as well as specific NPDES permittee information.

6.2. COMMENTS FROM PUBLIC MEETINGS. Watershed meetings are open to the public, and most meetings were represented by citizens who live in the watershed, NPDES permitees, business people, farmers, and local river conservation interests. Locations for meetings were chosen after consulting with people who live and work in the watershed. Everyone with an interest in clean water is encouraged to be a part of the public meeting process. The times and locations of watershed meetings are posted at: http://www.state.tn.us/environment/wpc/watershed/public.shtml.

6.2.A. Year 1 Public Meeting. The first Nolichucky River Watershed public meeting was held on December 7, 2000, at the Ruritan Club Building in Limestone, Tennessee. The goals of the meeting were to: (1) present, and review the objectives of, the Watershed Approach, (2) introduce local, state, and federal agency and nongovernmental organization partners, (3) review water quality monitoring strategies, and (4) solicit input from the public.

Major Concerns/Comments Voiced at Public Meeting

- How do we restore flow to natural levels
- How is public health assured when emergency conditions are allowed for industries?
- Do fines and penalties go toward restoring the Nolichucky River?
- What's the status of the uranium processing facility in the watershed?
- Concern about higher cancer frequency in the watershed.
- Will there be new laws to control livestock waste?
- Violators must be addressed immediately after documentation is complete.
- Can various agencies work together to address urbanization before it's a problem?

6.2.B. Year 3 Public Meeting. The second Nolichucky River Watershed public meeting was held on December 12, 2002, at the Ruritan Club Building in Limestone, Tennessee. The goals of the meeting were to: (1) provide an overview of the watershed approach, (2) review the monitoring strategy, (3) summarize the most recent water quality assessment, (4) discuss the TMDL schedule and citizens' role in commenting on draft TMDLs, and (5) discuss BMPs and other nonpoint source tools available through the Tennessee Department of Agriculture 319 Program and NRCS conservation assistance programs.

6.2.C. Year 5 Public Meeting. The third scheduled Nolichucky River Watershed public meeting was held October 29, 2008 at the Ruritan Building in Limestone and featured eleven educational components:

- Overview of watershed approach flash video
- Benthic macroinvertebrate specimens and interpretation
- "Is Your Stream Healthy" self-guided slide show
- "Why We Do Biological Sampling" self-guided slide show
- GIS (Geographic Information Systems) inventory of the watershed
- Water quality and land use maps
- Upper Nolichucky Watershed Alliance educational display
- Middle Nolichucky Watershed Alliance educational display
- Lands of Boone and Crockett educational display
- Altamont Environmental educational display
- Small Mouth Bass Unlimited educational display

In addition, citizens had the opportunity to make formal comments on the draft Watershed Water Quality Management Plan.

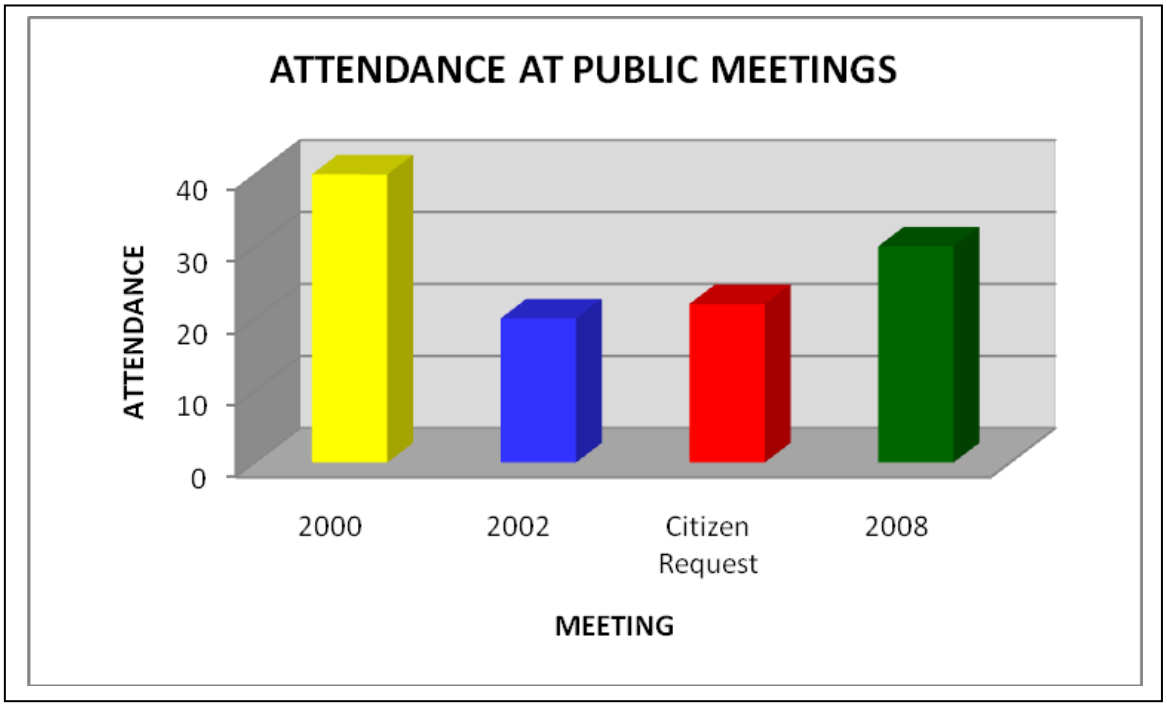


Figure 6-1. Attendance at the Nolichucky River Watershed Public Meetings. *Attendance numbers do not include TDEC personnel. Citizen Request Meeting was held May 29, 2008 in Erwin.*

Figure 6-2. The Nolichucky River Watershed Meeting Brought Federal and State Agencies, Watershed Associations, and the Private Sector Together to Work Toward the Benefit of the Citizens Who Live in the Watershed.

Figure 6-3. Local Groups, Like the Middle Nolichucky Watershed Alliance and the Upper Nolichucky Watershed Alliance, Have an Opportunity to Talk About Their Work with Citizens at the Watershed Meeting.

Figure 6-4. Scotty Sorrells (Division of Water Supply) Explains the Complicated Issues Involved with Groundwater as a Source of Drinking Water.

Figure 6-5. GIS (Geographic Information Systems) an Effective Interactive Tool to Teach Citizens About Their Watershed.

Figure 6-6. At Watershed Meetings, Citizens Learn About Benthic Macroinvertebrates (Small Invertebrates that Live on the Bottom of the Streams) in Their Watershed.

Figure 6-7. Displays by Local Groups, Like Smallmouth Bass Unlimited, Attract Interest at the Watershed Meeting.

Figure 6-8. Displays by Private Sector Companies, Like Altamont Environmental, Attest to the Partnerships Formed in the Nolichucky River Watershed.

6.3. APPROACHES USED.

6.3.A. Point Sources. Point source contributions to stream impairment are primarily addressed by NPDES and ARAP permit requirements and compliance with the terms of the permits. Notices of NPDES and ARAP draft permits available for public comment can be viewed at http://www.state.tn.us/environment/wpc/wpcppo/. Discharge monitoring data submitted by NPDES-permitted facilities may be viewed at http://www.epa.gov/enviro/html/pcs/pcs_query_java.html.

The purpose of the TMDL program is to identify remaining sources of pollution and allocate pollution control needs in places where water quality goals are still not being achieved. TMDL studies are tools that allow for a better understanding of load reductions necessary for impaired streams to return to compliance with water quality standards. More information about Tennessee's TMDL program may be found at: http://www.state.tn.us/environment/wpc/tmdl/.

Approved TMDL:

Nolichucky River Watershed - Total Maximum Daily Load for E. Coli in the Nolichucky River Watershed in Cocke, Greene, Hamblen, Hawkins, Unicoi and Washington Counties. Approved 03/05/2007.

http://state.tn.us/environment/wpc/tmdl/approvedtmdl/NolichuckyEcoli.pdf

Nolichucky River Watershed - Total Maximum Daily Load for Siltation and Habitat Alteration in the Nolichucky River Watershed in Cocke, Greene, Hamblen, Hawkins, Jefferson, Unicoi and Washington Counties. Approved 02/26/2008.

http://state.tn.us/environment/wpc/tmdl/approvedtmdl/NolichuckySed.pdf

TMDLs are prioritized for development based on many factors.

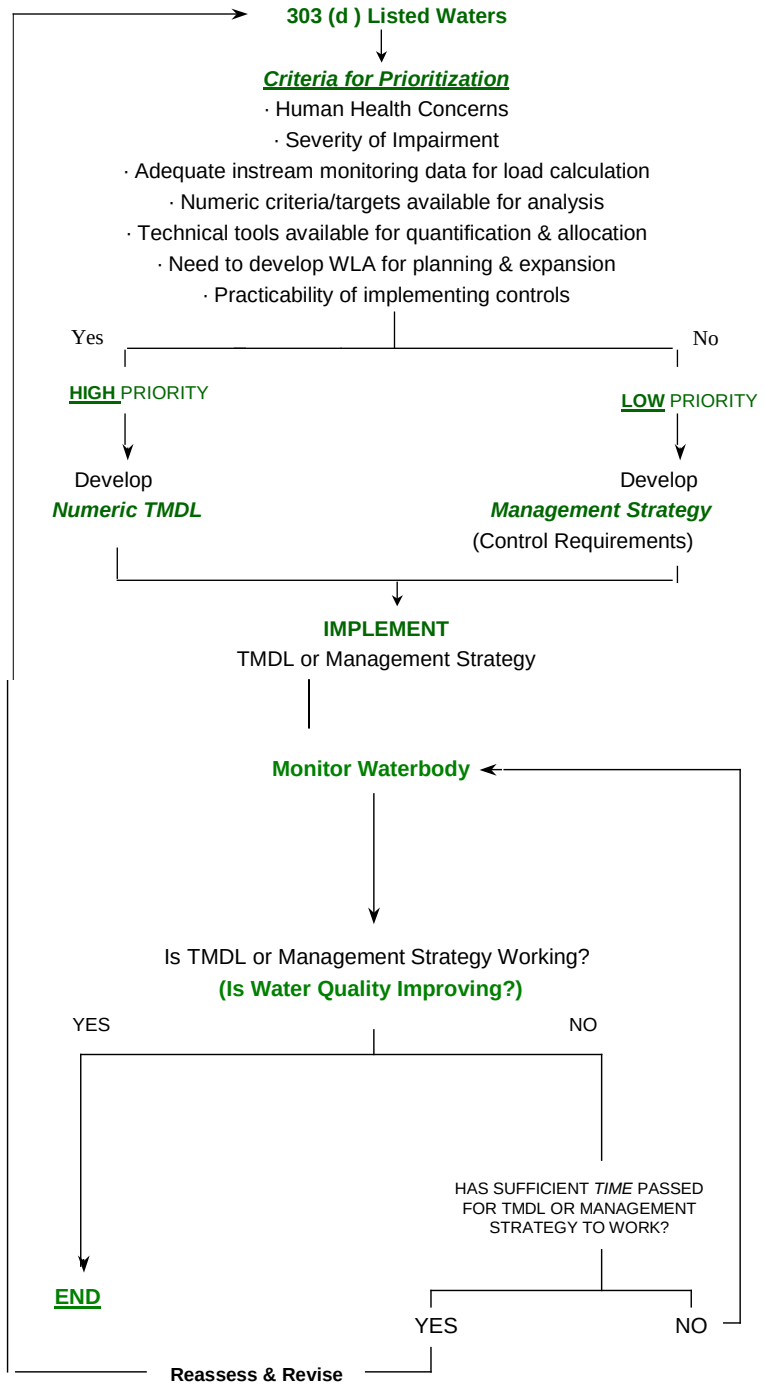


Figure 6-2. Prioritization Scheme for TMDL Development.

Several permitted discharges within the Nolichucky River Watershed, including Little Limestone Creek, Richland Creek, and Lick Creek, discharge suspended solids under the conditions of an NPDES permit and are reviewed during the watershed cycle for reissuance. A few will have limits on settleable solids. Those facilities with solids restrictions are WWTPs and package plants located in Jonesborough, Greeneville, and Mosheim, and numerous facilities such as Aerojet, and Nuclear Fuels.

6.3.B. Nonpoint Sources

Common nonpoint sources of pollution include urban runoff, riparian vegetation removal, and inappropriate land development, agricultural, and road construction practices. Since nonpoint pollution exists essentially everywhere rain falls, existing point source regulations can have only a limited effect. Other measures are, therefore, necessary.

There are several state and federal regulations that address some of the contaminants impacting waters in the Nolichucky River Watershed. Most of these are limited to only point sources: a pipe or ditch. Often, controls of point sources are not sufficient to protect waters, so other measures are necessary. Some measures include efforts by landowners and volunteer groups and the possible implementation of new regulations. Many agencies, such as the Tennessee Department of Agriculture (TDA) and the Natural Resources Conservation Service (NRCS), offer financial assistance to landowners for corrective actions (like Best Management Practices) that may be sufficient for recovery of impacted streams. Many nonpoint problems will require an active civic involvement at the local level geared towards establishment of improved zoning guidelines, building codes, streamside buffer zones and greenways, and general landowner education.

The following text describes types of impairments, possible causes, and suggested improvement measures. Restoration efforts should not be limited to only those streams and measures suggested below.

6.3.B.i. Sedimentation.

6.3.B.i.a. From Construction Sites. Construction activities have historically been considered “nonpoint sources.” In the late 1980’s, EPA designated them as being subject to NPDES regulation if more than 5 acres were being disturbed. In the spring of 2003, that threshold became 1 acre or less than 1 acre if it’s part of a larger development. The general permit issued for such construction sites establishes conditions for maintenance of the sites to minimize pollution from storm water runoff, including requirements for installation and inspection of erosion prevention and sediment controls. Also, the general permit imposes more stringent inspection, design criteria and sediment control measures on sites in the watershed of streams that are already impaired due to siltation or are considered high quality. Regardless of the size, no construction site is allowed to cause a condition of pollution.

Beginning in 2003, the state began requiring some municipalities to obtain coverage under a permit designed to address nonpoint runoff issues: the General NPDES

Municipal Separate Storm Sewer System Permit, commonly known as MS4. This permit requires the holder to develop a comprehensive storm water management program, including the adoption of local regulatory ordinances, regular inspection of construction sites and other discharges into their storm sewers, and a variety of educational, mapping, and monitoring activities. The state audits and oversees these local MS4 programs. Due to the rural nature of much of the area, and lack of large high density population centers, the only portion of the Nolichucky Watershed in Tennessee currently covered by an active MS4 program is the city of Greeneville and special sections of Washington County.

Construction sites within a sediment-impaired watershed may also have higher priority for inspections by WPC personnel, and are likely to have enforcement actions for failure to control erosion.

6.3.B.i.b. From Channel and/or Bank Erosion. Many streams within the Nolichucky River Watershed suffer from varying degrees of stream bank erosion. When stream channels are altered, banks can become unstable and highly erodable. Heavy livestock traffic can also severely disturb banks. When large tracts of land are cleared of vegetation (especially trees) and replaced with impermeable surfaces like asphalt and rooftops, the large increases in the velocities and volumes of storm water runoff can also overwhelm channel and bank integrity because destabilized banks contribute to sediment loadings and to the loss of beneficial riparian vegetation.

Some improper agricultural practices and overzealous land development have demonstrated impact to the hydrology and morphology of stream channels in the Nolichucky watershed, to the extent that it has caused a use impairment at this time.

Unpermitted rock harvesting and channel dredging can also severely disturb stream banks. Destabilized banks contribute to sediment load, poor results in biological diversity, and to the loss of beneficial riparian vegetation to the stream. The historical removal of cobble and rock from stream channels has resulted in destabilization of stream channels and aggressive erosion of stream banks.

Several agencies such as the NRCS and TDA, as well as watershed citizen groups, are working to stabilize portions of stream banks using bioengineering and other techniques. Many of the affected streams, such as Hale Branch, Slop Creek, Lick Creek, Rock Creek and Big and Little Limestone Creeks, could benefit from these types of projects. Other methods or controls that might be necessary to address common problems are:

Voluntary activities

- Re-establish bank vegetation (Sartain Creek, Slop Creek, tributaries to Richland, Pigeon and Meadow Creeks).
- Establish off-channel watering areas for livestock by moving watering troughs and feeders back from stream banks (Hale Branch, Crider Creek, tributaries to Big Limestone and Little Limestone Creeks, and tributaries to Little Chucky Creek).

- Limit cattle access to streams and bank vegetation (Carter Branch, Cedar Creek, and tributaries to Sinking and Richland Creeks). NRCS implemented fencing projects on Meadow Creek, Little Meadow Creek, and Greg Branch.
- Evaluate ditch clearing and bank stabilization with management practices in that area.
- Establish a Nonpoint Source Workgroup, which can develop and encourage programs, such as marketable wetland plants, to help offset the costs associated with implementation of BMPs.
- Provide an area for demonstration of filtration systems and new silt-removing products.

Regulatory Strategies

- Increase efforts in the Master Logger program to recognize impaired streams and require more effective management practices. (Pyborn Creek)
- Require post-construction run-off rates to be no greater than pre-construction rates in order to avoid in-channel erosion. (Holley, College, Frank, and Moon Creeks)
- Implement additional restrictions on logging in streamside management zones. (Rocky Fork and others – Unicoi County)
- Limit road and utility crossings of streams through better site design. (Little Limestone Creek)
- Restrict the use of off-highway vehicles on stream banks and in stream channels.
- Limit clearing of stream and roadside ditch banks or other alterations. (Tributaries to Lick and Richland Creeks) *Note: Permits may be required for any work along streams.*
- Encourage or require strong local buffer ordinances. (Little Limestone Creek)
- Restrict rock harvesting and sand removal to permitted sites. (Nolichucky River)

Additional strategies

- Better community planning and MS4 oversight for the impacts of development on small streams, especially development in growing areas such as around Holley, Pigeon and Big and Little Limestone Creeks.

6.3.B.i.c. From Agriculture and Silviculture. The Water Quality Control Act exempts normal agricultural and silvicultural practices that do not result in a point source discharge. Nevertheless, efforts are being made to address impacts due to these exempted practices.

The Master Logger Program has been in place for several years to train loggers how to install Best Management Practices that lessen the impact of logging activities on streams. Recently, laws and regulations established the authority for the Commissioners of the Departments of Environment and Conservation and of Agriculture to stop the logging operation that, upon failing to install these BMPs, is causing impacts to streams.

Since the Dust Bowl era, the agriculture community has strived to protect the soil from wind and water erosion. Agencies such as the Natural resources Conservation Service (NRCS), the University of Tennessee Agricultural Extension Service, and the Tennessee Department of Agriculture are striving to identify better ways of farming, to educate the

farmers, and to install the methods that address the sources of some of the impacts due to agriculture. Cost sharing is available for many of these measures.

Many sediment problems traceable to agricultural practices also involve riparian loss due to close row cropping or pasture clearing for grazing. Lack of any type of vegetated buffer along stream corridors is a major problem throughout the Nolichucky River Watershed. Impacted streams that could benefit from the establishment of riparian buffer zones include Carter Branch, Slop Creek, Crider Creek, Meadow Creek, Pigeon Creek, Richland Creek, North Indian Creek, and Big and Little Limestone Creeks.

6.3.B.i.d. Pathogen Contamination.

Possible sources of pathogens are inadequate or failing septic tank systems, overflows or breaks in public sewer collection systems, poorly disinfected discharges from sewage treatment plants, and fecal matter from pets, livestock and wildlife which are washed into streams and storm drains. When fecal bacterial levels are shown to be consistently elevated to dangerously high levels, especially in streams with high potential for recreational uses, the division must post signage along the creek, warning the public to avoid contact. Once pathogen sources have been identified and corrected, and pathogen level reductions are documented, the posting is lifted.

Permits issued by the Division of Water Pollution Control regulate discharges from point sources and require adequate control for these sources. Individual homes are required to have subsurface, on-site treatment (i.e., septic tank and field lines), if public sewers are not available. The Division of Ground Water Protection within the Johnson City and Knoxville Environmental Field Offices and delegated county health departments regulate septic tanks and field lines. In addition to discharges to surface waters, businesses may employ either subsurface or surface disposal of wastewater. The Division of Water Pollution Control regulates surface water disposal.

Currently, twenty stream systems in the Tennessee portion of the Nolichucky River Watershed are known to have excessive pathogen contamination including Big Limestone Creek, Blackley Creek, Carson Creek, Cedar Creek, Clear Creek, Horse Fork, Jockey Creek, Lick Creek, Little Limestone Creek, Mink Creek, Muddy Creek, Potter Creek, Richland Creek, and Sinking Creek. Little Limestone Creek, Lick Creek, and Richland Creeks are impacted by urban areas, with contributions of bacterial contamination coming from storm water runoff, sewage collection system leaks, and treatment plant operation failures. The division is not aware of any current plans for upgrades at the local WWTPs in this watershed.

Many streams in agricultural watersheds show elevated bacterial levels, including Flat Creek, Meadow Creek, Mud Creek, Bent Creek, Little Limestone Creek, Big Limestone Creek, Pigeon Creek, Richland Creek, and Long Creek. Lick Creek, Meadow Creek, Gap Creek, Little Chucky Creek, Pyborn Creek, and Nolichucky River may also have pathogen contributions from Concentrated Animal Feeding Operations (CAFOs).

Other measures that may be necessary to control pathogens are:

Voluntary activities

- Clean up pet waste.
- Repair failed septic systems.
- Establish off-channel watering areas for livestock by moving watering troughs and feeders back from stream banks (Hale Branch, Crider Creek, tributaries to Big Limestone and Little Limestone Creeks, and tributaries to Little Chucky Creek).
- Limit cattle access to streams and bank vegetation (Carter Branch, Cedar Creek, and tributaries to Sinking and Richland Creeks). NRCS has implemented fencing projects on Meadow Creek, Little Meadow Creek, and Greg Branch.
- Improve and educate on the proper management of animal waste from feeding operations.
- Work with the local watershed alliance group. Upper and Middle Nolichucky Watershed Alliances have conducted chemical and biological surveys to raise public awareness and to determine areas to designate projects.
- Attend training opportunities such as the EPA Watershed Academy.

Regulatory strategies

- Strengthen enforcement of regulations governing on-site wastewater treatment.
- Determine timely and appropriate enforcement for non-complying sewage treatment plants, large and small, and their collection systems.
- Identify Concentrated Animal Feeding Operations not currently permitted, particularly in the area of Pyborn Creek.

Additional strategies

- Develop intensive planning in areas where sewer is not available and treatment by subsurface disposal is not an option due to poor soils, floodplains, or high water tables.
- Develop and enforce leash laws and controls on pet fecal material (Richland Creek and Little Limestone Creek).
- Greater efforts by sewer utilities to identify leaking lines or overflowing manholes (Richland, Little Limestone, and Lick Creeks).
- Review the pathogen limits in discharge permits to determine the need for further restriction (Little Limestone Creek).
- Publish results of the Department of Agriculture's report on BMP's installed and the pre and post results of the effectiveness.
- Evaluate the possibility of establishing a project, similar to the Toe River Straight Pipe Elimination Grant, which assists certain individual households with septic system conditions within 500 feet of surface waters.

6.3.B.iii. Excessive Nutrients and/or Dissolved Oxygen Depletion.

These two impacts are usually listed together because high nutrients often contribute to low dissolved oxygen within a stream. Since nutrients often have the same source as pathogens, the measures previously listed can also address many of these problems. Elevated nutrient loadings are also often associated with urban runoff from impervious surfaces, from fertilized lawns and croplands, and faulty sewage disposal processes. Nutrients are often transported with sediment, so many of the measures designed to reduce sediment runoff will also aid in preventing organic enrichment of streams and lakes.

Dissolved oxygen depletion can also be due to the discharge of other biodegradable materials. These are limited in NPDES permits as ammonia and as either Biological Oxygen Demand (BOD) or Carbonaceous Oxygen Demand (CBOD).

Other sources of nutrients can be addressed by:

Voluntary activities

- Educate homeowners and lawn care companies in the proper application of fertilizers.
- Many streams in the Nolichucky River Watershed within agricultural areas would benefit from additional riparian buffers.
- Use grassed drainage ways that can remove fertilizer and sediment before it enters streams.
- Use native plants for landscaping since they don't require as much fertilizer and water.
- Develop better overall storm water management in urban and residential areas, including retrofitting existing commercial lots, homes, and roadways with storm water quality and quantity BMPs. This would especially improve the urban streams and lakes currently polluted by excessive nutrient and sediment inputs, such as Richland Creek, Rock Creek, Spring Creek and Little Limestone Creeks).

Physical changes to streams can prevent them from providing enough oxygen to biodegrade the materials that are naturally present. A few additional actions can address this problem:

- Maintain shade over a stream. Cooler water can hold more oxygen and retard the growth of algae. As a general rule, all stream channels suffer from some canopy removal. An intact riparian zone also acts as a buffer to filter out nutrient loads before they enter the water.
- Discourage impoundments and instead encourage filtration basins/constructed wetlands. Ponds and lakes do not aerate water. *Note: Permits may be required for any work on a stream, including impoundments.*

Regulatory strategies.

- Strengthen enforcement of regulations governing on-site wastewater treatment.
- Impose more stringent permit limits for nutrients discharged from sewage treatment plants including Little Limestone and Lick Creeks.

- Impose timely and appropriate enforcement for noncomplying sewage treatment plants, large and small, and their collection system including Little Limestone and Lick Creeks.
- Identify Concentrated Animal Feeding Operations not currently permitted.
- Identify any Animal Feeding Operations (AFO) that contribute to stream impacts and declare them as a CAFO requiring a permit (Lick Creek).
- Support and train local MS4 programs within municipalities, such as Greeneville, to deal with storm water pollution issues and require additional storm runoff quality control measures.
- Require nutrient management plans for all golf courses including Graysburg Hills, Andrew Johnson, Twin Creeks, and Link Hills.

Additional Strategies

- Encourage TDA and NRCS sponsored educational programs, which target agricultural landowners and aim at better nutrient management, as well as supplying information on technology-based application tools.

6.3.B.iv. Toxins and Other Materials.

Although some toxic substances are discharged directly into waters of the state from a point source, much of these materials are washed in during rainfalls from an upland location, or via improper waste disposal that contaminates groundwater. No streams are currently listed as impaired from these kinds of sources in the Tennessee portion of the Nolichucky River Watershed toxins in storm water runoff from industrial facilities or urban areas. More stringent inspection and regulation of permitted industrial facilities, and local storm water quality initiatives and regulations, could help reduce the amount of contaminated runoff reaching state waters. Examples of streams that would benefit from these measures are Richland, Holley, Little Limestone, and North Indian Creeks.

Individuals may also cause contaminants to enter streams by activities that may be attributed to apathy or the lack of knowledge or civility. Litter in roadside ditches, garbage bags tossed over bridge railings, paint brushes washed off over storm drains, and oil drained into ditches are all blatant examples of pollution in streams. Misapplication of chemicals on agricultural and suburban areas is another source of toxins and its impacts are observed in the Nolichucky River.

Some of these problems can be addressed by:

Voluntary activities

- Provide public education, involving municipalities/watershed groups.
- Paint warnings on storm drains that connect to a stream.
- Sponsor community clean-up days.
- Landscape public areas.
- Encourage public surveillance of their streams and reporting of dumping activities to their local authorities.

Regulatory strategies

- Continue to prohibit illicit discharges to storm drains and to search for the sources.
- Strengthen litter law enforcement at the local level.
- Increase the restrictions on storm water runoff from industrial facilities.
- Implement BMP strategies for nutrient and chemical management, such as the North Toe River Christmas BMP Demonstration project, that help to control the impacts of the storm water runoff from these types of areas.

Additional Strategies

- Return wetlands, or some man-made instrument acting like a wetland, to the hydrologic design of the stream, which will slow flows and remove harmful side effects of urbanization.

6.3.B.v. Habitat Alteration.

The alteration of the habitat within a stream can have severe consequences. Whether it is the removal of the vegetation, providing a root system network for holding soil particles together, the release of sediment which increases the bed load and covers benthic life and fish eggs, the removal of gravel bars, "cleaning out" creeks with heavy equipment, or the impounding of the water in ponds and lakes, many alterations impair the use of the stream for designated uses. Habitat alteration also includes the draining or filling of wetlands.

Many streams within the Nolichucky River Watershed suffer from some degree of habitat alteration, especially riparian loss and bank disturbances from agricultural practices. Some notable streams in the watershed that have suffered significant harm from being impounded include Hominy Creek and Big and Little Limestone Creeks.

Illicit gravel dredging is a particularly widespread and serious problem in the Nolichucky River Watershed due to the abundance of gravel substrate in streams in this area and their relative remoteness. "Wildcat" dredgers can do a devastating amount of damage to a localized area, then pack up and leave within a short period of time, making enforcement difficult. Streams affected by chronically recurring dredging operations include Rock Creek.

Although large-scale public projects such as highway construction can alter significant portions of streams, individual landowners and developers are responsible for the vast majority of stream alterations. Some measures that can help address these problems are:

Voluntary activities

- Sponsor litter pickup days to remove litter that might enter streams.
- Organize stream cleanups removing trash, limbs and debris before they cause blockage.
- Avoid use of heavy equipment to "clean out" streams. *Instream work other than debris removal will require an Aquatic Resource Alteration Permit (ARAP).*

- Plant native vegetation along streams to stabilize banks and provide habitat.
- Encourage developers to avoid extensive use of culverts in streams.

Regulatory Strategies

- Restrict modification of streams by means such as culverting, lining, or impounding.
- Require mitigation for impacts to streams and wetlands when modifications are allowed.
- Require permitting of all rock harvesting operations.
- Increased enforcement may be needed when violations of current regulations occur, especially for illicit gravel dredging.

Additional Enforcement

- Increased enforcement may be needed when violations of current regulations occur.

6.3.B.vi. Storm Water.

MS4 discharges are regulated through the Phase I or II NPDES-MS4 permits. These permits require the development and implementation of a Storm Water Management Program (SWMP) that will reduce the discharge of pollutants to the maximum extent practicable and not cause or contribute to violations of state water quality standards. The NPDES General Permit for Discharges from Phase I and II MSF facilities can be found at:

http://www.state.tn.us/environment/wpc/stormh2o/.

For discharges into impaired waters, the MS4 General Permit requires that SWMPs include a section describing how discharges of pollutants of concern will be controlled to ensure that they do not cause or contribute to instream exceedences of water quality standards. Specific measurements and BMPs to control pollutants of concern must also be identified. In addition, MS4s must implement the proposed waste load allocation provisions of an applicable TMDL (i.e., siltation/habitat alteration, pathogens) and describe methods to evaluate whether storm water controls are adequate to meet the waste load allocation. In order to evaluate SWMP effectiveness and demonstrate compliance with specified waste load allocations, MS4s are encouraged to develop and implement appropriate monitoring programs by the designated date.

Some storm sewer discharges are not regulated through the NPDES MS4 program. Strategies to address runoff in these urban areas include adapting Tennessee Growth Readiness Program (TGRP) educational materials to the watershed. TGRP is a statewide program built on existing best management practices from the Nonpoint Education for Municipal Officials program and the Center for Watershed Protection. TGRP developed the program to provide communities and counties with tools to design economically viable and watershed friendly developments. The program assists community leaders in reviewing current land use practices, determining impacts of imperviousness on watershed functions, and allowing them to understand the economics of good watershed management and site design.

6.4. PERMIT REISSUANCE PLANNING

Under the *Tennessee Water Quality Control Act*, municipal, industrial and other dischargers of wastewater must obtain a permit from the Division. Approximately 1,700 permits have been issued in Tennessee under the federally delegated National Pollutant Discharge Elimination System (NPDES). These permits establish pollution control and monitoring requirements based on protection of designated uses through implementation of water quality standards and other applicable state and federal rules.

The following three sections provide specific information on municipal, industrial, and water treatment plant active permit holders in the Tennessee portion of the Nolichucky River Watershed. Compliance information was obtained from EPA's Permit Compliance System (PCS). All data was queried for a five-year period between January 1, 2001 and December 31, 2006. PCS can be accessed publicly through EPA's Envirofacts website. This website provides access to several EPA databases to provide the public with information about environmental activities that may affect air, water, and land anywhere in the United States:

http://www.epa.gov/enviro/html/ef_overview.html

Stream Segment information, including designated uses and impairments, are described in detail in Chapter 3, *Water Quality Assessment of the Nolichucky River Watershed.*

6.4.A. Municipal Permits

TN0021229 Denzil Bowman Wastewater Treatment Plant (Greeneville STP)

Discharger rating: Minor
City: Greeneville
County: Greene
EFO Name: Johnson City
Issuance Date: 1/01/06
Expiration Date: 11/29/10
Receiving Stream(s): Davy Crockett Reservor at Nolichucky River mile 47.5
HUC-12: 080102030303
Effluent Summary: Treated municipal wastewater from Outfall 001
Treatment system: Activated sludge plant followed by final settling clarifiers with chlorination. Sludge is treated by digestion with mechanical aeration to centrifuge and disposed by land application.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
BOD % removal	All Year	40	Percent	DMin % Removal	Weekdays	Calculated	% Removal
BOD % removal	All Year	85	Percent	MAvg % Removal	Weekdays	Calculated	% Removal
BOD5	All Year	45	mg/L	DMax Conc	Weekdays	Composite	Effluent
BOD5	All Year		mg/L	DMax Conc	Weekdays	Composite	Influent (Raw Sewage)
BOD5	All Year	2335	lb/day	WAvg Load	Weekdays	Composite	Effluent
BOD5	All Year	30	mg/L	MAvg Conc	Weekdays	Composite	Effluent
BOD5	All Year	1752	lb/day	MAvg Load	Weekdays	Composite	Effluent
BOD5	All Year		mg/L	MAvg Conc	Weekdays	Composite	Influent (Raw Sewage)
BOD5	All Year	40	mg/L	WAvg Conc	Weekdays	Composite	Effluent
Bypass of Treatment (occurrences)	All Year		Occurences/ Month	MAvg Load	Continuous	Visual	Wet Weather
D.O.	All Year	1	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	941	#/100mL	DMax Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	Weekdays	Grab	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	DMax Load	Daily	Continuous	Influent (Raw Sewage)
IC25 7day Ceriodaphnia Dubia	All Year	3.7	Percent	DMin Conc	Continuous	Composite	Effluent
IC25 7day Fathead Minnows	All Year	3.7	Percent	DMin Conc	Continuous	Composite	Effluent
Overflow Use Occurences	All Year		Occurences/ Month	MAvg Load	Continuous	Visual	Wet Weather

Table 6-1a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Overflow Use Occurences	All Year		Occurences/ Month	MAvg Load	Continuous	Visual	Non Wet Weather
Settleable Solids	All Year	1	mL/L	DMax Conc	Weekdays	Composite	Effluent
TRC	All Year	0.52	mg/L	DMax Conc	Weekdays	Instantaneous	Effluent
TSS	All Year	45	mg/L	DMax Conc	Weekdays	Composite	Effluent
TSS	All Year	1752	lb/day	MAvg Load	Weekdays	Composite	Effluent
TSS	All Year		mg/L	DMax Conc	Weekdays	Composite	Influent (Raw Sewage)
TSS	All Year	2335	lb/day	WAvg Load	Weekdays	Composite	Effluent
TSS	All Year	40	mg/L	WAvg Conc	Weekdays	Composite	Effluent
TSS	All Year		mg/L	MAvg Conc	Weekdays	Composite	Influent (Raw Sewage)
TSS	All Year	30	mg/L	MAvg Conc	Weekdays	Composite	Effluent
TSS % Removal	All Year	40	Percent	DMin % Removal	Weekdays	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	Weekdays	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-1b.

Tables 6-1a-b. Permit Limits for Denzil Bowman Wastewater Treatment Plant (Greeneville STP).

Compliance History:
The following numbers of exceedences were noted in PCS:

- 118 Overflows

Comments:

Possible plans for an additional digester, no plans for treatment capacity is known; they are normally operating at about ½ capacity, generally good compliance.

Compliance Evaluation Inspection March 27, 2007: E. Coli discrepancies bring the reliability of the facility self-monitoring results into question. The discrepancies are of particular concern because the results obtained at the Denzil Bowman WWTP appear to be consistently low when compared to those obtained by the TDH laboratory. Several pump issues and lab reporting issues were noted and detailed in a letter to Greeneville Water Commission.

December 6, 2007 letter to Greeneville Water Commission: Since collection system rehabilitation efforts to date appear to have eliminated much of the previously existing I/I problems in the Frank Creek #1 system as evidenced by submitted flow data. The pump station has been replaced with one of greater capacity and apparently sufficient to meet current and projected future demands, and no overflows have been reported in the past several months despite occurrence of some heavy rainfalls. The division agrees to elimination of the existing moratorium on new connections within this portion of the Greeneville sewer collection system.

TN0040673 Nolichucky Elementary School

Discharger rating: Minor
City: Greeneville
County: Greene
EFO Name: Johnson City
Issuance Date: 6/30/06
Expiration Date: 9/29/10
Receiving Stream(s): Meadow Creek at mile 2.9
HUC-12: 080102030303
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: Extended aeration

SEGMENT	TN06010108007_1000
Name	Meadow Creek
Size	23.4
Unit	Miles
First Year on 303(d) List	2004
Uses	Fish and Aquatic Life (Supporting), Recreation (Non-Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	Escherichia coli
Sources	Unrestricted Cattle Access

Table 6-2. Stream Segment Information for Nolichucky Elementary School

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
BOD5	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
BOD5	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
D.O.	All Year	1	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	2/Month	Grab	Effluent
E. coli	All Year	941	#/100mL	MAvg Ari Mean	2/Month	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Weekdays	Instantaneous	Effluent
Flow	All Year		MGD	DMax Load	Weekdays	Instantaneous	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	1	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Week	Grab	Effluent

Table 6-3. Permit Limits for Nolichucky Elementary School

Comments:
None

TN0057371 TDEC Davy Crockett's Birthplace

Discharger rating: Minor
City: Limestone
County: Greene
EFO Name: Johnson City
Issuance Date: 1/01/06
Expiration Date: 11/29/10
Receiving Stream(s): Nolichuckey River at mile 68.3
HUC-12: 080102030303
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: Extended aeration

SEGMENT	TN06010108010_2000
Name	Nolichucky River
Size	6.5
Unit	Miles
First Year on 303(d) List	1990
Designated Uses	Domestic Water Supply (Supporting), Livestock Watering and Wildlife (Supporting), Irrigation (Supporting), Recreation (Supporting), Industrial Water Supply (Supporting), Fish and Aquatic Life (Non-Supporting)
Causes	Sedimentation/Siltation
Sources	Grazing in Riparian or Shoreline Zones, Sources Outside State Juristiction or Borders

Table 6-4. Stream Segment Information for TDEC Davy Crockett's Birthplace.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
BOD5	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
BOD5	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
D.O.	All Year	1	mg/L	DMin Conc	Weekdays	Grab	Effluent
Fecal Coliform	All Year	1000	#/100mL	DMax Conc	2/Month	Grab	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	2	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Week	Grab	Effluent

Table 6-5. Permit Limits for TDEC Davy Crockett's Birthplace.

Comments:
None

TN0057266 Suburban Terrace Apartments & Restaurant

Discharger rating: Minor
City: Greeneville
County: Greene
EFO Name: Johnson City
Issuance Date: 1/1/05
Expiration Date: 11/30/05
Receiving Stream(s): Moon Creek at mile 2.8
HUC-12: 080102030303
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: WAS to waste hauler to Greeneville WWTP

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ammonia as N (Total)	All Year	10	mg/L	DMax Conc	Monthly	Grab	Effluent
Ammonia as N (Total)	All Year	5	mg/L	MAvg Conc	Monthly	Grab	Effluent
CBOD5	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
CBOD5	All Year	25	mg/L	MAvg Conc	Monthly	Grab	Effluent
D.O.	All Year	6	mg/L	DMin Conc	Weekdays	Grab	Effluent
Fecal Coliform	All Year	1000	#/100mL	DMax Conc	Monthly	Grab	Effluent
Fecal Coliform	All Year	200	#/100mL	MAvg Geo Mean	Monthly	Grab	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	0.5	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	Monthly	Grab	Effluent
pH	All Year	8.5	SU	DMax Conc	2/Week	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	2/Week	Grab	Effluent

Table 6-6. Permit Limits for Suburban Terrace Apartments & Restaurant.

Enforcement:
Notice of Violation on 2/21/06 for late application.
Second Notice of Violation on 10/31/06 for late application.

Comments:
Permit expired, Notice of Violation sent from Nashville for failure to reapply, no certified operator at time of inspection.

TN0058301 South Greene High School

Discharger rating: Minor
City: Greeneville
County: Greene
EFO Name: Johnson City
Issuance Date: 7/01/06
Expiration Date: 12/31/10
Receiving Stream(s): Cove Creek at mile 3.5
HUC-12: 080102030303
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: Extended aeration

SEGMENT	TN06010108009_1000
Name	Cove Creek
Size	29.7
Unit	Miles
First Year on 303(d) List	2002
Designated Uses	Recreation (Not Assessed), Irrigation (Supporting), Fish and Aquatic Life (Non-Supporting), Livestock Watering and Wildlife (Supporting)
Causes	Sedimentation/Siltation
Sources	Grazing in Riparian or Shoreline Zones

Table 6-7. Stream Segment Information for South Greene High School.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
BOD5	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
BOD5	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
D.O.	All Year	1	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	2/Month	Grab	Effluent
E. coli	All Year	941	#/100mL	MAvg Ari Mean	2/Month	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Weekdays	Instantaneous	Effluent
Flow	All Year		MGD	DMax Load	Weekdays	Instantaneous	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	1.5	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Week	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent

Table 6-8. Permit Limits for South Greene High School.

Comments:
None

TN0058343 Ottway Elementary School

Discharger rating: Minor
City: Greeneville
County: Greene
EFO Name: Johnson City
Issuance Date: 1/01/06
Expiration Date: 6/30/10
Receiving Stream(s): Lick Creek at mile 41.1
HUC-12: 080102030303
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: Extended aeration

SEGMENT	TN06010108035_6000
Name	Lick Creek
Size	8.9
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Industrial Water Supply (Supporting), Livestock Watering and Wildlife (Supporting), Irrigation (Supporting), Recreation (Non-Supporting), Domestic Water Supply (Supporting), Fish and Aquatic Life (Non-Supporting)
Causes	Sedimentation/Siltation, Escherichia coli, Physical substrate habitat alterations, Nitrates
Sources	Grazing in Riparian or Shoreline Zones

Table 6-9. Stream Segment Information for Ottway Elementary School.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
BOD5	All Year	45	mg/L	DMax Conc	Monthly	Grab	Effluent
BOD5	All Year	30	mg/L	MAvg Conc	Monthly	Grab	Effluent
D.O.	All Year	4	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	Monthly	Grab	Effluent
E. coli	All Year	940	#/100mL	MAvg Ari Mean	Monthly	Grab	Effluent
Flow	All Year		MGD	DMax Load			Effluent
Flow	All Year		MGD	MAvg Load	Weekdays	Instantaneous	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	2	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	Monthly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Week	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent

Table 6-10. Permit Limits for Ottway Elementary School.

Comments: None

TN0058271 Chuckey Elementary School

Discharger rating: Minor
City: Chuckey
County: Greene
EFO Name: Johnson City
Issuance Date: 6/01/06
Expiration Date: 9/30/10
Receiving Stream(s): Rheatown Creek at mile 0.9
HUC-12: 080102030303
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: Extended aeration

SEGMENT	TN06010108010_0700
Name	Rheatown Creek
Size	3.1
Unit	Miles
First Year on 303(d) List	-
Designated Uses	Fish and Aquatic Life (Supporting), Recreation (Not Assessed), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	N/A
Sources	N/A

Table 6-11. Stream Segment Information for Chuckey Elementary School.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ammonia as N (Total)	All Year	10	mg/L	DMax Conc	2/Month	Grab	Effluent
Ammonia as N (Total)	All Year	5	mg/L	MAvg Conc	2/Month	Grab	Effluent
BOD5	All Year	20	mg/L	DMax Conc	2/Month	Grab	Effluent
BOD5	All Year	10	mg/L	MAvg Conc	2/Month	Grab	Effluent
D.O.	All Year	6	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year						Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	2/Month	Grab	Effluent
E. coli	All Year	941	#/100mL	MAvg Ari Mean	2/Month	Grab	Effluent
Flow	All Year		MGD	DMax Load	Weekdays	Instantaneous	Effluent
Flow	All Year		MGD	MAvg Load	Daily		Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	0.02	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
TSS	All Year	20	mg/L	MAvg Conc	2/Month	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	2/Week	Grab	Effluent

Table 6-12. Permit Limits for Chuckey Elementary School.

Enforcement:
Notice of Violation on 2/21/06 for late application

Comments: None

TN0058254 McDonald Elementary School

Discharger rating: Minor
City: Mohawk
County: Greene
EFO Name: Johnson City
Issuance Date: 6/01/06
Expiration Date: 9/30/10
Receiving Stream(s): War Branch at mile 0.5 to Lick Creek
HUC-12: 080102030303
Effluent Summary: Treated municipal wastewater from Outfall 001
Treatment system: Extended aeration

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ammonia as N (Total)	Summer	4	mg/L	DMax Conc	2/Month	Grab	Effluent
Ammonia as N (Total)	Summer	2	mg/L	MAvg Conc	2/Month	Grab	Effluent
Ammonia as N (Total)	Winter	10	mg/L	DMax Conc	2/Month	Grab	Effluent
Ammonia as N (Total)	Winter	5	mg/L	MAvg Conc	2/Month	Grab	Effluent
BOD5	All Year	20	mg/L	DMax Conc	2/Month	Grab	Effluent
BOD5	All Year	10	mg/L	MAvg Conc	2/Month	Grab	Effluent
D.O.	All Year	5	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	2/Month	Grab	Effluent
E. coli	All Year	941	#/100mL	MAvg Ari Mean	2/Month	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Weekdays	Instantaneous	Effluent
Flow	All Year		MGD	DMax Load	Weekdays	Instantaneous	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	0.5	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	2/Week	Grab	Effluent

Table 6-13. Permit Limits for McDonald Elementary School.

Comments:
None

TN0059366 Lick Creek Valley (Mosheim) Wastewater Treatment Plant

Discharger rating: Major
City: Midway
County: Greene
EFO Name: Johnson City
Issuance Date: 3/01/06
Expiration Date: 9/30/10
Receiving Stream(s): Lick Creek at mile 23.3
HUC-12: 080102030303
Effluent Summary: Treated municipal wastewater from Outfall 001
Treatment system: Waste Activated Sludge to aerobic digestor; some liquid to lap site; some drybed to lap

SEGMENT	TN06010108035_5000
Name	Lick Creek
Size	17.8
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Industrial Water Supply (Supporting), Fish and Aquatic Life (Non-Supporting), Recreation (Non-Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	Nitrates, Physical substrate habitat alterations, Sedimentation/Siltation, Escherichia coli
Sources	Grazing in Riparian or Shoreline Zones

Table 6-14. Stream Segment Information for Lick Creek Valley (Mosheim) Wastewater Treatment Plant.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ammonia as N (Total)	Summer	10	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	65	lb/day	WAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	8	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	41	lb/day	MAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	5	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	25	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	20	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	163	lb/day	WAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	15	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	122	lb/day	MAvg Load	3/Week	Composite	Effluent
Bypass of Treatment (flow rate)	All Year		Occurences/ Month	MAvg Load	Continuous	Visual	Wet Weather
CBOD % Removal	Summer	40	Percent	DMin % Removal	3/Week	Calculated	% Removal

Table 6-15a

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
CBOD % Removal	Summer	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
CBOD % Removal	Winter	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
CBOD % Removal	Winter	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
CBOD5	Summer	30	mg/L	DMax Conc	3/Week	Composite	Effluent
CBOD5	Summer		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
CBOD5	Summer	203	lb/day	WAvg Load	3/Week	Composite	Effluent
CBOD5	Summer	25	mg/L	WAvg Conc	3/Week	Composite	Effluent
CBOD5	Summer	20	mg/L	MAvg Conc	3/Week	Composite	Effluent
CBOD5	Summer	163	lb/day	MAvg Load	3/Week	Composite	Effluent
CBOD5	Summer		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
CBOD5	Winter	40	mg/L	DMax Conc	3/Week	Composite	Effluent
CBOD5	Winter	25	mg/L	MAvg Conc	3/Week	Composite	Effluent
CBOD5	Winter	35	mg/L	WAvg Conc	3/Week	Composite	Effluent
CBOD5	Winter	285	lb/day	WAvg Load	3/Week	Composite	Effluent
CBOD5	Winter	203	lb/day	MAvg Load	3/Week	Composite	Effluent
CBOD5	Winter		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
CBOD5	Winter		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
D.O.	All Year	6	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	941	#/100mL	DMax Conc	3/Week	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	DMax Load	Daily	Continuous	Effluent
IC25 7day *Ceriodaphnia Dubia*	All Year	10.7	Percent	DMin Conc	Quarterly	Composite	Effluent
IC25 7day Fathead Minnows	All Year	10.7	Percent	DMin Conc	Quarterly	Composite	Effluent
Nitrogen Total (as N)	Summer	22	mg/L	DMax Conc	Weekly	Composite	Effluent
Nitrogen Total (as N)	Summer	116	lb/day	DMax Load	Weekly	Composite	Effluent
Nitrogen Total (as N)	Summer	19	mg/L	MAvg Conc	Weekly	Composite	Effluent
Nitrogen Total (as N)	Summer	100	lb/day	MAvg Load	Weekly	Composite	Effluent
Nitrogen Total (as N)	Winter	23	mg/L	DMax Conc	Weekly	Composite	Effluent
Nitrogen Total (as N)	Winter	121	lb/day	DMax Load	Weekly	Composite	Effluent
Nitrogen Total (as N)	Winter	20	mg/L	MAvg Conc	Weekly	Composite	Effluent
Nitrogen Total (as N)	Winter	104	lb/day	MAvg Load	Weekly	Composite	Effluent
Overflow Use Occurences	All Year		Occurences/ Month	MAvg Load	Continuous	Visual	Wet Weather
Overflow Use Occurences	All Year		Occurences/ Month	MAvg Load	Continuous	Visual	Non Wet Weather
Phosphorus Total	All Year	28	lb/day	MAvg Load	Weekly	Composite	Effluent
Phosphorus Total	All Year	5	mg/L	MAvg Conc	Weekly	Composite	Effluent
Phosphorus Total	All Year	6	mg/L	DMax Conc	Weekly	Composite	Effluent

Table 6-15b.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Phosphorus Total	All Year	33	lb/day	DMax Load	Weekly	Composite	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	Weekdays	Grab	Effluent
TRC	All Year	0.18	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	25	mg/L	DMax Conc	3/Week	Composite	Effluent
TSS	All Year	122	lb/day	MAvg Load	3/Week	Composite	Effluent
TSS	All Year		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
TSS	All Year		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
TSS	All Year	15	mg/L	MAvg Conc	3/Week	Composite	Effluent
TSS	All Year	163	lb/day	WAvg Load	3/Week	Composite	Effluent
TSS	All Year	20	mg/L	WAvg Conc	3/Week	Composite	Effluent
TSS % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-15c.

Tables 6-15a-c. Permit Limits for Lick Creek Valley (Mosheim) Wastewater Treatment Plant.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 15 Total Suspended Solids (TSS)
- 59 Total Nitrogen
- 5 Suspended Solids % Removal
- 4 Carbonaceous Biological Oxygen Demand (CBOD)
- 2 Total Chlorine
- 3 Carbonaceous Oxygen Demand (BOD)
- 1 Zinc
- 2 Dissolved Oxygen
- 41 Overflows
- 3 Bypasses

Enforcement:
June 15, 2007: Notice of Violation for failure to meet the sampling requirements of NPDES permit, for failure to perform all of the required compliance monitoring activities, for failure to enforce against interference, and for failure to take adequate and timely enforcement.

Comments: *None*

TN0063932 Baileyton STP

Discharger rating: Minor
City: Greeneville
County: Greene
EFO Name: Johnson City
Issuance Date: 3/01/06
Expiration Date: 9/30/10
Receiving Stream(s): Lick Creek at mile 49.2
HUC-12: 080102030303
Effluent Summary: Treated municipal wastewater from Outfall 001
Treatment system: Waste Activated Sludge to aerobic digestor to land application or to drybeds.

SEGMENT	TN06010108035_7000
Name	Lick Creek
Size	9.4
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Domestic Water Supply (Supporting), Industrial Water Supply (Supporting), Fish and Aquatic Life (Non-Supporting), Recreation (Non-Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	Nitrates, Physical substrate habitat alterations, Sedimentation/Siltation, Escherichia coli
Sources	Grazing in Riparian or Shoreline Zones

Table 6-16. Stream Segment Information for Baileyton STP.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
BOD % removal	All Year	40	Percent	DMin % Removal	Weekly	Calculated	% Removal
BOD % removal	All Year	85	Percent	MAvg % Removal	Weekly	Calculated	% Removal
BOD5	All Year		mg/L	MAvg Conc	Weekly	Composite	Influent (Raw Sewage)
BOD5	All Year		mg/L	DMax Conc	Weekly	Composite	Influent (Raw Sewage)
BOD5	All Year	45	mg/L	DMax Conc	Weekly	Composite	Effluent
BOD5	All Year	30	mg/L	MAvg Conc	Weekly	Composite	Effluent
BOD5	All Year	40	mg/L	WAvg Conc	Weekly	Composite	Effluent
BOD5	All Year	25	lb/day	MAvg Load	Weekly	Composite	Effluent
BOD5	All Year	33	lb/day	WAvg Load	Weekly	Composite	Effluent
Bypass of Treatment (occurrences)	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather
D.O.	All Year	5	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	941	#/100mL	DMax Conc	Weekly	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	Weekly	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	DMax Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	DMax Load	Daily	Continuous	Effluent
Nitrogen Total (as N)	All Year		mg/L	MAvg Conc	Monthly	Composite	Effluent
Nitrogen Total (as N)	All Year		mg/L	DMax Conc	Monthly	Composite	Effluent
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Wet Weather
Overflow Use Occurences	All Year		Occurences/Month	MAvg Load	Continuous	Visual	Non Wet Weather
Phosphorus Total	All Year		mg/L	DMax Conc	Monthly	Composite	Effluent
Phosphorus, Total	All Year		mg/L	MAvg Conc	Monthly	Composite	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	Weekdays	Grab	Effluent
TRC	All Year	1.4	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year		mg/L	MAvg Conc	Weekly	Composite	Influent (Raw Sewage)
TSS	All Year		mg/L	DMax Conc	Weekly	Composite	Influent (Raw Sewage)
TSS	All Year	45	mg/L	DMax Conc	Weekly	Composite	Effluent
TSS	All Year	40	mg/L	WAvg Conc	Weekly	Composite	Effluent
TSS	All Year	25	lb/day	MAvg Load	Weekly	Composite	Effluent
TSS	All Year	30	mg/L	MAvg Conc	Weekly	Composite	Effluent
TSS	All Year	33	lb/day	WAvg Load	Weekly	Composite	Effluent
TSS % Removal	All Year	40	Percent	DMin % Removal	Weekly	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	Weekly	Calculated	% Removal
pH	All Year	6	SU	DMin Conc	Weekdays	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent

Table 6-17. Permit Limits for Baileyton STP.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 16 Biological Oxygen Demand (BOD)
- 6 Settleable Solids
- 5 Suspended Solids % Removal
- 9 Total Suspended Solids (TSS)
- 5 Dissolved Oxygen
- 1 Total Chlorine
- 2 Overflows

Comments:
None

TN0005053 TWRA - Erwin Fish Hatchery

Discharger rating: Minor
City: Erwin
County: Unicoi
EFO Name: Johnson City
Issuance Date: 7/01/05
Expiration Date: 5/31/10
Receiving Stream(s): Love Spring Creek at mile 0.5
HUC-12: 080102030303
Effluent Summary: Industrial wastewater (water from a fish farm operation) through Outfall 001
Treatment system: -

SEGMENT	TN06010108010_1910
Name	Spring Creek
Size	1.7
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Fish and Aquatic Life (Non-Supporting), Recreation (Not Assessed), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	Other anthropogenic substrate alterations
Sources	Discharges from Municipal Separate Storm Sewer Systems (MS4)

Table 6-18. Stream Segment Information for TWRA - Erwin Fish Hatchery.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
48hr LC50: *Ceriodaphnia Dubia*	All Year	100	Percent	DMin Conc	Annually	Grab	Effluent
48hr LC50: Fathead Minnows	All Year	100	Percent	DMin Conc	Annually	Grab	Effluent
D.O.	All Year	7	mg/L	DMin Conc	2/Month	Grab	Effluent
Flow	All Year		MGD	DMax Load	2/Month	Instantaneous	Effluent
Flow	All Year		MGD	MAvg Load	2/Month	Instantaneous	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	15	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Month	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Month	Grab	Effluent

Table 6-19. Permit Limits for TWRA - Erwin Fish Hatchery.

Comments: *None*

TN0023001 Erwin STP

Discharger rating: Minor
City: Erwin
County: Unicoi
EFO Name: Johnson City
Issuance Date: 1/01/06
Expiration Date: 8/31/10
Receiving Stream(s): Nolichucky River at mile 94.4
HUC-12: 080102030303
Effluent Summary: Biologically treated municipal wastewater from Outfall 001
Treatment system: Screening and grit removal with mechanical screens, primary sedimentation, rotating biological contactors, secondary sedimentation, disinfection by chlorination

SEGMENT	TN06010108010_2000
Name	Nolichucky River
Size	6.5
Unit	Miles
First Year on 303(d) List	1990
Designated Uses	Domestic Water Supply (Supporting), Livestock Watering and Wildlife (Supporting), Irrigation (Supporting), Recreation (Supporting), Industrial Water Supply (Supporting), Fish and Aquatic Life (Non-Supporting)
Causes	Sedimentation/Siltation
Sources	Grazing in Riparian or Shoreline Zones, Sources Outside State Juristiction or Borders

Table 6-20. Stream Segment Information for Erwin STP.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
48hr LC50: *Ceriodaphnia Dubia*	All Year	5	Percent	DMin Conc	Quarterly	Grab	Effluent
48hr LC50: Fathead Minnows	All Year	5	Percent	DMin Conc	Quarterly	Grab	Effluent
BOD % removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
BOD % removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
BOD5	All Year	45	mg/L	DMax Conc	3/Week	Composite	Effluent
BOD5	All Year		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
BOD5	All Year	634	lb/day	WAvg Load	3/Week	Composite	Effluent
BOD5	All Year	40	mg/L	WAvg Conc	3/Week	Composite	Effluent
BOD5	All Year	475	lb/day	MAvg Load	3/Week	Composite	Effluent
BOD5	All Year		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
BOD5	All Year	30	mg/L	MAvg Conc	3/Week	Composite	Effluent
Bypass of Treatment (occurrences)	All Year		Occurences/ Month	MAvg Load	Continuous	Visual	Wet Weather
D.O.	All Year	3	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	941	#/100mL	DMax Conc	3/Week	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Influent (Raw Sewage)
Flow	All Year		MGD	DMax Load	Daily	Continuous	Influent (Raw Sewage)
Overflow Use Occurences	All Year		Occurences/ Month	MAvg Load	Continuous	Visual	Wet Weather
Overflow Use Occurences	All Year		Occurences/ Month	MAvg Load	Continuous	Visual	Non Wet Weather
Settleable Solids	All Year	1	mL/L	DMax Conc	3/Week	Grab	Effluent
TRC	All Year	1.24	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	3/Week	Composite	Effluent
TSS	All Year	475	lb/day	MAvg Load	3/Week	Composite	Effluent
TSS	All Year		mg/L	DMax Conc	3/Week	Composite	Influent (Raw Sewage)
TSS	All Year	634	lb/day	WAvg Load	3/Week	Composite	Effluent
TSS	All Year	30	mg/L	MAvg Conc	3/Week	Composite	Effluent
TSS	All Year		mg/L	MAvg Conc	3/Week	Composite	Influent (Raw Sewage)
TSS	All Year	40	mg/L	WAvg Conc	3/Week	Composite	Effluent
TSS % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-21. Permit Limits for Erwin STP.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 20 Biological Oxygen Demand (BOD)
- 8 Escherichia coli
- 16 Bypasses

Comments:
4/11/07: Technical Assistance Visit and file review. In compliance.

TN0021547 Jonesborough STP

Discharger rating: Minor
City: Jonesborough
County: Washington
EFO Name: Johnson City
Issuance Date: 6/1/07
Expiration Date: 10/31/07
Receiving Stream(s): Big Limestone Creek at mile 12.5
HUC-12: 080102030303
Effluent Summary: Treated municipal wastewater from Outfall 001
Treatment system: Waste Activated Sludge to aerobic digestor to drybeds to land application site

SEGMENT	TN06010108510_2000
Name	Little Limestone Creek
Size	13.5
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Livestock Watering and Wildlife (Supporting), Irrigation (Supporting), Fish and Aquatic Life (Non-Supporting), Recreation (Non-Supporting)
Causes	Physical substrate habitat alterations, Escherichia coli
Sources	Grazing in Riparian or Shoreline Zones

Table 6-22. Stream Segment Information for Jonesborough STP.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ammonia as N (Total)	Summer	4	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	12.5	lb/day	DMax Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	3	mg/L	MAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	2	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Summer	8.3	lb/day	MAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	9	mg/L	DMax Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	18.8	lb/day	MAvg Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	28.4	lb/day	DMax Load	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	4.5	mg/L	WAvg Conc	3/Week	Composite	Effluent
Ammonia as N (Total)	Winter	6.8	mg/L	MAvg Conc	3/Week	Composite	Effluent
CBOD % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
CBOD % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
CBOD5	All Year	30	mg/L	DMax Conc	3/Week	Composite	Effluent
CBOD5	All Year	20	mg/L	DMin Conc	3/Week	Composite	Effluent
CBOD5	All Year	83	lb/day	MAvg Load	3/Week	Composite	Effluent
CBOD5	All Year	25	mg/L	MAvg Conc	3/Week	Composite	Effluent
CBOD5	All Year	104	lb/day	DMax Load	3/Week	Composite	Effluent
Cyanide, Total (CN-)	All Year	0.0078	mg/L	MAvg Conc	Semi-annually	Composite	Effluent
D.O.	All Year	6	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
Fecal Coliform	All Year	1000	#/100mL	DMax Conc	3/Week	Grab	Effluent
Fecal Coliform	All Year	200	#/100mL	MAvg Geo Mean	3/Week	Grab	Effluent
Hg (T)	All Year	0.0002	mg/L	MAvg Conc	Semi-annually	Composite	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	68.5	Percent	DMin Conc	Quarterly	Composite	Effluent
IC25 7day Fathead Minnows	All Year	68.5	Percent	DMin Conc	Quarterly	Composite	Effluent
Pb (T)	All Year	0.0438	mg/L	MAvg Conc	Semi-annually	Composite	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	Weekdays	Composite	Effluent
TRC	All Year	0.05	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	3/Week	Composite	Effluent
TSS	All Year	167	lb/day	DMax Load	3/Week	Composite	Effluent
TSS	All Year	30	mg/L	WAvg Conc	3/Week	Composite	Effluent
TSS	All Year	125	lb/day	MAvg Load	3/Week	Composite	Effluent
TSS	All Year	40	mg/L	MAvg Conc	3/Week	Composite	Effluent
TSS % Removal	All Year	40	Percent	DMin % Removal	3/Week	Calculated	% Removal
TSS % Removal	All Year	85	Percent	MAvg % Removal	3/Week	Calculated	% Removal
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-23. Permit Limits for Jonesborough STP.

Enforcement:
Director's Order # 03-061D: For failure to report sanitary sewer overflow.
Agreed Order #04-041D: For failure to send in a semi-annual report for pre-treatment

Comments:
None

TN0024406 Davy Crockett High School

Discharger rating: Minor
City: Jonesborough
County: Washington
EFO Name: Johnson City
Issuance Date: 1/1/06
Expiration Date: 10/31/10
Receiving Stream(s): Little Limestone Creek at mile 8.8
HUC-12: 080102030303
Effluent Summary: Treated municipal wastewater from Outfall 001
Treatment system: Extended aeration

SEGMENT	TN06010108510_2000
Name	Little Limestone Creek
Size	13.5
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Livestock Watering and Wildlife (Supporting), Irrigation (Supporting), Fish and Aquatic Life (Non-Supporting), Recreation (Non-Supporting)
Causes	Physical substrate habitat alterations, Escherichia coli
Sources	Grazing in Riparian or Shoreline Zones

Table 6-24. Stream Segment Information for Davy Crockett High School.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
BOD5	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
BOD5	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
D.O.	All Year	1	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	941	#/100mL	DMax Conc	2/Month	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Conc	2/Month	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Weekdays	Instantaneous	Effluent
Flow	All Year		MGD	DMax Load	Weekdays	Instantaneous	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	0.5	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Week	Grab	Effluent

Table 6-25. Permit Limits for Davy Crockett High School.

Comments:
None

TN0056332 John M. Reed Home, Inc.

Discharger rating: Minor
City: Jonesborough
County: Washington
EFO Name: Johnson City
Issuance Date: 6/1/06
Expiration Date: 12/30/10
Receiving Stream(s): Little Limestone Creek at mile 3.8
HUC-12: 080102030303
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: Extended aeration

SEGMENT	TN06010108030_2000
Name	Big Limestone Creek
Size	8.8
Unit	Miles
First Year on 303(d) List	1990
Designated Uses	Livestock Watering and Wildlife (Supporting), Irrigation (Supporting), Fish and Aquatic Life (Non-Supporting), Recreation (Non-Supporting)
Causes	Nitrates, Phosphate, Sedimentation/Siltation, Escherichia coli
Sources	Grazing in Riparian or Shoreline Zones

Table 6-26. Stream Segment Information for John M. Reed Home, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
BOD5	All Year	45	mg/L	DMax Conc	Monthly	Grab	Effluent
BOD5	All Year	30	mg/L	MAvg Conc	Monthly	Grab	Effluent
D.O.	All Year	1	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Geo Mean	Monthly	Grab	Effluent
E. coli	All Year	941	#/100mL	MAvg Ari Mean	Monthly	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Weekdays	Instantaneous	Effluent
Flow	All Year		MGD	DMax Load	Weekdays	Instantaneous	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	2	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	Monthly	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Week	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent

Table 6-27. Permit Limits for John M. Reed Home, Inc.

Comments:
None

TN0054887 Centerview Elementary School

Discharger rating: Minor
City: Bybee
County: Cocke
EFO Name: Johnson City
Issuance Date: 11/1/05
Expiration Date: 9/30/10
Receiving Stream(s): Slate Creek at mile 3.3
HUC-12: 080102030303
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: Extended aeration

PARAMETER	SEASON	LIMIT	UNITS	DESIGNATOR	FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ammonia as N (Total)	All Year	10	mg/L	DMax Conc	2/Month	Grab	Effluent
Ammonia as N (Total)	All Year	5	mg/L	MAvg Conc	2/Month	Grab	Effluent
CBOD5	All Year	25	mg/L	MAvg Conc	2/Month	Grab	Effluent
CBOD5	All Year	40	mg/L	DMax Conc	2/Month	Grab	Effluent
D.O.	All Year	6	mg/L	DMin Conc	Weekdays	Grab	Effluent
E. coli	All Year	126	#/100mL	MAvg Conc	2/Month	Grab	Effluent
E. coli	All Year	941	#/100mL	DMax Conc	2/Month	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Weekdays	Instantaneous	Effluent
Flow	All Year		MGD	DMax Load	Weekdays	Instantaneous	Effluent
Settleable Solids	All Year	1	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	0.1	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	2/Week	Grab	Effluent

Table 6-28. Permit Limits for Centerview Elementary School.

Comments:
None

6.4.B. Industrial Permits

TN0001899 Jarden Zinc Products, Inc.

Discharger rating: Minor
City: Greeneville
County: Greene
EFO Name: Johnson City
Issuance Date: 11/1/01
Expiration Date: 9/28/05
Receiving Stream(s): Mile 2.9 of Sinking Creek (Outfalls 001, SW1 and 02E) and mile 60.5 of the Nolichucky River (Outfall 002) and Outfall 004 at mile 2.8 of Sinking Creek
HUC-12: 080102030303
Effluent Summary: Noncontact cooling water and air conditioner cooling water from Outfall 001 during dry weather conditions; noncontact cooling water, air conditioner cooling water, and storm water runoff through Outfalls SW1 and 004 during wet weather conditions; treated process wastewater, treated sanitary wastewater, and remediated groundwater through Outfall 002; and treated process wastewater, treated sanitary wastewater, and remediated groundwater through Outfall 02E under emergency conditions
Treatment system: -

SEGMENT	TN06010108064_1000
Name	Sinking Creek
Size	3.8
Unit	Miles
First Year on 303(d) List	1990
Designated Uses	Irrigation (Supporting), Recreation (Non-Supporting), Livestock Watering and Wildlife (Supporting), Fish and Aquatic Life (Supporting), Industrial Water Supply (Supporting)
Causes	Escherichia coli
Sources	Grazing in Riparian or Shoreline Zones

Table 6-29. Stream Segment Information for Jarden Zinc Products, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
48hr LC50: Ceriodaphnia Dubia	All Year	3.7	Percent	DMin Conc	Continuous	Composite	Effluent
48hr LC50: Fathead Minnows	All Year	3.7	Percent	DMin Conc	Continuous	Composite	Effluent
Ag (T)	All Year		mg/L	DMax Conc	1/Discharge	Grab	Effluent
Cd (T)	All Year		mg/L	DMax Conc	1/Discharge	Grab	Effluent
Cr (T)	All Year		mg/L	DMax Conc	1/Discharge	Grab	Effluent
Cu (T)	All Year		mg/L	DMax Conc	1/Discharge	Grab	Effluent
Cyanide, Total (CN-)	All Year		mg/L	DMax Conc	1/Discharge	Grab	Effluent
Duration of Discharge	All Year		Hours/Day	DMax Load	1/Discharge	Grab	Effluent
Duration of Discharge	All Year		Hours/Day	MAvg Load	1/Discharge	Grab	Effluent
Flow	All Year		MGD	DMax Load	1/Discharge	Recorder	Effluent
Flow	All Year		MGD	MAvg Load	1/Discharge	Recorder	Effluent
Ni (T)	All Year		mg/L	DMax Conc	1/Discharge	Grab	Effluent
Pb (T)	All Year		mg/L	DMax Conc	1/Discharge	Grab	Effluent
Zn (T)	All Year		mg/L	DMax Conc	1/Discharge	Grab	Effluent
pH	All Year	9	SU	DMax Conc	1/Discharge	Grab	Effluent
pH	All Year	6	SU	DMin Conc	1/Discharge	Grab	Effluent

Table 6-30. Permit Limits for Outfall 02E at Jarden Zinc Products, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	DMax Load	Semi-annually	Estimate	Effluent
TSS	All Year		mg/L	DMax Conc	Semi-annually	Grab	Effluent
Zn (T)	All Year		mg/L	DMax Conc	Semi-annually	Grab	Effluent
pH	All Year		SU	DMax Conc	Semi-annually	Grab	Effluent

Table 6-31. Permit Limits for Outfall SW1 at Jarden Zinc Products, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ag (T)	All Year	0.2	mg/L	DMax Conc	Monthly	Composite	Effluent
Cd (T)	All Year	0.7	mg/L	DMax Conc	Monthly	Composite	Effluent
Cd (T)	All Year	0.26	mg/L	MAvg Conc	Monthly	Composite	Effluent
Cr (T)	All Year	2.8	mg/L	DMax Conc	Monthly	Composite	Effluent
Cr (T)	All Year	1.71	mg/L	MAvg Conc	Monthly	Composite	Effluent
Cu (T)	All Year	3.4	mg/L	DMax Conc	Monthly	Composite	Effluent
Cu (T)	All Year	2.07	mg/L	MAvg Conc	Monthly	Composite	Effluent
Cyanide, Total (CN-)	All Year	1.2	mg/L	DMax Conc	Monthly	Grab	Effluent
Cyanide, Total (CN-)	All Year	0.65	mg/L	MAvg Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Continuous	Recorder	Effluent
Flow	All Year		MGD	MAvg Load	Continuous	Recorder	Effluent
Ni (T)	All Year	4	mg/L	DMax Conc	Monthly	Composite	Effluent
Ni (T)	All Year	2.38	mg/L	MAvg Conc	Monthly	Composite	Effluent
Oil and Grease (Freon EM)	All Year	54	mg/L	DMax Conc	Monthly	Composite	Effluent
Oil and Grease (Freon EM)	All Year	27.2	mg/L	MAvg Conc	Monthly	Composite	Effluent
Pb (T)	All Year	0.7	mg/L	DMax Conc	Monthly	Composite	Effluent
Pb (T)	All Year	0.43	mg/L	MAvg Conc	Monthly	Composite	Effluent
TSS	All Year	64.1	mg/L	DMax Conc	Monthly	Composite	Effluent
TSS	All Year	32.9	mg/L	MAvg Conc	Monthly	Composite	Effluent
Total Toxic Organics (TTO) (40CFR433)	All Year	2.13	mg/L	DMax Conc	Monthly	Grab	Effluent
Zn (T)	All Year	2.6	mg/L	DMax Conc	Monthly	Composite	Effluent
Zn (T)	All Year	1.48	mg/L	MAvg Conc	Monthly	Composite	Effluent
pH	All Year	9	SU	DMax Conc	Weekly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekly	Grab	Effluent

Table 6-32. Permit Limits for Outfall 02A at Jarden Zinc Products, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
BOD5	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
BOD5	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
Fecal Coliform	All Year	1000	#/100mL	DMax Conc	2/Month	Grab	Effluent
Fecal Coliform	All Year	200	#/100mL	MAvg Geo Mean	2/Month	Grab	Effluent
Flow	All Year		MGD	DMax Load	Continuous	Recorder	Effluent
Flow	All Year		MGD	MAvg Load	Continuous	Recorder	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	2/Week	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Week	Grab	Effluent

Table 6-33. Permit Limits for Outfall 02B at Jarden Zinc Products, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
1,2-Cis-Dichloroethylene	All Year		mg/L	DMax Conc	Monthly	Grab	Effluent
1,2-Dichloroethane	All Year		mg/L	DMax Conc	Monthly	Grab	Effluent
Benzene	All Year	0.005	mg/L	DMax Conc	Monthly	Grab	Effluent
Ethylbenzene	All Year	0.01	mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		GPD	DMax Load	Daily	Totalizer	Effluent
Flow	All Year		GPD	MAvg Load	Daily	Totalizer	Effluent
Tetrachloroethylene	All Year		mg/L	DMax Conc	Monthly	Grab	Effluent
Toluene	All Year	0.01	mg/L	DMax Conc	Monthly	Grab	Effluent
Trichloroethylene	All Year		mg/L	DMax Conc	Monthly	Grab	Effluent
Xylene	All Year	0.01	mg/L	DMax Conc	Monthly	Grab	Effluent

Table 6-34. Permit Limits for Outfall 02C at Jarden Zinc Products, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	DMax Load	Weekdays	Instantaneous	Effluent
Flow	All Year		MGD	MAvg Load	Weekdays	Instantaneous	Effluent
Temperature (°C)	All Year		Deg. C	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-35. Permit Limits for Outfall 001 at Jarden Zinc Products, Inc.

SEGMENT	TN06010108010_2000
Name	Nolichucky River
Size	6.5
Unit	Miles
First Year on 303(d) List	1990
Designated Uses	Domestic Water Supply (Supporting), Livestock Watering and Wildlife (Supporting), Irrigation (Supporting), Recreation (Supporting), Industrial Water Supply (Supporting), Fish and Aquatic Life (Non-Supporting)
Causes	Sedimentation/Siltation
Sources	Grazing in Riparian or Shoreline Zones, Sources Outside State Juristiction or Borders

Table 6-36. Stream Segment Information for Outfall 002 at Jarden Zinc Products, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
48hr LC50: Ceriodaphnia Dubia	All Year	1.1	Percent	DMin Conc	Monthly	Composite	Effluent
48hr LC50: Fathead Minnows	All Year	1.1	Percent	DMin Conc	Monthly	Composite	Effluent
Flow	All Year		MGD	DMax Load	Continuous	Recorder	Effluent
Flow	All Year		MGD	MAvg Load	Continuous	Recorder	Effluent
pH	All Year	9	SU	DMax Conc	Weekdays	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekdays	Grab	Effluent

Table 6-37. Permit Limits for Outfall 002 at Jarden Zinc Products, Inc.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 1 Xylene

Comments:
Melting & casting of alloyed zinc strip, rolling & drawing of non-ferrous metals (zinc), and stamping & electroplating of ferrous and non-ferrous coinage products.

4/21/2006: Received addendum to original permit application describing a new zinc plating line that will expand the facility operation. Prepared a letter indicating that the current permit would authorize this operational change, in case the new permit is not issued prior to start up - 7/26/06

TN0054844 Plus Mark Inc.

Discharger rating: Minor
City: Afton
County: Greene
EFO Name: Johnson City
Issuance Date: 1/01/06
Expiration Date: 11/30/10
Receiving Stream(s): Sinking Creek at mile 2.8
HUC-12: 080102030303
Effluent Summary: Treated domestic wastewater from Outfall 001
Treatment system: Extended aeration treatment system is changed to septic tank, recirculating sand filter and UV disinfection

SEGMENT	TN06010108064_1000
Name	Sinking Creek
Size	3.8
Unit	Miles
First Year on 303(d) List	1990
Designated Uses	Irrigation (Supporting), Recreation (Non-Supporting), Livestock Watering and Wildlife (Supporting), Fish and Aquatic Life (Supporting), Industrial Water Supply (Supporting)
Causes	Escherichia coli
Sources	Grazing in Riparian or Shoreline Zones

Table 6-38. Stream Segment Information for Plus Mark Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ammonia as N (Total)	All Year	5	mg/L	MAvg Conc	2/Month	Grab	Effluent
Ammonia as N (Total)	All Year	10	mg/L	DMax Conc	2/Month	Grab	Effluent
BOD5	All Year	25	mg/L	MAvg Conc	2/Month	Grab	Effluent
BOD5	All Year	40	mg/L	DMax Conc	2/Month	Grab	Effluent
D.O.	All Year	2	mg/L	DMin Conc	Weekdays	Grab	Effluent
Flow	All Year		MGD	MAvg Load	Weekdays	Instantaneous	Effluent
Flow	All Year		MGD	DMax Load	Weekdays	Instantaneous	Effluent
Settleable Solids	All Year	1	mg/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	1	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Week	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent

Table 6-39. Permit Limits for Plus Mark Inc.

Comments: Revised permit application received 2/1/07. Presently working on plans for a replacement wastewater treatment plant, Permit Section should be working on the application/permit modification, plans submission/review/approval to follow the permitting decision(s), planning to start construction as soon as possible, generally good compliance

TN0073466 Cansler Farm Site #3

Discharger rating: Minor
City: Greeneville
County: Greene
EFO Name: Johnson City
Issuance Date: 6/01/05
Expiration Date: 8/31/10
Receiving Stream(s): Pond Creek at mile 0.9 to Mink Creek at mile 1.3 to Lick Creek at mile 16.0
HUC-12: 080102030303
Effluent Summary: Treated groundwater through Outfall 001
Treatment system: Filtration and carbon absorption units

Segment	TN06010108035_2810
Name	Pond Creek
Size	2.2
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Fish and Aquatic Life (Non-Supporting), Recreation (Not Assessed), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	Physical substrate habitat alterations
Sources	Grazing in Riparian or Shoreline Zones

Table 6-40. Stream Segment Information for Cansler Farm Site #3.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
1,1,1-Trichloroethane	All Year	10	ug/L	DMax Conc	Monthly	Grab	Effluent
1,1-Dichloroethane	All Year	10	ug/L	DMax Conc	Monthly	Grab	Effluent
Methylene Chloride	All Year	10	ug/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year		mg/L	MAvg Conc	Monthly	Grab	Effluent
Toluene	All Year	10	ug/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-41. Permit Limits for Cansler Farm Site #3.

Comments:
None

TN0002038 Nuclear Fuel Services

Discharger rating: Minor
City: Erwin
County: Unicoi
EFO Name: Johnson City
Issuance Date: 8/01/06
Expiration Date: 8/31/10
Receiving Stream(s): Nolichucky River at mile 94.6 for Outfall 001
HUC-12: 080102030303
Effluent Summary: Process wastewater, laboratory facilities, laundry facility, fuel production facilities, low enriched radioactive operation, miscellaneous, high enriched radioactive recovery operations, fuel development through Outfall 001
Treatment system: Waste segregation, Ammonia Stripping, Chemical Precipitation, Flocculation, Pressure Filtration, Dollinger Filter, Ion Exchange, Neutralization

SEGMENT	TN06010108010_5000
Name	Nolichucky River
Size	9.55
Unit	Miles
First Year on 303(d) List	-
Designated Uses	Domestic Water Supply (Supporting), Industrial Water Supply (Supporting), Fish and Aquatic Life (Supporting), Recreation (Not Assessed), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	N/A
Sources	N/A

Table 6-42. Stream Segment Information for Nuclear Fuel Services.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ag (T)	All Year	0.05	mg/L	DMax Conc	Monthly	Grab	Effluent
Ammonia as N (Total)	All Year	30	mg/L	DMax Conc	1/Batch	Grab	Effluent
Ammonia as N (Total)	All Year	20	mg/L	MAvg Conc	1/Batch	Grab	Effluent
As (T)	All Year		mg/L	DMax Conc	Quarterly	Grab	Effluent
COD	All Year	370	mg/L	DMax Conc	Monthly	Grab	Effluent
Cd (T)	All Year	0.01	mg/L	DMax Conc	Monthly	Grab	Effluent
Cr (T)	All Year		mg/L	DMax Conc	Quarterly	Grab	Effluent
Cu (T)	All Year	1	mg/L	DMax Conc	Monthly	Grab	Effluent
F (T)	All Year	20	mg/L	DMax Conc	1/Batch	Grab	Effluent
F (T)	All Year	15	mg/L	MAvg Conc	1/Batch	Grab	Effluent
Flow	All Year		MGD	DMax Load	1/Batch	Estimate	Effluent
Flow	All Year		MGD	MAvg Load	1/Batch	Estimate	Effluent
Hg (T)	All Year	0.05	mg/L	DMax Conc	1/Batch	Grab	Effluent
Hg (T)	All Year	0.0004	mg/L	MAvg Conc	1/Batch	Grab	Effluent

Table 6-43a.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ni (T)	All Year		mg/L	DMax Conc	Quarterly	Grab	Effluent
Nitrite + Nitrate Total (as N)	All Year	420	lb/day	DMax Load	1/Batch	Grab	Effluent
Pb (T)	All Year	0.1	mg/L	DMax Conc	Monthly	Grab	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	1/Batch	Grab	Effluent
TRC	All Year	2	mg/L	DMax Conc	1/Batch	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	1/Batch	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	1/Batch	Grab	Effluent
Tetrachloroethylene	All Year		mg/L	DMax Conc	Quarterly	Grab	Effluent
Uranium Natural Total	All Year	4	mg/L	DMax Conc	1/Batch	Grab	Effluent
Uranium Natural Total	All Year	2	mg/L	MAvg Conc	1/Batch	Grab	Effluent
pH	All Year	9	SU	DMax Conc	1/Batch	Grab	Effluent
pH	All Year	6	SU	DMin Conc	1/Batch	Grab	Effluent

Table 6-43b.

Tables 6-43a-b. Permit Limits for Nuclear Fuel Services.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 1 Mercury
- 1 Ammonia
- 1 Nitrite + Nitrate

Comments:
Nuclear fuel manufacturing and uranium recovery facility. Also conducts decommissioning/remediating and groundwater treatment activities related to past activities.

TN0023973 Hoover Precision Products, Inc

Discharger rating: Minor
City: Erwin
County: Unicoi
EFO Name: Johnson City
Issuance Date: 8/01/06
Expiration Date: 6/30/10
Receiving Stream(s): McInturff Branch at mile 0.16 to North Indian Creek at mile 1.0
HUC-12: 080102030303
Effluent Summary: Industrial process wastewater, storm water runoff and non-contact cooling water through Outfall 001
Treatment system: -

SEGMENT	TN06010108029_1000
Name	North Indian Creek
Size	8
Unit	Miles
First Year on 303(d) List	-
Designated Uses	Livestock Watering and Wildlife (Supporting), Domestic Water Supply (Supporting), Industrial Water Supply (Supporting), Fish and Aquatic Life (Non-Supporting), Recreation (Not Assessed), Irrigation (Supporting)
Causes	Sedimentation/Siltation
Sources	Discharges from Municipal Separate Storm Sewer Systems (MS4)

Table 6-44. Stream Segment Information for Hoover Precision Products, Inc.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
BOD5	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
BOD5	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
Flow	All Year		MGD	DMax Load	Weekdays	Instantaneous	Effluent
Flow	All Year		MGD	MAvg Load	2/Month	Instantaneous	Effluent
Oil and Grease (Freon EM)	All Year	16.9	mg/L	DMax Conc	2/Month	Grab	Effluent
Oil and Grease (Freon EM)	All Year	10	mg/L	MAvg Conc	2/Month	Grab	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	41	mg/L	DMax Conc	2/Month	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Month	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Month	Grab	Effluent

Table 6-45. Permit Limits for Hoover Precision Products, Inc.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 1 Settleable Solids

Comments: *None*

TN0057983 Aerojet Ordinance Tennessee

Discharger rating: Minor
City: Jonesborough
County: Washington
EFO Name: Johnson City
Issuance Date: 2/1/02
Expiration Date: 12/31/05
Receiving Stream(s): Little Limestone Creek at miles 8.7 (Outfall 001) and 8.8 (Outfalls 002 and 003)
HUC-12: 080102030303
Effluent Summary: Treated process wastewater through Outfall 001, non-contact cooling water and cooling tower blowdown through Outfall 002, and treated sanitary wastewater through Outfall 003
Treatment system:

SEGMENT	TN06010108510_2000
Name	Little Limestone Creek
Size	13.5
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Livestock Watering and Wildlife (Supporting), Irrigation (Supporting), Fish and Aquatic Life (Non-Supporting), Recreation (Non-Supporting)
Causes	Physical substrate habitat alterations, Escherichia coli
Sources	Grazing in Riparian or Shoreline Zones

Table 6-46. Stream Segment Information for Aerojet Ordinance Tennessee.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Cd (T)	All Year	0.006	lb/day	DMax Load	Semi-annually	Grab	Effluent
Cd (T)	All Year	0.002	lb/day	MAvg Load	Semi-annually	Grab	Effluent
Cr (T)	All Year	0.051	lb/day	DMax Load	Semi-annually	Grab	Effluent
Cr (T)	All Year	0.025	lb/day	MAvg Load	Semi-annually	Grab	Effluent
Cu (T)	All Year	0.05	lb/day	DMax Load	Semi-annually	Grab	Effluent
Cu (T)	All Year	0.027	lb/day	MAvg Load	Semi-annually	Grab	Effluent
F (T)	All Year	1.974	lb/day	DMax Load	Weekly	Grab	Effluent
F (T)	All Year	0.89	lb/day	MAvg Load	Weekly	Grab	Effluent
Flow	All Year		MGD	DMax Load	1/Batch	Estimate	Effluent
IC25 7day Ceriodaphnia Dubia	All Year	1.2	Percent	DMin Conc	Continuous	Grab	Effluent
IC25 7day Fathead Minnows	All Year	1.2	Percent	DMin Conc	Continuous	Grab	Effluent
Lead Total Dry Weight (as Pb)	All Year	0.009	lb/day	DMax Load	Semi-annually	Grab	Effluent
Lead Total Dry Weight (as Pb)	All Year	0.004	lb/day	MAvg Load	Semi-annually	Grab	Effluent
Mo (T)	All Year	0.144	lb/day	DMax Load	Semi-annually	Grab	Effluent
Mo (T)	All Year	0.064	lb/day	MAvg Load	Semi-annually	Grab	Effluent
Ni (T)	All Year	0.056	lb/day	DMax Load	Semi-annually	Grab	Effluent
Ni (T)	All Year	0.031	lb/day	MAvg Load	Semi-annually	Grab	Effluent
Oil and Grease (Freon EM)	All Year	2.324	lb/day	DMax Load	Weekly	Grab	Effluent
Oil and Grease (Freon EM)	All Year	1.354	lb/day	MAvg Load	Weekly	Grab	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Weekly	Grab	Effluent
TSS	All Year	4.471	lb/day	DMax Load	Weekly	Grab	Effluent
TSS	All Year	2.141	lb/day	MAvg Load	Weekly	Grab	Effluent
Uranium Natural Total	All Year	12	mg/L	DMax Conc	Weekly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Weekly	Grab	Effluent
pH	All Year	6	SU	DMin Conc	Weekly	Grab	Effluent

Table 6-47. Permit Limits for Outfall 001 at Aerojet Ordinance Tennessee.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	DMax Load	2/Month	Estimate	Effluent
Flow	All Year		MGD	MAvg Load	2/Month	Estimate	Effluent
Temperature (°C)	All Year		Deg. C	DMax Conc	2/Month	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Month	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Month	Grab	Effluent

Table 6-48. Permit Limits for Outfall 002 at Aerojet Ordinance Tennessee.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ammonia as N (Total)	All Year	20	mg/L	DMax Conc	2/Month	Grab	Effluent
Ammonia as N (Total)	All Year	15	mg/L	MAvg Conc	2/Month	Grab	Effluent
BOD5	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
BOD5	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
D.O.	All Year	1	mg/L	DMin Conc	Weekdays	Grab	Effluent
Fecal Coliform	All Year	1000	#/100mL	DMax Conc	2/Month	Grab	Effluent
Fecal Coliform	All Year	200	#/100mL	MAvg Geo Mean	2/Month	Grab	Effluent
Flow	All Year		MGD	DMax Load	Continuous	Recorder	Effluent
Flow	All Year		MGD	MAvg Load	Continuous	Recorder	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	2/Week	Grab	Effluent
TRC	All Year	2	mg/L	DMax Conc	Weekdays	Grab	Effluent
TSS	All Year	45	mg/L	DMax Conc	2/Month	Grab	Effluent
TSS	All Year	30	mg/L	MAvg Conc	2/Month	Grab	Effluent
pH	All Year	9	SU	DMax Conc	2/Week	Grab	Effluent
pH	All Year	6	SU	DMin Conc	2/Week	Grab	Effluent

Table 6-49. Permit Limits for Outfall 003 at Aerojet Ordinance Tennessee.

Compliance History:
The following numbers of exceedences were noted in PCS:

- 4 Total Chlorine
- 2 pH
- 1 Total Chromium
- 1 Total Lead
- 1 Total Molybdenum
- 1 Fecal coliform

Enforcement:
Notice of Violation for Propylene glycol release from outfall 002

Comments:
Manufacturer of tungsten and uranium metal, alloys, castings, mill products and machined pieces. Permit Section currently working on permit renewal, generally good compliance is known although there may be some issue(s) with sample location (that will be explored further as part of permitting process)

TN0068187 Liberty Fibers Corporation

Discharger rating: Minor
City: Lowland
County: Hamblen
EFO Name: Johnson City
Issuance Date: 10/01/06
Expiration Date: 8/31/10
Receiving Stream(s): Nolichucky River at mile 7.6 (Outfall 001), Nolichucky River at mile 7.4 (Outfall 002) and Flat Creek (Outfalls 003, 004, S03, S04, S05) Note: Receiving stream is tier two stream, see no degradation statement in permit rationale
HUC-12: 080102030303
Effluent Summary: Treated industrial process wastewater, sanitary wastewater, misc. utilities wastewater, coal pile runoff, storm water runoff, and landfill leachate through Outfall 001, noncontact cooling water, reservoir drainage, and storm water runoff through Outfall 002, non-process rayon staple, idle plant building, shops, and miscellaneous discharges including pump seal water, A/C condensate, and condenser cooling water through Outfalls 003/004 and storm water runoff through Outfalls S03, S04 and S05
Treatment system: Activated sludge, stabilization pond and discharge to surface water

SEGMENT	TN06010108001_2000
Name	Nolichucky River
Size	7.7
Unit	Miles
First Year on 303(d) List	1990
Designated Uses	Recreation (Non-Supporting), Livestock Watering and Wildlife (Supporting), Fish and Aquatic Life (Supporting), Industrial Water Supply (Supporting), Domestic Water Supply (Supporting), Irrigation (Supporting)
Causes	Escherichia coli
Sources	Grazing in Riparian or Shoreline Zones

Table 6-50. Stream Segment Information for Outfalls 001, 002, and 020 at Liberty Fibers Corporation.

SEGMENT	TN06010108001_0100
Name	Flat Creek
Size	4.9
Unit	Miles
First Year on 303(d) List	1998
Designated Uses	Fish and Aquatic Life (Supporting), Recreation (Non-Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	Escherichia coli
Sources	Grazing in Riparian or Shoreline Zones

Table 6-51. Stream Segment Information for Outfalls 003, 004, SW3, SW4, and SW5 at Liberty Fibers Corporation.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	MAvg Load	Quarterly	Instantaneous	Effluent
Flow	All Year		MGD	DMax Load	Quarterly	Instantaneous	Effluent
TOC	All Year		mg/L	DMax Conc	Quarterly	Grab	Effluent
Temperature Diff. Downstrm & Upstrm (°C)	All Year		°C	DMax Load	Daily	Grab	Effluent
pH	All Year		SU	DMax Conc	Quarterly	Grab	Effluent

Table 6-52. Permit Limits for Outfall 020 at Liberty Fibers Corporation.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Ammonia as N (Total)	All Year		mg/L	DMax Conc	Weekly	Composite	Effluent
Ammonia as N (Total)	All Year		mg/L	MAvg Conc	Weekly	Composite	Effluent
BOD5	All Year	1161	lb/day	MAvg Load	3/Week	Composite	Effluent
BOD5	All Year		lb/day	DMax Load	3/Week	Composite	Effluent
Cr (T)	All Year		mg/L	DMax Conc	Semi-annually	Composite	Effluent
Cu (T)	All Year		mg/L	DMax Conc	Semi-annually	Composite	Effluent
Cyanide, Total (CN-)	All Year		mg/L	DMax Conc	Semi-annually	Composite	Effluent
Flow	All Year		MGD	DMax Load	Daily	Continuous	Effluent
Flow	All Year		MGD	MAvg Load	Daily	Continuous	Effluent
IC25 7day *Ceriodaphnia Dubia*	All Year	5.6	Percent	DMin Conc	Semi-annually	Composite	Effluent
IC25 7day Fathead Minnows	All Year	5.6	Percent	DMin Conc	Semi-annually	Composite	Effluent
Ni (T)	All Year		mg/L	DMax Conc	Semi-annually	Composite	Effluent
Pb (T)	All Year		mg/L	DMax Conc	Semi-annually	Composite	Effluent
TOC	All Year		mg/L	DMax Conc	Quarterly	Composite	Effluent
TOC	All Year		mg/L	MAvg Conc	Quarterly	Composite	Effluent
TSS	All Year		mg/L	DMax Conc	3/Week	Composite	Effluent
TSS	All Year		mg/L	MAvg Conc	3/Week	Composite	Effluent
Temperature Diff. Downstrm & Upstream (°C)	All Year		°C	DMax Load	Daily	Grab	Effluent
Zn (T)	All Year		mg/L	DMax Conc	Semi-annually	Composite	Effluent
pH	All Year	9	SU	DMax Conc	3/Week	Grab	Effluent
pH	All Year	6	SU	DMin Conc	3/Week	Grab	Effluent

Table 6-53. Permit Limits for Outfall 002 at Liberty Fibers Corporation.

Compliance History:

The following numbers of exceedences were noted in PCS:

- 1 Total Chlorine
- 1 Escherichia coli
- 1 Diethyl phthalate

Comments:

The wastewater treatment plant has been sold to an LLC headed by Mike Ball. Mr. Ball is interested in charging those remaining entities at this old industrial site for sewer service, and he is also interested in trucking in wastewater from outside the immediate area. He has been told he must apply for a permit as a Centralized Waste Treatment Plant. He has also been told that if he functions as a privately owned public utility providing service to the businesses connected to his plant, he must have a Certificate of Convenience and Necessity from the Tennessee Regulatory Authority.

Liberty Fibers likewise is being told their permit must change in a major way. They no longer own 001, the wastewater plant. They no longer control all the activities in the watershed of outfall 002 (this is Nylon Branch, which the Knoxville Office has determined meets our criteria as a stream), and the outfalls 003, and 004 are no longer part of a rayon process. In fact, the existing permit was written for a rayon plant that no longer exists and will never exist again. The rayon plant has been closed and its production works demolished or hauled away.

6.4.C. Water Treatment Permits

TN0004791 North Greene WTP

Discharger rating: Minor
City: Greeneville
County: Greene
EFO Name: Johnson City
Issuance Date: 10/01/04
Expiration Date: 9/27/09
Receiving Stream(s): Lick Creek at mile 49.7
HUC-12: 080102030303
Effluent Summary: Filter backwash and/or sedimentation basin washdown from Outfall 001
Treatment system: Turbidity removal using PAC (coagulant), potassium permanganate, bleach, fluoride, hexametaphosphate

SEGMENT	TN06010108035_7000
Name	Lick Creek
Size	9.4
Unit	Miles
First Year on 303(d) List	2004
Designated Uses	Domestic Water Supply (Supporting), Industrial Water Supply (Supporting), Fish and Aquatic Life (Non-Supporting), Recreation (Non-Supporting), Irrigation (Supporting), Livestock Watering and Wildlife (Supporting)
Causes	Nitrates, Physical substrate habitat alterations, Sedimentation/Siltation, Escherichia coli
Sources	Grazing in Riparian or Shoreline Zones

Table 6-54. Stream Segment Information for North Greene WTP.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Al (T)	All Year	10	mg/L	DMax Conc	Monthly	Grab	Effluent
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	0.35	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent

Table 6-55. Permit Limits for North Greene WTP.

Comments: Turbidity removal WTP

TN0079090 Witt Utility District - Water Treatment Plant

Discharger rating: Minor
City: Morristown
County: Hamblen
EFO Name: Knoxville
Issuance Date: 7/17/06
Expiration Date: 9/27/09
Receiving Stream(s): Long Creek at approximate mile 2.8
HUC-12: 080102030303
Effluent Summary: Filter backwash and/or sedimentation basin washdown from Outfall 001
Treatment system: Polyaluminum chloride and chlorine bleach for pre-disinfection and coagulation, polymer injection, bleach for post-infection, and hydrofluorosilic acid as needed

SEGMENT	TN06010108043_1000
Name	Long Creek
Size	13.5
Unit	Miles
First Year on 303(d) List	2002
Designated Uses	Livestock Watering and Wildlife (Supporting), Fish and Aquatic Life (Supporting), Recreation (Non-Supporting), Irrigation (Supporting)
Causes	Escherichia coli
Sources	Grazing in Riparian or Shoreline Zones

Table 6-56. Stream Segment Information for Witt Utility District - Water Treatment Plant.

PARAMETER	SEASON	LIMIT	UNITS	SAMPLE DESIGNATOR	MONITORING FREQUENCY	SAMPLE TYPE	MONITORING LOCATION
Flow	All Year		MGD	DMax Load	Monthly	Instantaneous	Effluent
Settleable Solids	All Year	0.5	mL/L	DMax Conc	Monthly	Grab	Effluent
TRC	All Year	0.12	mg/L	DMax Conc	Monthly	Grab	Effluent
TSS	All Year	40	mg/L	DMax Conc	Monthly	Grab	Effluent
pH	All Year	6.5	SU	DMin Conc	Monthly	Grab	Effluent
pH	All Year	9	SU	DMax Conc	Monthly	Grab	Effluent

Table 6-57. Permit Limits for Witt Utility District - Water Treatment Plant.

Comments:
Turbidity removal WTP

APPENDIX II

ID	NAME	Hazard
307001	MORGAN	S
307002	TOM AUSTIN	0
307003	ROLLING G	0
307004	GRAYSBURG HILLS	L
307005	MALONE LAKE	3
307006	LAKEVIEW ESTATES	L
327001	C. W. JUSTIS	L
327003	PANTHER LAKE	1
877002	THUNDER HOLLOW	2
307007	UNIMIN CORP POND 18	S

Table A2-1. Inventoried Dams in the Tennessee Portion of the Nolichucky River Watershed. *Hazard Codes: (H, 1), High; (S, 2), Significant; (L, 3), Low. TDEC only regulates dams indicated by a numeric hazard score.*

LAND COVER/LAND USE	ACRES	% OF WATERSHED
Deciduous Forest	284113	39.3%
Evergreen Forest	20073	2.8%
Evergreen Shrubland	5862	0.8%
Grassland/Herbaceous	10116	1.4%
High Intensity Commercial/Industrial/Transportation	3156	0.4%
High Intensity Residential	11264	1.6%
Low Intensity Residential	37659	5.2%
Mixed Forest	14281	2%
Open Water	2068	0.3%
Pasture/Hay	311515	43.1%
Row Crops	19795	2.7%
Wetlands	1769	0.2%
Total	722344	100%

Table A2-2. Land Use Distribution in the Tennessee Portion of the Nolichucky River Watershed. *Data are from Multi-Resolution Land Characterization (MRLC) derived by applying a generalized Anderson level II system to mosaics of Landsat thematic mapper images collected every five years.*

ECOREGION	REFERENCE STREAM	WATERSHED (HUC)	
Southern Igneous Ridges and Mountains (66d)	Black Branch (66D01)	Watauga River	06010103
	Laurel Fork Creek (66D03)	Watauga River	06010103
	Doe River (66D05)	Watauga River	06010103
	Tumbling Creek (66D06)	Nolichucky River	06010108
	Little Stony Creek (66D07)	Watauga River	06010103
Southern Sedimentary Ridges (66e)	Gentry Creek (66E04)	SF Holston River	06010102
	Clark Creek (66E09)	Nolichucky River	06010108
	Lower Higgins Creek (66E11)	Nolichucky River	06010108
	Double Branch (66E17)	Watts Bar/Fort Loudoun Lake	06010201
	Gee Creek (66E18)	Hiwassee	06020002
Limestone Valleys and Coves (66f)	Abrams Creek (66F06)	Little Tennessee River	06010204
	Beaverdam Creek (66F07)	SF Holston River	06010102
	Stony Creek (66F08)	Watauga River	06010103
Southern Metasedimentary Mountains (66g)	Middle Prong Little River (66G04)	Lower French Broad	06010107
	Little River (66G05)	Watts Bar/Fort Loudoun Lake	06010201
	Citico Creek (66G07)	Little Tennessee River	06010204
	North River (66G09)	Little Tennessee River	06010204
	Sheeds Creek (66G12)	Conasauga River	03150101
Southern Limestone/Dolomite Valleys and Low Rolling Hills (67f)	Clear Creek (67F06)	Lower Clinch River	06010207
	White Creek (67F13)	Upper Clinch River	06010205
	Powell River (67F14)	Powell River	06010206
	Big War Creek (67F17)	Upper Clinch River	06010205
	Martin Creek (67F23)	Powell River	06010206
	Big Creek (67Ff01)	Holston River	06010104
	Fisher Creek (67F02)	Holston River	06010104
	Possum Creek (67F07)	South Fork Holston	06010102
	Powell River (67F25)	Powell River	06010206
Southern Shale Valleys (67g)	Little Chuckey Creek (67G01)	Nolichucky River	06010108
	Bent Creek (67G05)	Nolichucky River	06010108
	Brymer Creek (67G08)	Hiwassee River	06020002
	Harris Creek (67G09)	Hiwassee River	06020002
	Flat Creek (67G10)	Lower French Broad	06010107
	North Prong Fishdam Creek (67G11)	South Fork Holston	06010102
Southern Sandstone Ridges (67h)	Blackburn Creek (67H04)	Hiwassee River	06020002
	Laurel Creek (67H06)	Little Tennessee River	06010204
	Parker Creek (67H08)	Holston River	06010104
Southern Dissected Ridges and Knobs (67i)	Mill Branch (67I12)	Lower Clinch River	06010207

Table A2-3. Ecoregion Monitoring Sites in Ecoregions 66d, 66e, 66f, 66g, 67f, 67g, 67h and 67i).

CODE	NAME	AGENCY	AGENCY ID
103	TDEC/DNH DAVY CROCKETT RESERVOIR RESERVATION SITE	TDEC/DNH	M.USTNHP 36
151	TDEC/DNH NOLICHUCKY RIVER GORGE SITE	TDEC/DNH	S.USTNHP 50
402	TDOT LICK CREEK PERMIT SITE	TDOT	
486	TDEC/WPC BARKLEY BRANCH SITE	TDEC/WPC	
512	TDEC/WPC HIGHWAY 11-E PERMIT SITE	TDEC/WPC	
513	TDEC/WPC HIGHWAY 11-E MITIGATION SITE	TDEC/WPC	
1222	TWRA SITE	TWRA	
1922	TWRA HENDERSON SWAMP	TWRA	
1926	TWRA LICK CREEK SITE	TWRA	
2041	TWRA LICK CREEK SITE	TWRA	
2042	TWRA LICK CREEK SITE	TWRA	
2306	TWRA LICK CREEK SITE	TWRA	
2347	TWRA LICK CREEK SITE	TWRA	
2348	TWRA LICK CREEK SITE	TWRA	
2349	TWRA LICK CREEK SITE	TWRA	
2350	TWRA LICK CREEK SITE	TWRA	
2599	TWRA HENDERSON SWAMP SITE	TWRA	
2615	TDOT CHANNEL RELOCATION OF RHEATOWN CREEK SITE	TDOT	
2616	TDOT SR 350	NOLICHUCKY TO MAYS CREEK SITE	TDOT
2692	NRCS SITE	NRCS STATE OFFICE	

Table A2-4. Wetland Sites in the Tennessee Portion of the Nolichucky River Watershed in TDEC Database. *TDEC, Tennessee Department of Environment and Conservation; TDOT, Tennessee Department of Transportation; TWRA, Tennessee Wildlife Resources Agency; DNH, Division of Natural Heritage.* ***This table represents an incomplete inventory and should not be considered a dependable indicator of the presence of wetlands in the watershed.***

APPENDIX III

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Clark Creek	TN06010108010_3200	21.2
Gap Creek	TN06010108035_0600	30.0
Grassy Creek	TN06010108035_2600	12.6
Little Chucky Creek	TN06010108034_1000	21.9
Lower Higgins Creek	TN06010108013_1300	6.7
Nolichucky River	TN06010108001_3000	9.0
Nolichucky River	TN06010108005_3000	6.4
Nolichucky River	TN06010108010_1000	9.4
Nolichucky River	TN06010108010_2000	6.5
Nolichucky River	TN06010108010_3000	22.6
Nolichucky River	TN06010108010_4000	10.0
Nolichucky River	TN06010108010_6000	2.1
Richland Creek	TN06010108102_1000	2.5
Saylor Creek	TN06010108035_1100	1.0

Table A3-1. Streams Fully Supporting the Designated Use of Recreation in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Bent Creek	TN06010108042_1000	13.7
Big Limestone Creek	TN06010108030_1000	3.1
Big Limestone Creek	TN06010108030_2000	8.8
Blackley Creek	TN06010108030_0410	16.0
Carson Creek	TN06010108030_0220	17.9
Flat Creek	TN06010108001_0100	4.9
Hominy Creek	TN06010108510_0400	7.0
Jockey Creek	TN06010108030_0200	8.0
Lick Creek	TN06010108035_1000	3.9
Lick Creek	TN06010108035_2000	2.3
Lick Creek	TN06010108035_3000	7.4
Lick Creek	TN06010108035_4000	4.9
Lick Creek	TN06010108035_5000	17.8
Lick Creek	TN06010108035_6000	8.9
Lick Creek	TN06010108035_7000	9.4
Lick Creek	TN06010108035_8000	7.2
Lick Creek	TN06010108035_9000	7.7
Little Limestone Creek	TN06010108510_1000	8.0
Little Limestone Creek	TN06010108510_2000	13.5

Table A3-2a.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Long Creek	TN06010108043_1000	13.5
Meadow Creek	TN06010108007_1000	23.4
Mink Creek	TN06010108035_2800	9.1
Mud Creek	TN06010108042_0600	8.2
Muddy Fork	TN06010108030_0430	23.8
Nolichucky River	TN06010108001_1000	4.0
Nolichucky River	TN06010108001_2000	7.7
Nolichucky River	TN06010108005_2000	6.6
Pigeon Creek	TN06010108033_1000	8.8
Potter Creek	TN06010108035_0200	15.3
Puncheon Camp Creek	TN06010108035_0900	11.5
Pyborn Creek	TN06010108035_1800	6.4
Richland Creek	TN06010108102_2000	8.5
Sinking Creek	TN06010108064_1000	3.8
Sinking Creek	TN06010108064_2000	19.6

Table A3-2b.

Tables A3-2a-b. Streams Not Supporting the Designated Use of Recreation in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Alexander Creek	TN06010108088_0200	2.8
Asbury Creek	TN06010108010_1100	2.3
Babb Creek	TN06010108035_1110	4.6
Back Creek	TN06010108009_0100	7.9
Bacon Branch	TN06010108510_0200	4.6
Bailey Branch	TN06010108043_0600	2.3
Bales Creek	TN06010108005_0600	7.9
Bear Creek	TN06010108001_0500	1.9
Big Branch	TN06010108013_1100	3.0
Big Spring Branch	TN06010108042_0400	3.6
Bird Creek	TN06010108DCTRIBS_0300	3.3
Black Creek	TN06010108035_0100	9.2
Broad Shoal Creek	TN06010108010_2600	5.1
Brown Branch	TN06010108510_0100	8.3
Buffalo Creek	TN06010108033_0100	3.0
Bumpus Cove Creek	TN06010108010_2800	13.8
California Creek	TN06010108010_2500	1.4
Camp Creek	TN06010108456_1000	28.8
Caney Creek	TN06010108035_1600	7.6

Table A3-3a.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Cannon Creek	TN06010108088_0100	8.4
Carter Branch	TN06010108013_0500	1.1
Carter Branch	TN06010108043_0310	3.5
Cassi Creek	TN06010108010_3500	14.1
Cedar Creek	TN06010108009_0300	5.4
Cedar Creek	TN06010108030_0100	3.3
Cedar Creek	TN06010108043_0400	7.5
Cherokee Creek	TN06010108536_1000	2.6
Cherokee Creek	TN06010108536_2000	18.2
Clear Branch	TN06010108013_0300	1.4
Clear Creek	TN06010108035_1900	19.9
Clear Fork	TN06010108030_0400	12.0
Coffee Ridge Creek	TN06010108013_0240	13.9
Coldspring Branch	TN06010108042_0612	1.1
College Creek	TN06010108010_0300	9.3
Cove Creek	TN06010108009_1000	29.7
Crider Creek	TN06010108043_0200	6.2
Davis Creek	TN06010108035_2320	2.8
Davis Creek	TN06010108456_0210	5.6
Deacon Creek	TN06010108010_1800	4.3
Devil Fork	TN06010108013_0800	4.5
Devils Kitchen Branch	TN06010108009_0120	4.7
Dick Creek	TN06010108029_0700	7.0
Dodd Branch	TN06010108009_0310	2.5
Dodd Creek	TN06010108035_1700	6.1
Dry Branch	TN06010108005_0700	3.0
Dry Branch	TN06010108009_0320	2.8
Dry Branch	TN06010108043_0100	2.4
Dry Branch	TN06010108043_0700	1.4
Dry Creek	TN06010108010_1600	1.5
Dry Creek	TN06010108010_1650	16.3
Dry Creek	TN06010108029_0800	7.0
Dry Creek	TN06010108456_0200	3.3
Dry Creek	TN06010108456_0250	9.5
Dulaney Branch	TN06010108034_0300	5.2
East Fork Richland Creek	TN06010108102_0400	5.0
Edwards Branch	TN06010108013_1200	3.0
Feist Branch	TN06010108510_0300	2.3
Flag Branch	TN06010108DCTRIBS_0600	5.8
Flat Creek	TN06010108001_0150	10.6
Fox Branch	TN06010108035_2900	1.5

Table A3-3b.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Furness Branch	TN06010108005_0300	14.8
Gap Creek	TN06010108034_0200	3.9
Gardiner Creek	TN06010108035_1400	5.4
Gass Creek	TN06010108035_2520	8.3
Goodwater Branch	TN06010108005_1120	2.6
Granny Lewis Creek	TN06010108013_0100	4.9
Grassy Creek	TN06010108035_1200	4.1
Gregg Creek	TN06010108005_0500	2.7
Hale Branch	TN06010108042_0100	7.1
Harris Branch	TN06010108005_0200	1.8
Harris Branch	TN06010108029_0100	1.2
Hartman Branch	TN06010108034_0500	2.1
Hice Creek	TN06010108010_0800	2.1
Higgins Creek	TN06010108013_0610	9.9
Hipps Branch	TN06010108009_0200	2.7
Holley Creek	TN06010108010_0200	8.5
Hoodley Branch	TN06010108035_2400	5.3
Hoover Creek	TN06010108035_2510	18.2
Horse Creek	TN06010108088_1000	28.0
Horse Fork	TN06010108035_2300	1.6
Huff Branch	TN06010108034_0800	2.0
Hughes Branch	TN06010108035_1500	5.6
Irishman Branch	TN06010108029_0400	2.2
Jackson Creek	TN06010108010_2900	5.3
Jennings Creek	TN06010108456_0110	9.5
Johnson Branch	TN06010108001_0400	1.5
Johnson Creek	TN06010108DCTRIBS_0200	1.4
Jones Branch	TN06010108010_2100	3.8
Katy Branch	TN06010108010_3100	0.8
Katy Branch	TN06010108010_3150	2.7
Keebler Branch	TN06010108030_0300	7.4
Kelly Branch	TN06010108009_0110	2.5
Keplinger Creek	TN06010108010_1300	5.3
Keplinger Creek	TN06010108010_1500	4.1
Kite Creek	TN06010108035_1300	8.6
Knave Branch	TN06010108010_1200	4.6
Kneelas Creek	TN06010108001_0800	6.3
Knob Creek	TN06010108001_0600	11.9
Kyker Branch	TN06010108005_0800	2.5
Lebanon Branch	TN06010108010_1400	1.9
Leesburg Branch	TN06010108030_0431	3.4

Table A3-3c.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Lick Branch	TN06010108035_0700	1.2
Little Bald Creek	TN06010108013_0220	2.5
Little Bent Creek	TN06010108001_0300	3.4
Little Cherokee Creek	TN06010108536_0200	7.2
Little Indian Creek	TN06010108DCTRIBS_0400	3.0
Little Meadow Creek	TN06010108007_0100	16.9
Lizzie Branch	TN06010108013_0400	2.0
Lollar Branch	TN06010108035_0510	2.0
Long Creek	TN06010108010_2200	3.2
Long Fork	TN06010108035_2100	8.2
Loyd Creek	TN06010108536_0100	4.2
Luttrell Spring Branch	TN06010108005_0400	4.6
Lyons Creek	TN06010108042_0500	3.5
Marshall Creek	TN06010108042_0300	4.2
Martins Creek	TN06010108010_1900	8.3
McNew Branch	TN06010108034_0400	1.9
Middle Creek	TN06010108010_3700	11.4
Mill Creek	TN06010108013_1400	6.1
Millstone Creek	TN06010108010_1700	1.2
Mine Branch	TN06010108010_2300	2.4
Misc tribs to Bent Creek	TN06010108042_0999	13.6
Misc tribs to Big Limestone Creek	TN06010108030_0999	11.7
Misc Tribs to Davy Crockett Lake	TN06010108DCTRIBS_0999	2.1
Misc tribs to Lick Creek	TN06010108035_0999	58.9
Misc Tribs to Little Chucky Creek	TN06010108034_0999	35.4
Misc tribs to Long Creek	TN06010108043_0999	7.8
Misc Tribs to Nolichucky River	TN06010108001_0999	10.2
Misc Tribs to Nolichucky River	TN06010108005_0999	15.1
Misc tribs to Nolichucky River	TN06010108010_1999	13.7
Misc tribs to Nolichucky River	TN06010108010_2999	7.8
Misc Tribs to North Indian Creek	TN06010108029_0999	28.5
Misc Tribs to South Indian Creek	TN06010108013_0999	9.9
Moon Creek	TN06010108010_0400	8.7
Moore Branch	TN06010108010_3600	7.7
Mosheim Branch	TN06010108034_0100	3.0
Mud Creek	TN06010108035_0400	4.4
Mud Creek	TN06010108DCTRIBS_0500	21.4
Mutton Creek	TN06010108DCTRIBS_0100	1.7
Nolichucky River	TN06010108005_1000	9.4
Nolichucky River	TN06010108010_5000	9.6
North Indian Creek	TN06010108029_2000	7.5

Table A3-3d.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
North Indian Creek	TN06010108029_1000	8.0
Onion Creek	TN06010108510_0500	4.0
Ottinger Creek	TN06010108005_1111	1.6
Oven Creek	TN06010108005_1100	10.1
Painter Creek	TN06010108010_3400	7.9
Patty Creek	TN06010108010_2700	2.4
Pigeon Branch	TN06010108007_0110	1.4
Pikestaff Creek	TN06010108042_0611	4.5
Plum Creek	TN06010108035_1120	5.2
Pond Creek	TN06010108035_2810	2.2
Possum Creek	TN06010108010_0100	2.1
Possum Creek	TN06010108035_2521	7.5
Privet Branch	TN06010108005_0310	1.4
Pudding Creek	TN06010108010_0500	5.5
Raccoon Branch	TN06010108035_2200	2.5
Rader Branch	TN06010108005_1121	2.0
Ramsey Creek	TN06010108034_0700	1.5
Red Fork	TN06010108029_0600	9.9
Rheatown Creek	TN06010108010_0700	3.1
Rheatown Creek	TN06010108010_0750	6.7
Rice Creek	TN06010108013_0700	8.6
Riley Creek	TN06010108035_0300	9.8
Ripley Creek	TN06010108010_0600	8.5
Roaring Creek	TN06010108010_3300	1.9
Roaring Fork	TN06010108035_2500	31.8
Robinson Creek	TN06010108001_0110	3.4
Rock Creek	TN06010108029_1100	15.3
Rocky Fork	TN06010108013_0900	15.0
Sams Creek	TN06010108013_0600	5.0
Sartain Branch	TN06010108043_0300	4.4
Scioto Creek	TN06010108029_0300	14.8
Seven Springs Branch	TN06010108035_2700	2.9
Shelton Branch	TN06010108005_0710	1.2
Silver City Branch	TN06010108042_0200	3.9
Simerly Creek	TN06010108029_0500	3.9
Simpson Creek	TN06010108102_0200	1.9
Sinking Creek	TN06010108005_1110	3.4
Sinking Fork	TN06010108043_0500	15.0
Slate Creek	TN06010108001_0700	11.0
Slate Creek	TN06010108005_0900	4.4
Slop Creek	TN06010108042_0110	1.7

Table A3-3e.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Snapp Branch	TN06010108010_0900	1.9
Snow Camp Branch	TN06010108035_0800	1.8
Soloman Branch	TN06010108034_0600	2.0
South Indian Creek	TN06010108013_1000	6.3
South Indian Creek	TN06010108013_2000	7.0
Spivey Creek	TN06010108013_0200	7.9
Splatter Creek	TN06010108030_0210	3.6
Spring Creek	TN06010108010_1910	1.7
Stony Creek	TN06010108035_0500	6.8
Tate Springs	TN06010108029_0900	1.0
Tillison Branch	TN06010108010_2400	1.5
Tipton Creek	TN06010108102_0300	1.6
Tribs to Little Cherokee Creek	TN06010108536_0299	14.3
Tumbling Creek	TN06010108013_0230	2.9
Turkey Creek	TN06010108001_0200	5.8
Union Temple Creek	TN06010108035_2310	23.9
Unnamed Trib to Clear Fork	TN06010108030_0420	6.9
Unnamed Trib to Katy Creek	TN06010108010_3110	1.9
Unnamed trib to Nolichucky River	TN06010108005_0100	1.2
Unnamed Trib. To Richland Creek	TN06010108102_0100	4.1
Water Fork	TN06010108456_0100	4.4
Wattenbarger Creek	TN06010108035_1410	5.3
Watts Branch	TN06010108013_0210	3.6
Whaley Branch	TN06010108029_0200	1.4
Whitehorn Creek	TN06010108042_0610	17.9
Wolf Branch	TN06010108010_3800	1.3
Wolf Creek	TN06010108035_3100	2.1

Table A3-3f.

Tables A3-3a-f. Streams Not Assessed for the Designated Use of Recreation in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Back Creek	TN06010108009_0100	7.9
Bailey Branch	TN06010108043_0600	2.3
Bent Creek	TN06010108042_1000	13.7
Big Branch	TN06010108013_1100	3.0
Big Limestone Creek	TN06010108030_1000	3.1
Big Spring Branch	TN06010108042_0400	3.6
Bird Creek	TN06010108DCTRIBS_0300	3.3
Blackley Creek	TN06010108030_0410	16.0
Camp Creek	TN06010108456_1000	28.8
Caney Creek	TN06010108035_1600	7.6
Cannon Creek	TN06010108088_0100	8.4
Clark Creek	TN06010108010_3200	21.2
Clear Branch	TN06010108013_0300	1.4
Coffee Ridge Creek	TN06010108013_0240	13.9
Davis Creek	TN06010108456_0210	5.6
Deacon Creek	TN06010108010_1800	4.3
Devil Fork	TN06010108013_0800	4.5
Devils Kitchen Branch	TN06010108009_0120	4.7
Dick Creek	TN06010108029_0700	7.0
Dodd Creek	TN06010108035_1700	6.1
Dry Branch	TN06010108043_0700	1.4
Dry Creek	TN06010108010_1600	1.5
Dry Creek	TN06010108029_0800	7.0
Dulaney Branch	TN06010108034_0300	5.2
Edwards Branch	TN06010108013_1200	3.0
Flat Creek	TN06010108001_0100	4.9
Furness Branch	TN06010108005_0300	14.8
Gap Creek	TN06010108035_0600	30.0
Gass Creek	TN06010108035_2520	8.3
Goodwater Branch	TN06010108005_1120	2.6
Granny Lewis Creek	TN06010108013_0100	4.9
Grassy Creek	TN06010108035_2600	12.6
Hartman Branch	TN06010108034_0500	2.1
Higgins Creek	TN06010108013_0610	9.9
Hipps Branch	TN06010108009_0200	2.7
Hoover Creek	TN06010108035_2510	18.2
Horse Creek	TN06010108088_1000	28.0
Huff Branch	TN06010108034_0800	2.0
Jennings Creek	TN06010108456_0110	9.5
Kelly Branch	TN06010108009_0110	2.5
Lick Creek	TN06010108035_2000	2.3

Table A3-4a.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Lick Creek	TN06010108035_4000	4.9
Lick Creek	TN06010108035_8000	7.2
Little Bald Creek	TN06010108013_0220	2.5
Little Bent Creek	TN06010108001_0300	3.4
Little Chucky Creek	TN06010108034_1000	21.9
Little Indian Creek	TN06010108DCTRIBS_0400	3.0
Little Meadow Creek	TN06010108007_0100	16.9
Lizzie Branch	TN06010108013_0400	2.0
Lollar Branch	TN06010108035_0510	2.0
Long Creek	TN06010108043_1000	13.5
Long Fork	TN06010108035_2100	8.2
Lower Higgins Creek	TN06010108013_1300	6.7
Luttrell Spring Branch	TN06010108005_0400	4.6
Lyons Creek	TN06010108042_0500	3.5
McNew Branch	TN06010108034_0400	1.9
Meadow Creek	TN06010108007_1000	23.4
Middle Creek	TN06010108010_3700	11.4
Mill Creek	TN06010108013_1400	6.1
Millstone Creek	TN06010108010_1700	1.2
Mink Creek	TN06010108035_2800	9.1
Mosheim Branch	TN06010108034_0100	3.0
Muddy Fork	TN06010108030_0430	23.8
Nolichucky River	TN06010108001_2000	7.7
Nolichucky River	TN06010108010_4000	10.0
Nolichucky River	TN06010108010_5000	9.6
North Indian Creek	TN06010108029_2000	7.5
Ottinger Creek	TN06010108005_1111	1.6
Oven Creek	TN06010108005_1100	10.1
Patty Creek	TN06010108010_2700	2.4
Pigeon Creek	TN06010108033_1000	8.8
Plum Creek	TN06010108035_1120	5.2
Possum Creek	TN06010108010_0100	2.1
Pyborn Creek	TN06010108035_1800	6.4
Raccoon Branch	TN06010108035_2200	2.5
Red Fork	TN06010108029_0600	9.9
Rheatown Creek	TN06010108010_0700	3.1
Rice Creek	TN06010108013_0700	8.6
Richland Creek	TN06010108102_1000	2.5
Ripley Creek	TN06010108010_0600	8.5
Roaring Creek	TN06010108010_3300	1.9
Roaring Fork	TN06010108035_2500	31.8

Table A3-4b.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Rock Creek	TN06010108029_1100	15.3
Rocky Fork	TN06010108013_0900	15.0
Sams Creek	TN06010108013_0600	8.0
Saylor Creek	TN06010108035_1100	1.0
Seven Springs Branch	TN06010108035_2700	2.9
Silver City Branch	TN06010108042_0200	3.9
Simerly Creek	TN06010108029_0500	3.9
Sinking Creek	TN06010108005_1110	3.4
Sinking Creek	TN06010108064_1000	3.8
Sinking Creek	TN06010108064_2000	19.6
Sinking Fork	TN06010108043_0500	15.0
Slate Creek	TN06010108001_0700	11.0
Slate Creek	TN06010108005_0900	4.4
Snow Camp Branch	TN06010108035_0800	1.8
Soloman Branch	TN06010108034_0600	2.0
South Indian Creek	TN06010108013_1000	6.3
South Indian Creek	TN06010108013_2000	7.0
Spivey Creek	TN06010108013_0200	7.9
Stony Creek	TN06010108035_0500	6.8
Tumbling Creek	TN06010108013_0230	2.9
Water Fork	TN06010108456_0100	4.4
Watts Branch	TN06010108013_0210	3.6
Whaley Branch	TN06010108029_0200	1.4
Wolf Creek	TN06010108035_3100	2.1

Table A3-4c.

Tables A3-4a-c. Streams Fully Supporting the Designated Use of Fish & Aquatic life in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Alexander Creek	TN06010108088_0200	2.8
Asbury Creek	TN06010108010_1100	2.3
Babb Creek	TN06010108035_1110	4.6
Bacon Branch	TN06010108510_0200	4.6
Big Limestone Creek	TN06010108030_2000	8.8
Brown Branch	TN06010108510_0100	8.3
Buffalo Creek	TN06010108033_0100	3.0
Carson Creek	TN06010108030_0220	17.9
Carter Branch	TN06010108043_0310	3.5
Cedar Creek	TN06010108009_0300	5.4
Cedar Creek	TN06010108030_0100	3.3
Cedar Creek	TN06010108043_0400	7.5
Cherokee Creek	TN06010108536_1000	2.6
Cherokee Creek	TN06010108536_2000	18.2
Clear Creek	TN06010108035_1900	19.9
Clear Fork	TN06010108030_0400	12.0
Coldspring Branch	TN06010108042_0612	1.1
College Creek	TN06010108010_0300	9.3
Cove Creek	TN06010108009_1000	29.7
Crider Creek	TN06010108043_0200	6.2
Davis Creek	TN06010108035_2320	2.8
Dry Creek	TN06010108456_0200	3.3
East Fork Richland Creek	TN06010108102_0400	5.0
Feist Branch	TN06010108510_0300	2.3
Flag Branch	TN06010108DCTRIBS_0600	5.8
Fox Branch	TN06010108035_2900	1.5
Gardiner Creek	TN06010108035_1400	5.4
Gregg Creek	TN06010108005_0500	2.7
Hale Branch	TN06010108042_0100	7.1
Hice Creek	TN06010108010_0800	2.1
Holley Creek	TN06010108010_0200	8.5
Hominy Creek	TN06010108510_0400	7.0
Hoodley Branch	TN06010108035_2400	5.3
Horse Fork	TN06010108035_2300	1.6
Jockey Creek	TN06010108030_0200	8.0
Johnson Creek	TN06010108DCTRIBS_0200	1.4
Katy Branch	TN06010108010_3100	0.8
Keebler Branch	TN06010108030_0300	7.4
Keplinger Creek	TN06010108010_1300	5.3
Knave Branch	TN06010108010_1200	4.6
Kyker Branch	TN06010108005_0800	2.5

Table A3-5a.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Lebanon Branch	TN06010108010_1400	1.9
Leesburg Branch	TN06010108030_0431	3.4
Lick Branch	TN06010108035_0700	1.2
Lick Creek	TN06010108035_1000	3.9
Lick Creek	TN06010108035_3000	7.4
Lick Creek	TN06010108035_5000	17.8
Lick Creek	TN06010108035_6000	8.9
Lick Creek	TN06010108035_7000	9.4
Lick Creek	TN06010108035_9000	7.7
Little Cherokee Creek	TN06010108536_0200	7.2
Little Limestone Creek	TN06010108510_1000	8.0
Little Limestone Creek	TN06010108510_2000	13.5
Loyd Creek	TN06010108536_0100	4.2
Martins Creek	TN06010108010_1900	8.3
Moon Creek	TN06010108010_0400	8.7
Moore Branch	TN06010108010_3600	7.7
Mud Creek	TN06010108035_0400	4.4
Mud Creek	TN06010108DCTRIBS_0500	21.4
Mutton Creek	TN06010108DCTRIBS_0100	1.7
Nolichucky River	TN06010108001_1000	4.0
Nolichucky River	TN06010108001_3000	9.0
Nolichucky River	TN06010108005_1000	9.4
Nolichucky River	TN06010108005_2000	6.6
Nolichucky River	TN06010108005_3000	6.4
Nolichucky River	TN06010108010_1000	9.4
Nolichucky River	TN06010108010_2000	6.5
Nolichucky River	TN06010108010_3000	22.6
Nolichucky River	TN06010108010_6000	2.1
North Indian Creek	TN06010108029_1000	8.0
Onion Creek	TN06010108510_0500	4.0
Pond Creek	TN06010108035_2810	2.2
Possum Creek	TN06010108035_2521	7.5
Potter Creek	TN06010108035_0200	15.3
Privet Branch	TN06010108005_0310	1.4
Pudding Creek	TN06010108010_0500	5.5
Puncheon Camp Creek	TN06010108035_0900	11.5
Rader Branch	TN06010108005_1121	2.0
Rheatown Creek	TN06010108010_0750	6.7
Richland Creek	TN06010108102_2000	8.5
Robinson Creek	TN06010108001_0110	3.4
Sartain Branch	TN06010108043_0300	4.4

Table A3-5b.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Scioto Creek	TN06010108029_0300	14.8
Shelton Branch	TN06010108005_0710	1.2
Simpson Creek	TN06010108102_0200	1.9
Slop Creek	TN06010108042_0110	1.7
Snapp Branch	TN06010108010_0900	1.9
Splatter Creek	TN06010108030_0210	3.6
Spring Creek	TN06010108010_1910	1.7
Tate Springs	TN06010108029_0900	1.0
Tipton Creek	TN06010108102_0300	1.6
Turkey Creek	TN06010108001_0200	5.8
Union Temple Creek	TN06010108035_2310	23.9
Unnamed Trib to Clear Fork	TN06010108030_0420	6.9
Unnamed Trib. To Richland Creek	TN06010108102_0100	4.1
Wattenbarger Creek	TN06010108035_1410	5.3
Wolf Branch	TN06010108010_3800	1.3

Table A3-5c.

Tables A3-5a-c. Streams Not Supporting the Designated Use of Fish & Aquatic life in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Bales Creek	TN06010108005_0600	7.9
Bear Creek	TN06010108001_0500	1.9
Black Creek	TN06010108035_0100	9.2
Broad Shoal Creek	TN06010108010_2600	5.1
Bumpus Cove Creek	TN06010108010_2800	13.8
California Creek	TN06010108010_2500	1.4
Carter Branch	TN06010108013_0500	1.1
Cassi Creek	TN06010108010_3500	14.1
Dodd Branch	TN06010108009_0310	2.5
Dry Branch	TN06010108005_0700	3.0
Dry Branch	TN06010108009_0320	2.8
Dry Branch	TN06010108043_0100	2.4
Dry Creek	TN06010108010_1650	16.3
Dry Creek	TN06010108456_0250	9.5
Flat Creek	TN06010108001_0150	10.6
Gap Creek	TN06010108034_0200	3.9
Grassy Creek	TN06010108035_1200	4.1
Harris Branch	TN06010108005_0200	1.8
Harris Branch	TN06010108029_0100	1.2

Table A3-6a.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Hughes Branch	TN06010108035_1500	5.6
Irishman Branch	TN06010108029_0400	2.2
Jackson Creek	TN06010108010_2900	5.3
Johnson Branch	TN06010108001_0400	1.5
Jones Branch	TN06010108010_2100	3.8
Katy Branch	TN06010108010_3150	2.7
Keplinger Creek	TN06010108010_1500	4.1
Kite Creek	TN06010108035_1300	8.6
Kneelas Creek	TN06010108001_0800	6.3
Knob Creek	TN06010108001_0600	11.9
Long Creek	TN06010108010_2200	3.2
Marshall Creek	TN06010108042_0300	4.2
Mine Branch	TN06010108010_2300	2.4
Misc tribs to Bent Creek	TN06010108042_0999	13.6
Misc tribs to Big Limestone Creek	TN06010108030_0999	11.7
Misc Tribs to Davy Crockett Lake	TN06010108DCTRIBS_0999	2.1
Misc tribs to Lick Creek	TN06010108035_0999	58.9
Misc Tribs to Little Chucky Creek	TN06010108034_0999	35.4
Misc tribs to Long Creek	TN06010108043_0999	7.8
Misc Tribs to Nolichucky River	TN06010108001_0999	10.2
Misc Tribs to Nolichucky River	TN06010108005_0999	15.1
Misc tribs to Nolichucky River	TN06010108010_1999	13.7
Misc tribs to Nolichucky River	TN06010108010_2999	7.8
Misc Tribs to North Indian Creek	TN06010108029_0999	28.5
Misc Tribs to South Indian Creek	TN06010108013_0999	9.9
Mud Creek	TN06010108042_0600	8.2
Painter Creek	TN06010108010_3400	7.9
Pigeon Branch	TN06010108007_0110	1.4
Pikestaff Creek	TN06010108042_0611	4.5
Ramsey Creek	TN06010108034_0700	1.5
Riley Creek	TN06010108035_0300	9.8
Tillison Branch	TN06010108010_2400	1.5
Tribs to Little Cherokee Creek	TN06010108536_0299	14.3
Unnamed Trib to Katy Creek	TN06010108010_3110	1.9
Unnamed trib to Nolichucky River	TN06010108005_0100	1.2
Whitehorn Creek	TN06010108042_0610	17.9

Table A3-6b.

Tables A3-6a-b. Streams Not Assessed for the Designated Use of Fish & Aquatic Life in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Davy Crockett Lake	TN06010108DCROCKETT_1000	383

Table A3-7. Lake Not Assessed for the Designated Use of Fish & Aquatic Life in the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Davy Crockett Lake	TN06010108DCROCKETT_1000	383

Table A3-8. Lake Not Supporting the Designated Use of Fish & Aquatic Life in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Big Limestone Creek	TN06010108030_2000	8.8
Carson Creek	TN06010108030_0220	17.9
Hominy Creek	TN06010108510_0400	7.0
Jockey Creek	TN06010108030_0200	8.0
Lick Creek	TN06010108035_1000	3.9
Lick Creek	TN06010108035_3000	7.4
Lick Creek	TN06010108035_5000	17.8
Lick Creek	TN06010108035_6000	8.9
Lick Creek	TN06010108035_7000	9.4
Lick Creek	TN06010108035_9000	7.7
Little Limestone Creek	TN06010108510_1000	8.0
Puncheon Camp Creek	TN06010108035_0900	11.5
Richland Creek	TN06010108102_2000	8.5

Table A3-9. Stream Segments Impaired Due to Nutrients in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Bent Creek	TN06010108042_1000	13.7
Big Limestone Creek	TN06010108030_1000	3.1
Big Limestone Creek	TN06010108030_2000	8.8
Blackley Creek	TN06010108030_0410	16.0
Carson Creek	TN06010108030_0220	17.9
Flat Creek	TN06010108001_0100	4.9
Hominy Creek	TN06010108510_0400	7.0
Jockey Creek	TN06010108030_0200	8.0
Lick Creek	TN06010108035_1000	3.9
Lick Creek	TN06010108035_2000	2.3
Lick Creek	TN06010108035_3000	7.4
Lick Creek	TN06010108035_4000	4.9
Lick Creek	TN06010108035_5000	17.8
Lick Creek	TN06010108035_6000	8.9
Lick Creek	TN06010108035_7000	9.4
Lick Creek	TN06010108035_8000	7.2
Lick Creek	TN06010108035_9000	7.7
Little Limestone Creek	TN06010108510_1000	8.0
Little Limestone Creek	TN06010108510_2000	13.5
Long Creek	TN06010108043_1000	13.5
Meadow Creek	TN06010108007_1000	23.4
Mink Creek	TN06010108035_2800	9.1
Mud Creek	TN06010108042_0600	8.2
Muddy Fork	TN06010108030_0430	23.8
Nolichucky River	TN06010108001_1000	4.0
Nolichucky River	TN06010108001_2000	7.7
Nolichucky River	TN06010108005_2000	6.6
Pigeon Creek	TN06010108033_1000	8.8
Potter Creek	TN06010108035_0200	15.3
Puncheon Camp Creek	TN06010108035_0900	11.5
Pyborn Creek	TN06010108035_1800	6.4
Richland Creek	TN06010108102_2000	8.5
Sinking Creek	TN06010108064_1000	3.8
Sinking Creek	TN06010108064_2000	19.6

Table A3-10. Stream Segments Impaired Due to Escherichia coli in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Alexander Creek	TN06010108088_0200	2.8
Asbury Creek	TN06010108010_1100	2.3
Babb Creek	TN06010108035_1110	4.6
Bacon Branch	TN06010108510_0200	4.6
Big Limestone Creek	TN06010108030_2000	8.8
Brown Branch	TN06010108510_0100	8.3
Buffalo Creek	TN06010108033_0100	3.0
Carson Creek	TN06010108030_0220	17.9
Carter Branch	TN06010108043_0310	3.5
Cedar Creek	TN06010108009_0300	5.4
Cedar Creek	TN06010108030_0100	3.3
Cedar Creek	TN06010108043_0400	7.5
Cherokee Creek	TN06010108536_1000	2.6
Cherokee Creek	TN06010108536_2000	18.2
Clear Creek	TN06010108035_1900	19.9
Clear Fork	TN06010108030_0400	12.0
Coldspring Branch	TN06010108042_0612	1.1
College Creek	TN06010108010_0300	9.3
Cove Creek	TN06010108009_1000	29.7
Crider Creek	TN06010108043_0200	6.2
Davis Creek	TN06010108035_2320	2.8
Dry Creek	TN06010108456_0200	3.3
East Fork Richland Creek	TN06010108102_0400	5.0
Feist Branch	TN06010108510_0300	2.3
Flag Branch	TN06010108DCTRIBS_0600	5.8
Fox Branch	TN06010108035_2900	1.5
Gardiner Creek	TN06010108035_1400	5.4
Gregg Creek	TN06010108005_0500	2.7
Hale Branch	TN06010108042_0100	7.1
Hice Creek	TN06010108010_0800	2.1
Holley Creek	TN06010108010_0200	8.5
Hoodley Branch	TN06010108035_2400	5.3
Horse Fork	TN06010108035_2300	1.6
Jockey Creek	TN06010108030_0200	8.0
Johnson Creek	TN06010108DCTRIBS_0200	1.4
Katy Branch	TN06010108010_3100	0.8
Keebler Branch	TN06010108030_0300	7.4
Keplinger Creek	TN06010108010_1300	5.3
Knave Branch	TN06010108010_1200	4.6
Kyker Branch	TN06010108005_0800	2.5
Lebanon Branch	TN06010108010_1400	1.9
Leesburg Branch	TN06010108030_0431	3.4

Table A3-11a.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Lick Branch	TN06010108035_0700	1.2
Lick Creek	TN06010108035_1000	3.9
Lick Creek	TN06010108035_3000	7.4
Lick Creek	TN06010108035_5000	17.8
Lick Creek	TN06010108035_6000	8.9
Lick Creek	TN06010108035_7000	9.4
Lick Creek	TN06010108035_9000	7.7
Little Cherokee Creek	TN06010108536_0200	7.2
Little Limestone Creek	TN06010108510_2000	13.5
Loyd Creek	TN06010108536_0100	4.2
Martins Creek	TN06010108010_1900	8.3
Moon Creek	TN06010108010_0400	8.7
Moore Branch	TN06010108010_3600	7.7
Mud Creek	TN06010108035_0400	4.4
Mud Creek	TN06010108DCTRIBS_0500	21.4
Mutton Creek	TN06010108DCTRIBS_0100	1.7
Nolichucky River	TN06010108001_1000	4.0
Nolichucky River	TN06010108001_3000	9.0
Nolichucky River	TN06010108005_2000	6.6
Nolichucky River	TN06010108005_3000	6.4
Nolichucky River	TN06010108010_1000	9.4
Nolichucky River	TN06010108010_2000	6.5
Nolichucky River	TN06010108010_3000	22.6
Nolichucky River	TN06010108010_6000	2.1
North Indian Creek	TN06010108029_1000	8.0
Onion Creek	TN06010108510_0500	4.0
Pond Creek	TN06010108035_2810	2.2
Possum Creek	TN06010108035_2521	7.5
Potter Creek	TN06010108035_0200	15.3
Privet Branch	TN06010108005_0310	1.4
Pudding Creek	TN06010108010_0500	5.5
Puncheon Camp Creek	TN06010108035_0900	11.5
Rader Branch	TN06010108005_1121	2.0
Rheatown Creek	TN06010108010_0750	6.7
Richland Creek	TN06010108102_2000	8.5
Robinson Creek	TN06010108001_0110	3.4
Sartain Branch	TN06010108043_0300	4.4
Scioto Creek	TN06010108029_0300	14.8
Shelton Branch	TN06010108005_0710	1.2
Simpson Creek	TN06010108102_0200	1.9
Slop Creek	TN06010108042_0110	1.7

Table A3-11b.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Snapp Branch	TN06010108010_0900	1.9
Splatter Creek	TN06010108030_0210	3.6
Spring Creek	TN06010108010_1910	1.7
Tipton Creek	TN06010108102_0300	1.6
Turkey Creek	TN06010108001_0200	5.8
Union Temple Creek	TN06010108035_2310	23.9
Unnamed Trib to Clear Fork	TN06010108030_0420	6.9
Unnamed Trib. To Richland Creek	TN06010108102_0100	4.1
Wattenbarger Creek	TN06010108035_1410	5.3
Wolf Branch	TN06010108010_3800	1.3

Table A3-11c.

Table A3-11a-c. Stream Segments Impaired Due to Siltation in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (ACRES)
Davy Crockett Lake	TN06010108DCROCKETT_1000	383

Table A3-12. Lake Impairment Due to Siltation in the Tennessee Portion of the Nolichucky River Watershed.

WATERBODY ID	WATERBODY NAME	TOTAL SEGMENT MILES IMPAIRED	HUC-12
TN06010108010_0600	Ripley Creek	8.50	060101080501
TN06010108088_1000	Horse Creek	14.28	060101080502
TN06010108007_0100	Little Meadow Creek	16.91	060101080505
TN06010108042_0610	Whitehorn Creek	17.90	060101080603
TN06010108035_2600	Grassy Creek	12.60	060101080702
TN06010108035_3100	Wolf Creek	2.10	060101080705

Table A3-13. Streams Added to the 2008 303(d) List in the Tennessee Portion of the Nolichucky River Watershed. *For more information see Tennessee's 2008 303(d) List at: http://www.state.tn.us/environment/wpc/publications/2008_303d.pdf .*

WATERBODY ID	WATERBODY NAME	TOTAL SEGMENT MILES IMPAIRED	CAUSE/POLLUTANT	HUC-12
TN06010108010_1900	Martins Creek	8.3	Alteration in Stream-Side or Littoral Vegetative Cover	060101080201
TN06010108029_0300	Scioto Creek	14.8	Loss of Biological Integrity due to Siltation	060101080202
TN06010108029_1000	North Indian Creek	8.0	Loss of Biological Integrity due to Siltation	060101080202
TN06010108010_3100	Katy Branch	0.8	Loss of Biological Integrity due to Siltation	060101080203
TN06010108536_0100	Loyd Creek	4.2	Loss of Biological Integrity due to Siltation, Alteration in Stream-Side or Littoral Vegetative Cover	060101080204
TN06010108536_1000 & 2000	Cherokee Creek	20.8	Loss of Biological Integrity due to Siltation	060101080204
TN06010108010_3600	Moore Branch	7.7	Loss of Biological Integrity due to Siltation, Alteration in Stream-Side or Littoral Vegetative Cover	060101080205
TN06010108030_0400	Clear Fork	12.0	Loss of Biological Integrity due to Siltation, Alteration in Stream-Side or Littoral Vegetative Cover	060101080401
TN06010108030_0210	Splatter Creek	3.6	Loss of Biological Integrity due to Siltation, Alteration in Stream-Side or Littoral Vegetative Cover	060101080402
TN06010108030_0300	Keebler Branch	7.4	Loss of Biological Integrity due to Siltation, Alteration in Stream-Side or Littoral Vegetative Cover	060101080402
TN06010108010_0800	Hice Branch	2.1	Siltation, Alteration in Stream-Side or Littoral Vegetative Cover	060101080501
TN06010108010_2000	Nolichucky River	38.5	Loss of Biological Integrity due to Siltation	060101080501
TN06010108088_0200	Alexander Creek	2.8	Loss of Biological Integrity due to Siltation, Alteration in Stream-Side or Littoral Vegetative Cover	060101080502
TN06010108005_0800	Kyker Branch	2.5	Loss of Biological Integrity due to Siltation	060101080505
TN06010108005_1000	Nolichucky River	9.4	Loss of Biological Integrity due to Siltation	060101080505
TN06010108005_2000	Nolichucky River	6.6	Loss of Biological Integrity due to Siltation, *Escherichia coli*	060101080505
TN06010108009_1000	Cove Creek	29.7	Loss of Biological Integrity due to Siltation	060101080506

Table A3-14a.

WATERBODY ID	WATERBODY NAME	TOTAL SEGMENT MILES IMPAIRED	CAUSE/POLLUTANT	HUC-12
TN06010108001_0200	Turkey Creek	5.8	Loss of Biological Integrity due to Siltation	060101080601
TN06010108001_1000	Nolichucky River	4.0	*Escherichia coli*	060101080601
TN06010108001_2000	Nolichucky River	7.7	*Escherichia coli*	060101080601
TN06010108005_1000	Nolichucky River	9.4	Loss of Biological Integrity due to Siltation	060101080601
TN06010108042_0110	Slop Creek	1.7	Alteration in Stream-Side or Littoral Vegetative Cover	060101080603
TN06010108035_2310	Union Temple Creek	23.9	Loss of Biological Integrity due to Siltation, Other Habitat Alterations	060101080701
TN06010108035_2900	Fox Branch	1.5	Other Habitat Alterations	060101080705
TN06010108005_1121	Rader Branch	2.0	Alteration in Stream-Side or Littoral Vegetative Cover	Not Shown

Table A3-14b.

Table A3-14a-b. Streams (or pollutants) Delisted Since the 2006 303(d) List in the Tennessee Portion of the Nolichucky River Watershed. *For more information see Tennessee's 2008 303(d) List at:*

http://www.state.tn.us/environment/wpc/publications/2008_303d.pdf .

WATERBODY	DESCRIPTION	BASIS FOR	HUC-12
Back Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080506
Back Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080506
Barnett Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080302
Barnett Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080302
Beards Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080205
Beards Creek*	Portion in Cherokee N.F.	Cherokee N.F.	060101080205
Bent Creek	From junction of Warrensburg and Mountain Road to Mud Creek	Exceptional biological diversity, WPC ecoregion reference stream for 67g	060101080603
Big Bald Creek	Portion in Cherokee N.F.	Cherokee N.F. State threatened Mountain Bittercress	060101080302
Big Bald Creek UT*	Portion in Cherokee N.F.	Cherokee N.F. State threatened Mountain Bittercress	060101080302
Big Branch	From South Indian Creek to headwaters	Naturally reproducing trout stream in Cherokee National Forest	060101080303
Big Branch UT*	From South Indian Creek to headwaters	Naturally reproducing trout stream in Cherokee National Forest	060101080303
Big Limestone Creek	Near mouth in Davy Crockett Birthplace State Historic Park	Davy Crockett Birthplace State Historic Park	060101080402
Birchfield Camp Branch	From Lower Higgens Creek to headwaters	Naturally reproducing trout stream in Cherokee N.F.	060101080303
Briar Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080203

Table A3-15a.

WATERBODY	DESCRIPTION	BASIS	HUC-12
Briar Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Broad Shoal Creek	From Nolichucky River to headwaters	Naturally reproducing trout stream in Cherokee N.F.	060101080203
Broad Shoal Creek UT*	From Nolichucky River to headwaters	Naturally reproducing trout stream in Cherokee N.F.	060101080203
California Creek UT*	From Nolichucky River to headwaters	Naturally reproducing trout stream in Cherokee N.F.	060101080203
Camp Creek	From mouth to coN.F.luence with Dry Creek and headwaters in Cherokee N.F.	Naturally reproducing trout stream to coN.F.luence with Dry Creek. Headwaters in Cherokee N.F.	060101080503
Camp Creek UT*	From mouth to coN.F.luence with Dry Creek and headwaters in Cherokee N.F.	Naturally reproducing trout stream to coN.F.luence with Dry Creek. Headwaters in Cherokee N.F.	060101080503
Cannon Branch	Portion in Sampson Mountain Wilderness Area	Sampson Mountain Wilderness Area	060101080502
Cannon Branch UT*	Portion in Sampson Mountain Wilderness Area	Sampson Mountain Wilderness Area.	060101080502
Cassi Creek	Nolichucky River to headwaters	Naturally reproducing trout stream in Cherokee N.F. and Sampson Mountain Wilderness Area. State endangered American Water-Pennywort and State threatened Running Bittercress	060101080205
Cassi Creek UT*	Nolichucky River to headwaters	Naturally reproducing trout stream in Cherokee N.F. and Sampson Mountain Wilderness Area. State endangered American Water-Pennywort and State threatened Running Bittercress	060101080205
Cedar Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080506
Chigger Branch UT*	From Clark Creek to origin including tribs	Naturally reproducing trout stream. Sampson Mountain Wilderness Area	060101080203
Clark Creek	From Nolichucky River to headwaters	Naturally reproducing trout stream. Sampson Mountain Wilderness and Cherokee N.F. Exceptional biological diversity. WPC ecoregion reference for 66e. State endangered Broad-Leaved Tickseed	060101080203
Clark Creek UT	Headwater tributary from Clark Creek to origin	State threatened Spinulose Shield Fern	060101080203
Clark Creek UT*	From Nolichucky River to headwaters	Naturally reproducing trout stream. Sampson Mountain Wilderness and Cherokee N.F. Exceptional biological diversity. WPC ecoregion reference for 66e. State endangered Broad-Leaved Tickseed	060101080203
Clear Fork	From Red Fork of North Indian Creek to origin	Naturally reproducing trout stream in Cherokee N.F.	060101080202
Clear Fork UT*	From Red Fork of North Indian Creek to origin	Naturally reproducing trout stream in Cherokee N.F.	060101080202
Coffee Ridge Creek	From Spivey Creek to origin	Naturally reproducing trout stream, Cherokee N.F.	060101080302

Table A3-15b.

WATERBODY	DESCRIPTION	BASIS	HUC-12
Coffee Ridge Creek UT*	From Spivey Creek to origin	Naturally reproducing trout stream, Cherokee N.F.	060101080302
Cordwood Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Coulter Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080506
Coulter Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080506
Cove Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Cove Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Cove Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080506
Davis Creek	From Dry Creek to headwaters.	Naturally reproducing trout stream, Cherokee N.F.	060101080503
Davis Creek UT	From Davis Creek near Round Knob to origin	State threatened Mountain Witch Alder. Cherokee N.F.	060101080503
Davis Creek UT*	From Davis Creek near Round Knob to origin	State threatened Mountain Witch Alder. Cherokee N.F.	060101080503
Davy Crockett Lake	Portion in Nolichucky Waterfowl Sanctuary	Nolichucky Waterfowl Sanctuary	060101080504
Deacon Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Deacon Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Devil Fork	From South Indian Creek to headwaters	Naturally reproducing trout stream	060101080302
Devil Fork UT*	From South Indian Creek to headwaters	Naturally reproducing trout stream	060101080302
Devils Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080201
Devils Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080201
Devils Fork	From Clark Creek to origin	Naturally reproducing trout stream. Cherokee N.F.	060101080203
Devils Fork UT*	From Clark Creek to origin	Naturally reproducing trout stream. Cherokee N.F.	060101080203
Devils Kitchen Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080506
Devils Kitchen Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080506
Dick Creek	Portion in Cherokee N.F. and Unaka Mountain Wilderness Area	Cherokee N.F. and Unaka Mountain Wilderness Area	060101080202
Dick Creek UT*	Portion in Cherokee N.F. and Unaka Mountain Wilderness Area	Cherokee N.F. and Unaka Mountain Wilderness Area	060101080202
Dry Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080506
Dry Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080506
Dry Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Dry Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Dry Creek	From river mile 3.6 to headwaters	Naturally reproducing trout streams in Cherokee N.F.	060101080503
Dry Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Dry Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Dry Creek UT*	From river mile 3.6 to headwaters	Naturally reproducing trout streams in Cherokee N.F.	060101080503
East Fork Cassi Creek	From Cassi Creek to origin	Naturally reproducing trout stream. Cherokee N.F. and Sampson Mountain Wilderness Area	060101080205

Table A3-15c.

WATERBODY	DESCRIPTION	BASIS	HUC-12
East Fork Cassi Creek UT*	From Cassi Creek to origin	Naturally reproducing trout stream. Cherokee N.F. and Sampson Mountain Wilderness Area	060101080205
East Fork Higgins Creek	From Sams Creek to headwaters	Naturally reproducing trout stream, Cherokee N.F.	060101080301
East Fork Higgins Creek UT*	From Sams Creek to headwaters	Naturally reproducing trout stream, Cherokee N.F.	060101080301
Fall Branch	Portion in Unaka Mountain Wilderness	Unaka Mountain Wilderness	060101080202
Fall Branch UT*	Portion in Unaka Mountain Wilderness	Unaka Mountain Wilderness	060101080202
First Prong Mill Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080303
First Prong Mill Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080303
Flatrock Branch	Portion in Sampson Mountain Wilderness Area.	Sampson Mountain Wilderness Area	060101080205
Flatrock Branch UT*	Portion in Sampson Mountain Wilderness Area.	Sampson Mountain Wilderness Area	060101080205
Flatttop Mountain Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080302
Flatttop Mountain Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080302
Flint Creek	From Rocky Fork to headwaters	Naturally reproducing trout stream	060101080302
Fort Davie Creek UT	From Fort Davie Creek to origin	State endangered Large Purple Fringed Orchid	060101080302
Gilbert Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080302
Granny Lewis Creek	From South Indian Creek to headwaters	Naturally reproducing trout stream in Cherokee N.F.	060101080303
Granny Lewis Creek UT*	From South Indian Creek to headwaters	Naturally reproducing trout stream in Cherokee N.F.	060101080303
Gunstock Branch UT	Portion in Cherokee N.F.	Cherokee N.F.	060101080503
Harris Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Harris Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Hartman Branch	From Little Chucky Creek to headwaters	Federal endangered Cumberland Bean	060101080602
Hell Hollow	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Hell Hollow UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Higgins Creek Including East Fork	From Sams Creek to headwaters	Naturally reproducing trout stream, Cherokee N.F.	060101080301
Higgins Creek Lower	From South Indian Creek to headwaters	Naturally reproducing trout streams in Cherokee N.F. Exceptional biological diversity. WPC ecoregion reference stream for 66e	060101080303
Higgins Creek UT*	From Sams Creek to headwaters	Naturally reproducing trout stream, Cherokee N.F.	060101080301
Higgins Creek UT*	From South Indian Creek to headwaters	Naturally reproducing trout streams in Cherokee N.F. Exceptional biological diversity. WPC ecoregion reference stream for 66e	060101080303
Hipps Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080506
Hipps Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080506

Table A3-15d.

WATERBODY	DESCRIPTION	BASIS	HUC-12
Horse Creek	From mouth to headwaters	Naturally reproducing trout stream, Cherokee N.F. and Sampson Mountain Wilderness	060101080502
Horse Creek UT*	From mouth to headwaters	Naturally reproducing trout stream, Cherokee N.F. and Sampson Mountain Wilderness	060101080502
Indian Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Irishman Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Irishman Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Jennings Creek	From Camp Creek to headwaters	Naturally reproducing trout stream, Cherokee N.F.	060101080503
Jennings Creek UT*	From Camp Creek to headwaters	Naturally reproducing trout stream, Cherokee N.F.	060101080503
Jewel Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080201
Jewel Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080201
Jones Branch	From Nolichucky River to headwaters	Federal endangered Appalachian Elktoe. Naturally reproducing trout stream. Cherokee N.F.	060101080201
Jones Branch UT*	From Nolichucky River to headwaters	Federal endangered Appalachian Elktoe. Naturally reproducing trout stream. Cherokee N.F.	060101080201
Joshua Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Joshua Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Katy Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Katy Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Kelly Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080506
Kelly Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080506
Laurel Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080302
Laurel Branch*	Portion in Cherokee N.F.	Cherokee N.F.	060101080302
Little Bald Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080302
Little Bald Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080302
Little Cherokee Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080204
Little Chucky Creek	From Cobble Branch to Mosheim Branch.	Federal endangered Cumberland Bean and state endangered Chucky Madtom	060101080602
Little Meadow Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080505
Little Meadow Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080505
Little Rocky Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Little Rocky Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Long Branch	From Nolichucky River to headwaters	Naturally reproducing trout stream, Cherokee N.F.	060101080201
Long Branch UT*	From Nolichucky River to headwaters	Naturally reproducing trout stream, Cherokee N.F.	060101080201
Long Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Long Branch*	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Longarm Branch UT*	From Devil fork to origin	Naturally reproducing trout stream, Cherokee N.F.	060101080203
Martin Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080201
Martin Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080201

Table A3-15e.

WATERBODY	DESCRIPTION	BASIS	HUC-12
McNew Branch	From Little Chucky Creek to headwaters	Federal endangered Cumberland Bean	060101080602
Middle Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080501
Middle Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080501
Middle Fork Cassi Creek	Nolichucky River to headwaters	Naturally reproducing trout stream in Cherokee N.F. and Sampson Mountain Wilderness Area. State endangered American Water-Pennywort and State threatened Running Bittercress	060101080205
Middle Fork Cassi Creek UT*	Nolichucky River to headwaters	Naturally reproducing trout stream in Cherokee N.F. and Sampson Mountain Wilderness Area. State endangered American Water-Pennywort and State threatened Running Bittercress	060101080205
Mill Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080303
MIll Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080303
MIllstone Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
MIllstone Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Mine Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080201
Mine Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080201
Mud Creek	Portions in Cherokee N.F. and Nolichucky Waterfowl Sanctuary	Cherokee N.F. and Nolichucky Waterfowl Sanctuary	060101080504
Mud Creek UT*	Portions in Cherokee N.F. and Nolichucky Waterfowl Sanctuary	Cherokee N.F. and Nolichucky Waterfowl Sanctuary.	060101080504
Nolichucky River	From Bumpus Cove Creek to North Carolina state line	Federal endangered Appalachian Elktoe. Cherokee National Forest.	060101080201
Nolichucky River	From Hwy 70 to Big Limestone Creek	Nolichucky Waterfowl Sanctuary and Davy Crockett Birthplace State Historic Park	060101080501
Nolichucky River	From Hwy 70 to Big Limestone Creek	Nolichucky Waterfowl Sanctuary and Davy Crockett Birthplace State Historic Park	060101080504
Nolichucky River UT*	From Bumpus Cove Creek to North Carolina state line	Federal endangered Appalachian Elktoe. Cherokee National Forest.	060101080201
Nolichucky River UT*			060101080203
Nolichucky River UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080205
North Fork Painter Creek	Portion in Sampson Mountain Wilderness Area	Sampson Mountain Wilderness Area	060101080205
North Fork Painter Creek UT*	Portion in Sampson Mountain Wilderness Area	Sampson Mountain Wilderness Area	060101080205
North Indian Creek	Upstream of Erwin to Headwaters	Naturally reproducing trout stream, Cherokee N.F. and Unaka Mountain Wilderness	060101080202
North Indian Creek UT*	Upstream of Erwin to Headwaters	Naturally reproducing trout stream, Cherokee N.F. and Unaka Mountain Wilderness	060101080202
North Indian Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Odom Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080201

Table A3-15f.

WATERBODY	DESCRIPTION	BASIS	HUC-12
Odom Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080201
Old Field Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Old Field Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Paint Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Paint Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Painter Creek	Portion in Sampson Mountain Wilderness Area	Sampson Mountain Wilderness Area. State endangered American Water Pennywort and State threatened Mountain Bittercress	060101080205
Painter Creek UT*	Portion in Sampson Mountain Wilderness Area	Sampson Mountain Wilderness Area. State endangered American Water Pennywort and State threatened Mountain Bittercress	060101080205
Patty Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Patty Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Pete Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080302
Pete Creek*	Portion in Cherokee N.F.	Cherokee N.F.	060101080302
Pigeon Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080505
Pigeon Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080505
Ramsey Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Red Fork	Portion in Unaka Mountain Wilderness and Cherokee N.F.	Naturally reproducing trout stream, Unaka Mountain Wilderness and Cherokee N.F.	060101080202
Red Fork UT*	Portion in Unaka Mountain Wilderness and Cherokee N.F.	Naturally reproducing trout stream, Unaka Mountain Wilderness and Cherokee N.F.	060101080202
Rice Creek	From South Indian Creek to headwaters	Naturally reproducing trout stream	060101080301
Rice Creek UT*	From South Indian Creek to headwaters	Naturally reproducing trout stream	060101080301
Right Prong Rock Creek	From Rock Creek to origin	Cherokee N.F. and Unaka Mountain Wilderness	060101080202
Right Prong Rock Creek UT*	From Rock Creek to origin	Cherokee N.F. and Unaka Mountain Wilderness	060101080202
Roaring Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Roaring Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Rock Creek	From North Indian Creek to origin	Naturally reproducing trout stream, Cherokee N.F. and Unaka Mountain Wilderness	060101080202
Rock Creek UT*	From North Indian Creek to origin	Naturally reproducing trout stream, Cherokee N.F. and Unaka Mountain Wilderness	060101080202
Rocky Branch	Portion in Cherokee N.F. and Unaka Mountain Wilderness	Cherokee N.F. and Unaka Mountain Wilderness	060101080202
Rocky Branch UT*	Portion in Cherokee N.F. and Unaka Mountain Wilderness	Cherokee N.F. and Unaka Mountain Wilderness	060101080202
Rocky Fork	From South Indian Creek to origin.	Naturally reproducing trout stream	060101080302

Table A3-15g.

WATERBODY	DESCRIPTION	BASIS	HUC-12
Round Knob Creek	From coN.F.luence with Jennings Creek to origin including unnamed tributaries	Cherokee N.F., state threatened Mountain Witch Alder and Running Bittercress	060101080503
Round Knob Creek UT*	From coN.F.luence with Jennings Creek to origin including UTs	Cherokee N.F., state threatened Mountain Witch Alder and Running Bittercress	060101080503
Sams Creek	From South Indian Creek to origin	Naturally reproducing trout streams	060101080301
Sams Creek UT*	From South Indian Creek to origin	Naturally reproducing trout streams	060101080301
Scioto Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Scioto Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Second Prong Mill Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080303
Second Prong Mill Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080303
Sill Branch Inc North Fork	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Sill Branch Inc North Fork UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Simerly Creek*	Portion in Cherokee N.F.		060101080202
Sinking Creek	From Afton Road to headwaters.	Exceptional biological diversity	060101080501
Slip Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080302
Slip Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080302
South Fork Painter Creek	Portion in Sampson Mountain Wilderness Area	Sampson Mountain Wilderness Area. State endangered American Water Pennywort and State threatened Mountain Bittercress	060101080205
South Fork Painter Creek UT*	Portion in Sampson Mountain Wilderness Area	Sampson Mountain Wilderness Area. State endangered American Water Pennywort and State threatened Mountain Bittercress	060101080205
South Fork Sill Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
South Fork Sill Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
South Indian Creek	From Nolichucky River to origin	Naturally reproducing trout stream, Cherokee N.F.	060101080302
South Indian Creek	From Nolichucky River to origin	Naturally reproducing trout stream, Cherokee N.F.	060101080303
South Indian Creek UT*	From Nolichucky River to origin	Naturally reproducing trout stream, Cherokee N.F.	060101080303
Spivey Creek	From South Indian Creek to origin	Naturally reproducing trout stream, Cherokee N.F.	060101080302
Spivey Creek UT*	From South Indian Creek to origin	Naturally reproducing trout stream, Cherokee N.F.	060101080302
Squibb Creek	From Horse Creek to origin	Naturally reproducing trout stream, Sampson Mountain Wilderness Area. State threatened Running Bittercress	060101080502
Squibb Creek UT*	From Horse Creek to origin	Naturally reproducing trout stream, Sampson Mountain Wilderness Area. State threatened Running Bittercress	060101080502
Straight Creek	Portion in Sampson Mountain WA and Cherokee N.F.	Sampson Mountain Wilderness and Cherokee N.F.	060101080202

Table A3-15h.

WATERBODY	DESCRIPTION	BASIS	HUC-12
Straight Creek	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Straight Creek UT*	Portion in Sampson Mountain WA and Cherokee N.F.	Sampson Mountain Wilderness and Cherokee N.F.	060101080202
Straight Creek UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Sugarloaf Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080302
Sugarloaf Branch*	Portion in Cherokee N.F.	Cherokee N.F.	060101080302
Sulphur Springs Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Sulphur Springs Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Tellico Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080203
Tillison Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080201
Tillison Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080201
Tumbling Creek	Portion in Cherokee N.F.	Exceptional biological diversity. WPC ecoregion reference for 66d. Cherokee N.F.	060101080302
Tumbling Creek UT*	Portion in Cherokee N.F.	Exceptional biological diversity. WPC ecoregion reference for 66d. Cherokee N.F.	060101080302
Turkey Trail Branch	Portions in Cherokee N.F. and Unaka Mountain Wilderness	Cherokee N.F. and Unaka Mountain Wilderness	060101080202
Turkey Trail Branch UT*	Portions in Cherokee N.F. and Unaka Mountain Wilderness	Cherokee N.F. and Unaka Mountain Wilderness	060101080202
Water Fork UT	From Jennings Creek to origin.	Cherokee N.F.	060101080503
Watts Branch	From South Indian Creek to origin	Naturally reproducing trout stream, Cherokee N.F.	060101080302
Watts Branch UT*	From South Indian Creek to origin	Naturally reproducing trout stream, Cherokee N.F.	060101080302
West Fork Cassi Creek UT*	From Cassi Creek to origin	Naturally reproducing trout stream. Cherokee N.F. and Sampson Mountain Wilderness Area	060101080205
Whaley Branch	Portion in Cherokee N.F.	Cherokee N.F.	060101080202
Whaley Branch UT*	Portion in Cherokee N.F.	Cherokee N.F.	060101080202

Table A3-15i.

Table A3-15a-i. Known High Quality Waters in the Tennessee Portion of the Nolichucky River Watershed as of September 2008. *The most recently published list is available at www.state.tn.us/environment/wpc/publications/hqwlist.mht. UT, Unnamed Tributary; N.F., National Forest; WPC , Water Pollution Control; *Located within state or federally protected lands; N.F., National Forest.*

APPENDIX III

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Nolichucky River	TN06010108001_3000	9
Nolichucky River	TN06010108005_3000	6.4
Nolichucky River	TN06010108010_1000	9.4
Nolichucky River	TN06010108010_2000	6.5
Nolichucky River	TN06010108010_3000	22.6
Clark Creek	TN06010108010_3200	21.2
Nolichucky River	TN06010108010_4000	10
Nolichucky River	TN06010108010_6000	2.06
Lower Higgins Creek	TN06010108013_1300	6.7
Little Chucky Creek	TN06010108034_1000	21.9
Gap Creek	TN06010108035_0600	30
Saylor Creek	TN06010108035_1100	1
Grassy Creek	TN06010108035_2600	12.6
Richland Creek	TN06010108102_1000	2.51

Table A3-1a. Streams Fully Supporting the Designated Use of Recreation in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Flat Creek	TN06010108001_0100	4.9
Nolichucky River	TN06010108001_1000	4
Nolichucky River	TN06010108001_2000	7.7
Nolichucky River	TN06010108005_2000	6.6
Meadow Creek	TN06010108007_1000	23.4
Jockey Creek	TN06010108030_0200	8
Carson Creek	TN06010108030_0220	17.9
Blackley Creek	TN06010108030_0410	16
Muddy Fork	TN06010108030_0430	23.8
Big Limestone Creek	TN06010108030_1000	3.1
Big Limestone Creek	TN06010108030_2000	8.8
Pigeon Creek	TN06010108033_1000	8.8
Potter Creek	TN06010108035_0200	15.3
Puncheon Camp Creek	TN06010108035_0900	11.5
Lick Creek	TN06010108035_1000	3.9
Pyborn Creek	TN06010108035_1800	6.4
Lick Creek	TN06010108035_2000	2.3
Mink Creek	TN06010108035_2800	9.1
Lick Creek	TN06010108035_3000	7.4
Lick Creek	TN06010108035_4000	4.9
Lick Creek	TN06010108035_5000	17.8
Lick Creek	TN06010108035_6000	8.9

Lick Creek	TN06010108035_7000	9.4
Lick Creek	TN06010108035_8000	7.2
Lick Creek	TN06010108035_9000	7.7
Mud Creek	TN06010108042_0600	8.2
Bent Creek	TN06010108042_1000	13.7
Long Creek	TN06010108043_1000	13.5
Sinking Creek	TN06010108064_1000	3.8
Sinking Creek	TN06010108064_2000	19.6
Richland Creek	TN06010108102_2000	8.51
Hominy Creek	TN06010108510_0400	7
Little Limestone Creek	TN06010108510_1000	8
Little Limestone Creek	TN06010108510_2000	13.5

Table A3-1b. Streams Not Supporting the Designated Use of Recreation in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Robinson Creek	TN06010108001_0110	3.4
Flat Creek	TN06010108001_0150	10.6
Turkey Creek	TN06010108001_0200	5.8
Little Bent Creek	TN06010108001_0300	3.4
Johnson Branch	TN06010108001_0400	1.5
Bear Creek	TN06010108001_0500	1.9
Knob Creek	TN06010108001_0600	11.9
Slate Creek	TN06010108001_0700	11
Kneelas Creek	TN06010108001_0800	6.3
Misc Tribs to Nolichucky River	TN06010108001_0999	10.2
Unnamed trib to Nolichucky River	TN06010108005_0100	1.2
Harris Branch	TN06010108005_0200	1.8
Furness Branch	TN06010108005_0300	14.8
Privet Branch	TN06010108005_0310	1.4
Luttrell Spring Branch	TN06010108005_0400	4.6
Gregg Creek	TN06010108005_0500	2.7
Bales Creek	TN06010108005_0600	7.9
Dry Branch	TN06010108005_0700	3.03
Shelton Branch	TN06010108005_0710	1.23
Kyker Branch	TN06010108005_0800	2.5
Slate Creek	TN06010108005_0900	4.4
Misc Tribs to Nolichucky River	TN06010108005_0999	15.07
Nolichucky River	TN06010108005_1000	9.4
Oven Creek	TN06010108005_1100	10.1
Sinking Creek	TN06010108005_1110	3.4
Ottinger Creek	TN06010108005_1111	1.6
Goodwater Branch	TN06010108005_1120	2.6
Rader Branch	TN06010108005_1121	2
Little Meadow Creek	TN06010108007_0100	16.91
Pigeon Branch	TN06010108007_0110	1.4

Back Creek	TN06010108009_0100	7.9
Kelly Branch	TN06010108009_0110	2.5
Devils Kitchen Branch	TN06010108009_0120	4.7
Hipps Branch	TN06010108009_0200	2.7
Cedar Creek	TN06010108009_0300	5.4
Dodd Branch	TN06010108009_0310	2.5
Dry Branch	TN06010108009_0320	2.8
Cove Creek	TN06010108009_1000	29.7
Possum Creek	TN06010108010_0100	2.1
Holley Creek	TN06010108010_0200	8.5
College Creek	TN06010108010_0300	9.3
Moon Creek	TN06010108010_0400	8.7
Pudding Creek	TN06010108010_0500	5.5
Ripley Creek	TN06010108010_0600	8.5
Rheatown Creek	TN06010108010_0700	3.1
Rheatown Creek	TN06010108010_0750	6.7
Hice Creek	TN06010108010_0800	2.1
Snapp Branch	TN06010108010_0900	1.9
Asbury Creek	TN06010108010_1100	2.33
Knave Branch	TN06010108010_1200	4.6
Keplinger Creek	TN06010108010_1300	5.3
Lebanon Branch	TN06010108010_1400	1.9
Keplinger Creek	TN06010108010_1500	4.1
Dry Creek	TN06010108010_1600	1.5
Dry Creek	TN06010108010_1650	16.3
Millstone Creek	TN06010108010_1700	1.2
Deacon Creek	TN06010108010_1800	4.3
Martins Creek	TN06010108010_1900	8.3
Spring Creek	TN06010108010_1910	1.7
Misc tribs to Nolichucky River	TN06010108010_1999	13.7
Jones Branch	TN06010108010_2100	3.8
Long Creek	TN06010108010_2200	3.2
Mine Branch	TN06010108010_2300	2.4
Tillison Branch	TN06010108010_2400	1.5
California Creek	TN06010108010_2500	1.4
Broad Shoal Creek	TN06010108010_2600	5.1
Patty Creek	TN06010108010_2700	2.4
Bumpus Cove Creek	TN06010108010_2800	13.8
Jackson Creek	TN06010108010_2900	5.25
Misc tribs to Nolichucky River	TN06010108010_2999	7.82
Katy Branch	TN06010108010_3100	0.8
Unnamed Trib to Katy Creek	TN06010108010_3110	1.9
Katy Branch	TN06010108010_3150	2.7
Roaring Creek	TN06010108010_3300	1.9
Painter Creek	TN06010108010_3400	7.9
Cassi Creek	TN06010108010_3500	14.1

Moore Branch	TN06010108010_3600	7.7
Middle Creek	TN06010108010_3700	11.4
Wolf Branch	TN06010108010_3800	1.3
Nolichucky River	TN06010108010_5000	9.55
Granny Lewis Creek	TN06010108013_0100	4.94
Spivey Creek	TN06010108013_0200	7.9
Watts Branch	TN06010108013_0210	3.6
Little Bald Creek	TN06010108013_0220	2.5
Tumbling Creek	TN06010108013_0230	2.9
Coffee Ridge Creek	TN06010108013_0240	13.9
Clear Branch	TN06010108013_0300	1.4
Lizzie Branch	TN06010108013_0400	2
Carter Branch	TN06010108013_0500	1.1
Sams Creek	TN06010108013_0600	4.98
Higgins Creek	TN06010108013_0610	9.9
Rice Creek	TN06010108013_0700	8.6
Devil Fork	TN06010108013_0800	4.5
Rocky Fork	TN06010108013_0900	15
Misc Tribs to South Indian Creek	TN06010108013_0999	9.9
South Indian Creek	TN06010108013_1000	6.3
Big Branch	TN06010108013_1100	3
Edwards Branch	TN06010108013_1200	3
Mill Creek	TN06010108013_1400	6.1
South Indian Creek	TN06010108013_2000	7
Harris Branch	TN06010108029_0100	1.2
Whaley Branch	TN06010108029_0200	1.4
Scioto Creek	TN06010108029_0300	14.8
Irishman Branch	TN06010108029_0400	2.2
Simerly Creek	TN06010108029_0500	3.9
Red Fork	TN06010108029_0600	9.9
Dick Creek	TN06010108029_0700	7
Dry Creek	TN06010108029_0800	7
Tate Springs	TN06010108029_0900	1
Misc Tribs to North Indian Creek	TN06010108029_0999	28.5
North Indian Creek	TN06010108029_1000	8
Rock Creek	TN06010108029_1100	15.3
North Indian Creek	TN06010108029_2000	7.5
Cedar Creek	TN06010108030_0100	3.3
Splatter Creek	TN06010108030_0210	3.6
Keebler Branch	TN06010108030_0300	7.4
Clear Fork	TN06010108030_0400	12
Unnamed Trib to Clear Fork	TN06010108030_0420	6.9
Leesburg Branch	TN06010108030_0431	3.4
Misc tribs to Big Limestone Creek	TN06010108030_0999	11.7
Buffalo Creek	TN06010108033_0100	3
Mosheim Branch	TN06010108034_0100	3

Gap Creek	TN06010108034_0200	3.9
Dulaney Branch	TN06010108034_0300	5.2
McNew Branch	TN06010108034_0400	1.9
Hartman Branch	TN06010108034_0500	2.1
Soloman Branch	TN06010108034_0600	2
Ramsey Creek	TN06010108034_0700	1.5
Huff Branch	TN06010108034_0800	2
Misc Tribs to Little Chucky Creek	TN06010108034_0999	35.4
Black Creek	TN06010108035_0100	9.2
Riley Creek	TN06010108035_0300	9.8
Mud Creek	TN06010108035_0400	4.4
Stony Creek	TN06010108035_0500	6.8
Lollar Branch	TN06010108035_0510	2
Lick Branch	TN06010108035_0700	1.2
Snow Camp Branch	TN06010108035_0800	1.8
Misc tribs to Lick Creek	TN06010108035_0999	58.9
Babb Creek	TN06010108035_1110	4.6
Plum Creek	TN06010108035_1120	5.2
Grassy Creek	TN06010108035_1200	4.1
Kite Creek	TN06010108035_1300	8.6
Gardiner Creek	TN06010108035_1400	5.4
Wattenbarger Creek	TN06010108035_1410	5.3
Hughes Branch	TN06010108035_1500	5.6
Caney Creek	TN06010108035_1600	7.6
Dodd Creek	TN06010108035_1700	6.1
Clear Creek	TN06010108035_1900	19.9
Long Fork	TN06010108035_2100	8.2
Raccoon Branch	TN06010108035_2200	2.5
Horse Fork	TN06010108035_2300	1.6
Union Temple Creek	TN06010108035_2310	23.9
Davis Creek	TN06010108035_2320	2.8
Hoodley Branch	TN06010108035_2400	5.3
Roaring Fork	TN06010108035_2500	31.8
Hoover Creek	TN06010108035_2510	18.2
Gass Creek	TN06010108035_2520	8.3
Possum Creek	TN06010108035_2521	7.5
Seven Springs Branch	TN06010108035_2700	2.9
Pond Creek	TN06010108035_2810	2.2
Fox Branch	TN06010108035_2900	1.5
Wolf Creek	TN06010108035_3100	2.1
Hale Branch	TN06010108042_0100	7.1
Slop Creek	TN06010108042_0110	1.7
Silver City Branch	TN06010108042_0200	3.9
Marshall Creek	TN06010108042_0300	4.2
Big Spring Branch	TN06010108042_0400	3.6
Lyons Creek	TN06010108042_0500	3.5

Whitehorn Creek	TN06010108042_0610	17.9
Pikestaff Creek	TN06010108042_0611	4.5
Coldspring Branch	TN06010108042_0612	1.1
Misc tribs to Bent Creek	TN06010108042_0999	13.6
Dry Branch	TN06010108043_0100	2.4
Crider Creek	TN06010108043_0200	6.2
Sartain Branch	TN06010108043_0300	4.4
Carter Branch	TN06010108043_0310	3.5
Cedar Creek	TN06010108043_0400	7.5
Sinking Fork	TN06010108043_0500	15
Bailey Branch	TN06010108043_0600	2.3
Dry Branch	TN06010108043_0700	1.4
Misc tribs to Long Creek	TN06010108043_0999	7.8
Cannon Creek	TN06010108088_0100	8.4
Alexander Creek	TN06010108088_0200	2.8
Horse Creek	TN06010108088_1000	28
Unnamed Trib. To Richland Creek	TN06010108102_0100	4.05
Simpson Creek	TN06010108102_0200	1.87
Tipton Creek	TN06010108102_0300	1.6
East Fork Richland Creek	TN06010108102_0400	4.96
Water Fork	TN06010108456_0100	4.4
Jennings Creek	TN06010108456_0110	9.5
Dry Creek	TN06010108456_0200	3.3
Davis Creek	TN06010108456_0210	5.6
Dry Creek	TN06010108456_0250	9.5
Camp Creek	TN06010108456_1000	28.8
Brown Branch	TN06010108510_0100	8.3
Bacon Branch	TN06010108510_0200	4.6
Feist Branch	TN06010108510_0300	2.3
Onion Creek	TN06010108510_0500	4
Loyd Creek	TN06010108536_0100	4.2
Little Cherokee Creek	TN06010108536_0200	7.2
Tribs to Little Cherokee Creek	TN06010108536_0299	14.3
Cherokee Creek	TN06010108536_1000	2.6
Cherokee Creek	TN06010108536_2000	18.2
Mutton Creek	TN06010108DCTRIBS_0100	1.7
Johnson Creek	TN06010108DCTRIBS_0200	1.4
Bird Creek	TN06010108DCTRIBS_0300	3.3
Little Indian Creek	TN06010108DCTRIBS_0400	3
Mud Creek	TN06010108DCTRIBS_0500	21.4
Flag Branch	TN06010108DCTRIBS_0600	5.8
Misc Tribs to Davy Crockett Lake	TN06010108DCTRIBS_0999	2.1

Table A3-1c. Streams Not Assessed for the Designated Use of Recreation in the Tenneessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Roaring Creek	TN06010108010_3300	1.9
Lollar Branch	TN06010108035_0510	2
Flat Creek	TN06010108001_0100	4.9
Little Bent Creek	TN06010108001_0300	3.4
Slate Creek	TN06010108001_0700	11
Nolichucky River	TN06010108001_2000	7.7
Furness Branch	TN06010108005_0300	14.8
Luttrell Spring Branch	TN06010108005_0400	4.6
Slate Creek	TN06010108005_0900	4.4
Oven Creek	TN06010108005_1100	10.1
Sinking Creek	TN06010108005_1110	3.4
Ottinger Creek	TN06010108005_1111	1.6
Goodwater Branch	TN06010108005_1120	2.6
Little Meadow Creek	TN06010108007_0100	16.91
Meadow Creek	TN06010108007_1000	23.4
Back Creek	TN06010108009_0100	7.9
Kelly Branch	TN06010108009_0110	2.5
Devils Kitchen Branch	TN06010108009_0120	4.7
Hipps Branch	TN06010108009_0200	2.7
Possum Creek	TN06010108010_0100	2.1
Ripley Creek	TN06010108010_0600	8.5
Rheatown Creek	TN06010108010_0700	3.1
Dry Creek	TN06010108010_1600	1.5
Millstone Creek	TN06010108010_1700	1.2
Deacon Creek	TN06010108010_1800	4.3
Patty Creek	TN06010108010_2700	2.4
Clark Creek	TN06010108010_3200	21.2
Middle Creek	TN06010108010_3700	11.4
Nolichucky River	TN06010108010_4000	10
Nolichucky River	TN06010108010_5000	9.55
Granny Lewis Creek	TN06010108013_0100	4.94
Spivey Creek	TN06010108013_0200	7.9
Watts Branch	TN06010108013_0210	3.6
Little Bald Creek	TN06010108013_0220	2.5
Tumbling Creek	TN06010108013_0230	2.9
Coffee Ridge Creek	TN06010108013_0240	13.9
Clear Branch	TN06010108013_0300	1.4
Lizzie Branch	TN06010108013_0400	2
Sams Creek	TN06010108013_0600	4.98
Higgins Creek	TN06010108013_0610	9.9
Rice Creek	TN06010108013_0700	8.6
Devil Fork	TN06010108013_0800	4.5
Rocky Fork	TN06010108013_0900	15
South Indian Creek	TN06010108013_1000	6.3
Big Branch	TN06010108013_1100	3

Edwards Branch	TN06010108013_1200	3
Lower Higgins Creek	TN06010108013_1300	6.7
Mill Creek	TN06010108013_1400	6.1
South Indian Creek	TN06010108013_2000	7
Whaley Branch	TN06010108029_0200	1.4
Simerly Creek	TN06010108029_0500	3.9
Red Fork	TN06010108029_0600	9.9
Dick Creek	TN06010108029_0700	7
Dry Creek	TN06010108029_0800	7
Rock Creek	TN06010108029_1100	15.3
North Indian Creek	TN06010108029_2000	7.5
Blackley Creek	TN06010108030_0410	16
Muddy Fork	TN06010108030_0430	23.8
Big Limestone Creek	TN06010108030_1000	3.1
Pigeon Creek	TN06010108033_1000	8.8
Mosheim Branch	TN06010108034_0100	3
Dulaney Branch	TN06010108034_0300	5.2
McNew Branch	TN06010108034_0400	1.9
Hartman Branch	TN06010108034_0500	2.1
Soloman Branch	TN06010108034_0600	2
Huff Branch	TN06010108034_0800	2
Little Chucky Creek	TN06010108034_1000	21.9
Stony Creek	TN06010108035_0500	6.8
Gap Creek	TN06010108035_0600	30
Snow Camp Branch	TN06010108035_0800	1.8
Saylor Creek	TN06010108035_1100	1
Plum Creek	TN06010108035_1120	5.2
Caney Creek	TN06010108035_1600	7.6
Dodd Creek	TN06010108035_1700	6.1
Pyborn Creek	TN06010108035_1800	6.4
Lick Creek	TN06010108035_2000	2.3
Long Fork	TN06010108035_2100	8.2
Raccoon Branch	TN06010108035_2200	2.5
Roaring Fork	TN06010108035_2500	31.8
Hoover Creek	TN06010108035_2510	18.2
Gass Creek	TN06010108035_2520	8.3
Grassy Creek	TN06010108035_2600	12.6
Seven Springs Branch	TN06010108035_2700	2.9
Mink Creek	TN06010108035_2800	9.1
Wolf Creek	TN06010108035_3100	2.1
Lick Creek	TN06010108035_4000	4.9
Lick Creek	TN06010108035_8000	7.2
Silver City Branch	TN06010108042_0200	3.9
Big Spring Branch	TN06010108042_0400	3.6
Lyons Creek	TN06010108042_0500	3.5
Bent Creek	TN06010108042_1000	13.7

Sinking Fork	TN06010108043_0500	15
Bailey Branch	TN06010108043_0600	2.3
Dry Branch	TN06010108043_0700	1.4
Long Creek	TN06010108043_1000	13.5
Sinking Creek	TN06010108064_1000	3.8
Sinking Creek	TN06010108064_2000	19.6
Cannon Creek	TN06010108088_0100	8.4
Horse Creek	TN06010108088_1000	28
Richland Creek	TN06010108102_1000	2.51
Water Fork	TN06010108456_0100	4.4
Jennings Creek	TN06010108456_0110	9.5
Davis Creek	TN06010108456_0210	5.6
Camp Creek	TN06010108456_1000	28.8
Bird Creek	TN06010108DCTRIBS_0300	3.3
Little Indian Creek	TN06010108DCTRIBS_0400	3

Table A3-1d. Streams Fully Supporting the Designated Use of Fish & Aquatic life in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Robinson Creek	TN06010108001_0110	3.4
Turkey Creek	TN06010108001_0200	5.8
Nolichucky River	TN06010108001_1000	4
Nolichucky River	TN06010108001_3000	9
Privet Branch	TN06010108005_0310	1.4
Gregg Creek	TN06010108005_0500	2.7
Shelton Branch	TN06010108005_0710	1.23
Kyker Branch	TN06010108005_0800	2.5
Nolichucky River	TN06010108005_1000	9.4
Rader Branch	TN06010108005_1121	2
Nolichucky River	TN06010108005_2000	6.6
Nolichucky River	TN06010108005_3000	6.4
Cedar Creek	TN06010108009_0300	5.4
Cove Creek	TN06010108009_1000	29.7
Holley Creek	TN06010108010_0200	8.5
College Creek	TN06010108010_0300	9.3
Moon Creek	TN06010108010_0400	8.7
Pudding Creek	TN06010108010_0500	5.5
Rheatown Creek	TN06010108010_0750	6.7
Hice Creek	TN06010108010_0800	2.1
Snapp Branch	TN06010108010_0900	1.9
Nolichucky River	TN06010108010_1000	9.4
Asbury Creek	TN06010108010_1100	2.33
Knave Branch	TN06010108010_1200	4.6
Keplinger Creek	TN06010108010_1300	5.3
Lebanon Branch	TN06010108010_1400	1.9
Martins Creek	TN06010108010_1900	8.3

Spring Creek	TN06010108010_1910	1.7
Nolichucky River	TN06010108010_2000	6.5
Nolichucky River	TN06010108010_3000	22.6
Katy Branch	TN06010108010_3100	0.8
Moore Branch	TN06010108010_3600	7.7
Wolf Branch	TN06010108010_3800	1.3
Nolichucky River	TN06010108010_6000	2.06
Scioto Creek	TN06010108029_0300	14.8
Tate Springs	TN06010108029_0900	1
North Indian Creek	TN06010108029_1000	8
Cedar Creek	TN06010108030_0100	3.3
Jockey Creek	TN06010108030_0200	8
Splatter Creek	TN06010108030_0210	3.6
Carson Creek	TN06010108030_0220	17.9
Keebler Branch	TN06010108030_0300	7.4
Clear Fork	TN06010108030_0400	12
Unnamed Trib to Clear Fork	TN06010108030_0420	6.9
Leesburg Branch	TN06010108030_0431	3.4
Big Limestone Creek	TN06010108030_2000	8.8
Buffalo Creek	TN06010108033_0100	3
Potter Creek	TN06010108035_0200	15.3
Mud Creek	TN06010108035_0400	4.4
Lick Branch	TN06010108035_0700	1.2
Puncheon Camp Creek	TN06010108035_0900	11.5
Lick Creek	TN06010108035_1000	3.9
Babb Creek	TN06010108035_1110	4.6
Gardiner Creek	TN06010108035_1400	5.4
Wattenbarger Creek	TN06010108035_1410	5.3
Clear Creek	TN06010108035_1900	19.9
Horse Fork	TN06010108035_2300	1.6
Union Temple Creek	TN06010108035_2310	23.9
Davis Creek	TN06010108035_2320	2.8
Hoodley Branch	TN06010108035_2400	5.3
Possum Creek	TN06010108035_2521	7.5
Pond Creek	TN06010108035_2810	2.2
Fox Branch	TN06010108035_2900	1.5
Lick Creek	TN06010108035_3000	7.4
Lick Creek	TN06010108035_5000	17.8
Lick Creek	TN06010108035_6000	8.9
Lick Creek	TN06010108035_7000	9.4
Lick Creek	TN06010108035_9000	7.7
Hale Branch	TN06010108042_0100	7.1
Slop Creek	TN06010108042_0110	1.7
Coldspring Branch	TN06010108042_0612	1.1
Crider Creek	TN06010108043_0200	6.2
Sartain Branch	TN06010108043_0300	4.4

Carter Branch	TN06010108043_0310	3.5
Cedar Creek	TN06010108043_0400	7.5
Alexander Creek	TN06010108088_0200	2.8
Unnamed Trib. To Richland Creek	TN06010108102_0100	4.05
Simpson Creek	TN06010108102_0200	1.87
Tipton Creek	TN06010108102_0300	1.6
East Fork Richland Creek	TN06010108102_0400	4.96
Richland Creek	TN06010108102_2000	8.51
Dry Creek	TN06010108456_0200	3.3
Brown Branch	TN06010108510_0100	8.3
Bacon Branch	TN06010108510_0200	4.6
Feist Branch	TN06010108510_0300	2.3
Hominy Creek	TN06010108510_0400	7
Onion Creek	TN06010108510_0500	4
Little Limestone Creek	TN06010108510_1000	8
Little Limestone Creek	TN06010108510_2000	13.5
Loyd Creek	TN06010108536_0100	4.2
Little Cherokee Creek	TN06010108536_0200	7.2
Cherokee Creek	TN06010108536_1000	2.6
Cherokee Creek	TN06010108536_2000	18.2
Mutton Creek	TN06010108DCTRIBS_0100	1.7
Johnson Creek	TN06010108DCTRIBS_0200	1.4
Mud Creek	TN06010108DCTRIBS_0500	21.4
Flag Branch	TN06010108DCTRIBS_0600	5.8

Table A3-1e. Streams Not Supporting the Designated Use of Fish & Aquatic life in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Flat Creek	TN06010108001_0150	10.6
Johnson Branch	TN06010108001_0400	1.5
Bear Creek	TN06010108001_0500	1.9
Knob Creek	TN06010108001_0600	11.9
Kneelas Creek	TN06010108001_0800	6.3
Misc Tribs to Nolichucky River	TN06010108001_0999	10.2
Unnamed trib to Nolichucky River	TN06010108005_0100	1.2
Harris Branch	TN06010108005_0200	1.8
Bales Creek	TN06010108005_0600	7.9
Dry Branch	TN06010108005_0700	3.03
Misc Tribs to Nolichucky River	TN06010108005_0999	15.07
Pigeon Branch	TN06010108007_0110	1.4
Dodd Branch	TN06010108009_0310	2.5
Dry Branch	TN06010108009_0320	2.8
Keplinger Creek	TN06010108010_1500	4.1
Dry Creek	TN06010108010_1650	16.3
Misc tribs to Nolichucky River	TN06010108010_1999	13.7
Jones Branch	TN06010108010_2100	3.8

Long Creek	TN06010108010_2200	3.2
Mine Branch	TN06010108010_2300	2.4
Tillison Branch	TN06010108010_2400	1.5
California Creek	TN06010108010_2500	1.4
Broad Shoal Creek	TN06010108010_2600	5.1
Bumpus Cove Creek	TN06010108010_2800	13.8
Jackson Creek	TN06010108010_2900	5.25
Misc tribs to Nolichucky River	TN06010108010_2999	7.82
Unnamed Trib to Katy Creek	TN06010108010_3110	1.9
Katy Branch	TN06010108010_3150	2.7
Painter Creek	TN06010108010_3400	7.9
Cassi Creek	TN06010108010_3500	14.1
Carter Branch	TN06010108013_0500	1.1
Misc Tribs to South Indian Creek	TN06010108013_0999	9.9
Harris Branch	TN06010108029_0100	1.2
Irishman Branch	TN06010108029_0400	2.2
Misc Tribs to North Indian Creek	TN06010108029_0999	28.5
Misc tribs to Big Limestone Creek	TN06010108030_0999	11.7
Gap Creek	TN06010108034_0200	3.9
Ramsey Creek	TN06010108034_0700	1.5
Misc Tribs to Little Chucky Creek	TN06010108034_0999	35.4
Black Creek	TN06010108035_0100	9.2
Riley Creek	TN06010108035_0300	9.8
Misc tribs to Lick Creek	TN06010108035_0999	58.9
Grassy Creek	TN06010108035_1200	4.1
Kite Creek	TN06010108035_1300	8.6
Hughes Branch	TN06010108035_1500	5.6
Marshall Creek	TN06010108042_0300	4.2
Mud Creek	TN06010108042_0600	8.2
Whitehorn Creek	TN06010108042_0610	17.9
Pikestaff Creek	TN06010108042_0611	4.5
Misc tribs to Bent Creek	TN06010108042_0999	13.6
Dry Branch	TN06010108043_0100	2.4
Misc tribs to Long Creek	TN06010108043_0999	7.8
Dry Creek	TN06010108456_0250	9.5
Tribs to Little Cherokee Creek	TN06010108536_0299	14.3
Misc Tribs to Davy Crockett Lake	TN06010108DCTRIBS_0999	2.1

Table A3-1f. Streams Not Assessed for the Designated Use of Fish & Aquatic Life in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Davy Crockett Lake	TN06010108DCROCKETT_1000	383

Table A3-1g. Lake Not Assessed for the Designated Use of Fish & Aquatic Life in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)
Davy Crockett Lake	TN06010108DCROCKETT_1000	383

Table A3-1h. Lake Not Supporting the Designated Use of Fish & Aquatic Life in the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)	SUPPORT DESCRIPTION
Jockey Creek	TN06010108030_0200	8	Not Supporting
Carson Creek	TN06010108030_0220	17.9	Not Supporting
Big Limestone Creek	TN06010108030_2000	8.8	Not Supporting
Puncheon Camp Creek	TN06010108035_0900	11.5	Not Supporting
Lick Creek	TN06010108035_1000	3.9	Not Supporting
Lick Creek	TN06010108035_3000	7.4	Not Supporting
Lick Creek	TN06010108035_5000	17.8	Not Supporting
Lick Creek	TN06010108035_6000	8.9	Not Supporting
Lick Creek	TN06010108035_7000	9.4	Not Supporting
Lick Creek	TN06010108035_9000	7.7	Not Supporting
Richland Creek	TN06010108102_2000	8.51	Not Supporting
Hominy Creek	TN06010108510_0400	7	Not Supporting
Little Limestone Creek	TN06010108510_1000	8	Not Supporting

Table A3-2a. Stream Impairment Due to Nutrients in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)	SUPPORT DESCRIPTION
Flat Creek	TN06010108001_0100	4.9	Not Supporting
Nolichucky River	TN06010108001_1000	4	Not Supporting
Nolichucky River	TN06010108001_2000	7.7	Not Supporting
Nolichucky River	TN06010108005_2000	6.6	Not Supporting
Meadow Creek	TN06010108007_1000	23.4	Not Supporting
Jockey Creek	TN06010108030_0200	8	Not Supporting
Carson Creek	TN06010108030_0220	17.9	Not Supporting
Blackley Creek	TN06010108030_0410	16	Not Supporting
Muddy Fork	TN06010108030_0430	23.8	Not Supporting
Big Limestone Creek	TN06010108030_1000	3.1	Not Supporting
Big Limestone Creek	TN06010108030_2000	8.8	Not Supporting
Pigeon Creek	TN06010108033_1000	8.8	Not Supporting
Potter Creek	TN06010108035_0200	15.3	Not Supporting
Puncheon Camp Creek	TN06010108035_0900	11.5	Not Supporting
Lick Creek	TN06010108035_1000	3.9	Not Supporting
Pyborn Creek	TN06010108035_1800	6.4	Not Supporting
Lick Creek	TN06010108035_2000	2.3	Not Supporting
Mink Creek	TN06010108035_2800	9.1	Not Supporting
Lick Creek	TN06010108035_3000	7.4	Not Supporting
Lick Creek	TN06010108035_4000	4.9	Not Supporting

Lick Creek	TN06010108035_5000	17.8	Not Supporting
Lick Creek	TN06010108035_6000	8.9	Not Supporting
Lick Creek	TN06010108035_7000	9.4	Not Supporting
Lick Creek	TN06010108035_8000	7.2	Not Supporting
Lick Creek	TN06010108035_9000	7.7	Not Supporting
Mud Creek	TN06010108042_0600	8.2	Not Supporting
Bent Creek	TN06010108042_1000	13.7	Not Supporting
Long Creek	TN06010108043_1000	13.5	Not Supporting
Sinking Creek	TN06010108064_1000	3.8	Not Supporting
Sinking Creek	TN06010108064_2000	19.6	Not Supporting
Richland Creek	TN06010108102_2000	8.51	Not Supporting
Hominy Creek	TN06010108510_0400	7	Not Supporting
Little Limestone Creek	TN06010108510_1000	8	Not Supporting
Little Limestone Creek	TN06010108510_2000	13.5	Not Supporting

Table A3-2b. Stream Impairment Due to Escherichia coli in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (MILES)	SUPPORT DESCRIPTION
Privet Branch	TN06010108005_0310	1.4	Not Supporting
Rader Branch	TN06010108005_1121	2	Not Supporting
College Creek	TN06010108010_0300	9.3	Not Supporting
Moon Creek	TN06010108010_0400	8.7	Not Supporting
Pudding Creek	TN06010108010_0500	5.5	Not Supporting
College Creek	TN06010108010_0300	9.3	Not Supporting
Martins Creek	TN06010108010_1900	8.3	Not Supporting
Spring Creek	TN06010108010_1910	1.7	Not Supporting
Big Limestone Creek	TN06010108030_2000	8.8	Not Supporting
Shelton Branch	TN06010108005_0710	1.23	Not Supporting
Pudding Creek	TN06010108010_0500	5.5	Not Supporting
Rheatown Creek	TN06010108010_0750	6.7	Not Supporting
Hice Creek	TN06010108010_0800	2.1	Not Supporting
Snapp Branch	TN06010108010_0900	1.9	Not Supporting
Asbury Creek	TN06010108010_1100	2.33	Not Supporting
Knave Branch	TN06010108010_1200	4.6	Not Supporting
Keplinger Creek	TN06010108010_1300	5.3	Not Supporting
Lebanon Branch	TN06010108010_1400	1.9	Not Supporting
Moore Branch	TN06010108010_3600	7.7	Not Supporting
Wolf Branch	TN06010108010_3800	1.3	Not Supporting
Cedar Creek	TN06010108030_0100	3.3	Not Supporting
Splatter Creek	TN06010108030_0210	3.6	Not Supporting
Keebler Branch	TN06010108030_0300	7.4	Not Supporting
Clear Fork	TN06010108030_0400	12	Not Supporting
Unnamed Trib to Clear Fork	TN06010108030_0420	6.9	Not Supporting
Leesburg Branch	TN06010108030_0431	3.4	Not Supporting
Buffalo Creek	TN06010108033_0100	3	Not Supporting

Potter Creek	TN06010108035_0200	15.3	Not Supporting
Mud Creek	TN06010108035_0400	4.4	Not Supporting
Lick Branch	TN06010108035_0700	1.2	Not Supporting
Lick Creek	TN06010108035_1000	3.9	Not Supporting
Babb Creek	TN06010108035_1110	4.6	Not Supporting
Gardiner Creek	TN06010108035_1400	5.4	Not Supporting
Wattenbarger Creek	TN06010108035_1410	5.3	Not Supporting
Horse Fork	TN06010108035_2300	1.6	Not Supporting
Union Temple Creek	TN06010108035_2310	23.9	Not Supporting
Davis Creek	TN06010108035_2320	2.8	Not Supporting
Hoodley Branch	TN06010108035_2400	5.3	Not Supporting
Possum Creek	TN06010108035_2521	7.5	Not Supporting
Pond Creek	TN06010108035_2810	2.2	Not Supporting
Fox Branch	TN06010108035_2900	1.5	Not Supporting
Lick Creek	TN06010108035_3000	7.4	Not Supporting
Lick Creek	TN06010108035_5000	17.8	Not Supporting
Lick Creek	TN06010108035_6000	8.9	Not Supporting
Lick Creek	TN06010108035_7000	9.4	Not Supporting
Hale Branch	TN06010108042_0100	7.1	Not Supporting
Slop Creek	TN06010108042_0110	1.7	Not Supporting
Coldspring Branch	TN06010108042_0612	1.1	Not Supporting
Crider Creek	TN06010108043_0200	6.2	Not Supporting
Sartain Branch	TN06010108043_0300	4.4	Not Supporting
Carter Branch	TN06010108043_0310	3.5	Not Supporting
Alexander Creek	TN06010108088_0200	2.8	Not Supporting
Unnamed Trib. To Richland Creek	TN06010108102_0100	4.05	Not Supporting
Simpson Creek	TN06010108102_0200	1.87	Not Supporting
Tipton Creek	TN06010108102_0300	1.6	Not Supporting
East Fork Richland Creek	TN06010108102_0400	4.96	Not Supporting
Richland Creek	TN06010108102_2000	8.51	Not Supporting
Dry Creek	TN06010108456_0200	3.3	Not Supporting
Brown Branch	TN06010108510_0100	8.3	Not Supporting
Bacon Branch	TN06010108510_0200	4.6	Not Supporting
Little Limestone Creek	TN06010108510_2000	13.5	Not Supporting
Loyd Creek	TN06010108536_0100	4.2	Not Supporting
Little Cherokee Creek	TN06010108536_0200	7.2	Not Supporting
Mutton Creek	TN06010108DCTRIBS_0100	1.7	Not Supporting
Flag Branch	TN06010108DCTRIBS_0600	5.8	Not Supporting
Robinson Creek	TN06010108001_0110	3.4	Not Supporting
Turkey Creek	TN06010108001_0200	5.8	Not Supporting
Nolichucky River	TN06010108001_1000	4	Not Supporting
Nolichucky River	TN06010108001_3000	9	Not Supporting
Privet Branch	TN06010108005_0310	1.4	Not Supporting
Gregg Creek	TN06010108005_0500	2.7	Not Supporting
Shelton Branch	TN06010108005_0710	1.23	Not Supporting
Kyker Branch	TN06010108005_0800	2.5	Not Supporting

Nolichucky River	TN06010108005_1000	9.4	Not Supporting
Nolichucky River	TN06010108005_2000	6.6	Not Supporting
Nolichucky River	TN06010108005_3000	6.4	Not Supporting
Cedar Creek	TN06010108009_0300	5.4	Not Supporting
Cove Creek	TN06010108009_1000	29.7	Not Supporting
Holley Creek	TN06010108010_0200	8.5	Not Supporting
College Creek	TN06010108010_0300	9.3	Not Supporting
Pudding Creek	TN06010108010_0500	5.5	Not Supporting
Rheatown Creek	TN06010108010_0750	6.7	Not Supporting
Hice Creek	TN06010108010_0800	2.1	Not Supporting
Snapp Branch	TN06010108010_0900	1.9	Not Supporting
Nolichucky River	TN06010108010_1000	9.4	Not Supporting
Asbury Creek	TN06010108010_1100	2.33	Not Supporting
Keplinger Creek	TN06010108010_1300	5.3	Not Supporting
Lebanon Branch	TN06010108010_1400	1.9	Not Supporting
Nolichucky River	TN06010108010_2000	6.5	Not Supporting
Nolichucky River	TN06010108010_3000	22.6	Not Supporting
Katy Branch	TN06010108010_3100	0.8	Not Supporting
Moore Branch	TN06010108010_3600	7.7	Not Supporting
Wolf Branch	TN06010108010_3800	1.3	Not Supporting
Nolichucky River	TN06010108010_6000	2.06	Not Supporting
Scioto Creek	TN06010108029_0300	14.8	Not Supporting
North Indian Creek	TN06010108029_1000	8	Not Supporting
Cedar Creek	TN06010108030_0100	3.3	Not Supporting
Jockey Creek	TN06010108030_0200	8	Not Supporting
Splatter Creek	TN06010108030_0210	3.6	Not Supporting
Carson Creek	TN06010108030_0220	17.9	Not Supporting
Keebler Branch	TN06010108030_0300	7.4	Not Supporting
Clear Fork	TN06010108030_0400	12	Not Supporting
Unnamed Trib to Clear Fork	TN06010108030_0420	6.9	Not Supporting
Leesburg Branch	TN06010108030_0431	3.4	Not Supporting
Big Limestone Creek	TN06010108030_2000	8.8	Not Supporting
Buffalo Creek	TN06010108033_0100	3	Not Supporting
Potter Creek	TN06010108035_0200	15.3	Not Supporting
Puncheon Camp Creek	TN06010108035_0900	11.5	Not Supporting
Lick Creek	TN06010108035_1000	3.9	Not Supporting
Clear Creek	TN06010108035_1900	19.9	Not Supporting
Union Temple Creek	TN06010108035_2310	23.9	Not Supporting
Davis Creek	TN06010108035_2320	2.8	Not Supporting
Lick Creek	TN06010108035_3000	7.4	Not Supporting
Lick Creek	TN06010108035_5000	17.8	Not Supporting
Lick Creek	TN06010108035_6000	8.9	Not Supporting
Lick Creek	TN06010108035_7000	9.4	Not Supporting
Lick Creek	TN06010108035_9000	7.7	Not Supporting
Coldspring Branch	TN06010108042_0612	1.1	Not Supporting
Crider Creek	TN06010108043_0200	6.2	Not Supporting

Sartain Branch	TN06010108043_0300	4.4	Not Supporting
Carter Branch	TN06010108043_0310	3.5	Not Supporting
Cedar Creek	TN06010108043_0400	7.5	Not Supporting
Alexander Creek	TN06010108088_0200	2.8	Not Supporting
Unnamed Trib. To Richland Creek	TN06010108102_0100	4.05	Not Supporting
Simpson Creek	TN06010108102_0200	1.87	Not Supporting
Tipton Creek	TN06010108102_0300	1.6	Not Supporting
Richland Creek	TN06010108102_2000	8.51	Not Supporting
Dry Creek	TN06010108456_0200	3.3	Not Supporting
Brown Branch	TN06010108510_0100	8.3	Not Supporting
Bacon Branch	TN06010108510_0200	4.6	Not Supporting
Feist Branch	TN06010108510_0300	2.3	Not Supporting
Onion Creek	TN06010108510_0500	4	Not Supporting
Loyd Creek	TN06010108536_0100	4.2	Not Supporting
Little Cherokee Creek	TN06010108536_0200	7.2	Not Supporting
Cherokee Creek	TN06010108536_1000	2.6	Not Supporting
Cherokee Creek	TN06010108536_2000	18.2	Not Supporting
Mutton Creek	TN06010108DCTRIBS_0100	1.7	Not Supporting
Johnson Creek	TN06010108DCTRIBS_0200	1.4	Not Supporting
Mud Creek	TN06010108DCTRIBS_0500	21.4	Not Supporting
Flag Branch	TN06010108DCTRIBS_0600	5.8	Not Supporting

Table A3-2c. Stream Impairment Due to Siltation in the Tennessee Portion of the Nolichucky River Watershed.

SEGMENT NAME	WATERBODY SEGMENT ID	SEGMENT SIZE (ACRES)	SUPPORT DESCRIPTION
Davy Crockett Lake	TN06010108DCROCKETT_1000	383	Not Supporting

Table A3-2d. Lake Impairment Due to Siltation in the Tennessee Portion of the Nolichucky River Watershed.

APPENDIX V

LAND TREATMENT – CONSERVATION BUFFERS					
	Contour Buffer Strips (acres)	Field Borders (feet)	Filter Strip (feet)	Streambank / Shoreline Protection (feet)	Riparian Forest Buffer (acres)
FY 2002	9	3000	7	20416	8
FY 2003	9	22800	7	7900	41
FY 2005			6	900	15
FY 2006		7020	4	2095	

Table A5-1a. Land Treatment Conservation Practices (Conservation Buffers), in Partnership with NRCS in the Tennessee Portion of the Nolichucky River Watershed. *Data are from Performance & Results Measurement System (PRMS) for each fiscal year reporting period (October 1 through September 30) from 2002 to 2006.*

EROSION CONTROL		
	Est. soil saved (tons/year)	Land Treated with erosion control measures (acres)
FY 2002	32663	2486
FY 2003	39702	3948

Table A5-1b. Erosion Control Conservation Practices, in Partnership with NRCS in the Tennessee Portion of the Nolichucky River Watershed. *Data are from Performance & Results Measurement System (PRMS) for each fiscal year reporting period (October 1 through September 30) from 2002 to 2006.*

IRRIGATION MANAGEMENT		
	Est. Water Conserved (acre inches)	Irrigation Mgmt. Systems (acres)
FY 2002		14
FY 2003	2500	350

Table A5-1c. Irrigation Management Conservation Practices in Partnership with NRCS in the Tennessee Portion of the Nolichucky River Watershed. *Data are from Performance & Results Measurement System (PRMS) for each fiscal year reporting period (October 1 through September 30) from 2002 to 2006.*

NUTRIENT MANAGEMENT			
	AFO Nutrient Mgmt Applied (acres)	Non-AFO Nutrient Mgmt. Applied (acres)	Total Applied (acres)
FY 2002	1858	2665	4523
FY 2003	348	4182	4530
FY 2004	415		415
FY 2005	5644		5644
FY 2006	5478		5478

Table A5-1d. Nutrient Management Conservation Practices in Partnership with NRCS in the Tennessee Portion of the Nolichucky River Watershed. *Data are from Performance & Results Measurement System (PRMS) for each fiscal year reporting period (October 1 through September 30) from 2002 to 2006.*

PEST MANAGEMENT	
	Pest Mgmt. Systems (acres)
FY 2002	4542
FY 2003	5244
FY 2004	415
FY 2005	5834
FY 2006	5453

Table A5-1e. Pest Management Conservation Practices in Partnership with NRCS in the Tennessee Portion of the Nolichucky River Watershed. *Data are from Performance & Results Measurement System (PRMS) for each fiscal year reporting period (October 1 through September 30) from 2002 to 2006.*

GRAZING/FORAGES				
	Prescribed Grazing (acres)	Fencing (feet)	Heavy Use Area Protection (acres)	Pasture and Hay Planting (acres)
FY 2002	3271			
FY 2003	2810			
FY 2004	1738	12110	1	27
FY 2005	3639	39746	50	57
FY 2006	674	46239	5	199

Table A5-1f. Grazing/Forages Conservation Practices in Partnership with NRCS in the Tennessee Portion of the Nolichucky River Watershed. *Data are from Performance & Results Measurement System (PRMS) for each fiscal year reporting period (October 1 through September 30) from 2002 to 2006.*

TREE AND SHRUB PRACTICES				
	Land Improved through Forest Stand improvement (acres)	Total Tree & Shrub Estab. (acres)	Forestland Re-established or improved (acres)	Use Exclusion (acres)
FY 2002	694	43		
FY 2003	742			
FY 2004	662		662	
FY 2005	645		645	11
FY 2006	1680	1	1681	4

Table A5-1g. Tree and Shrub Conservation Practices in Partnership with NRCS in the Tennessee Portion of the Nolichucky River Watershed. *Data are from Performance & Results Measurement System (PRMS) for each fiscal year reporting period (October 1 through September 30) from 2002 to 2006.*

LAND TREATMENT – TILLAGE AND CROPPING						
	Residue Mgmt, No-till, Strip till (acres)	Residue Mgmt - Mulch Till (acres)	Tillage & Residue Mgmt Systems (acres)	Conservation Crop Rotation (acres)	Contour Farming (acres)	Cover Crop (acres)
FY 2002	471		471			
FY 2003	80		80			
FY 2004	78		78	387	54	129
FY 2005	483	38	521	1107	642	181
FY 2006	626	500	1126	1200	395	177

Table A5-1h. Land Treatment Conservation Practices (Tillage and Cropping), in Partnership with NRCS in the Tennessee Portion of the Nolichucky River Watershed. *Data are from Performance & Results Measurement System (PRMS) for each fiscal year reporting period (October 1 through September 30) from 2002 to 2006.*

WETLANDS	
	Wetlands Created or Restored (acres)
FY 2002	1
FY 2003	39

Table A5-1i. Wetland Conservation Practices in Partnership with NRCS in the Tennessee Portion of the Nolichucky River Watershed. *Data are from Performance & Results Measurement System (PRMS) for each fiscal year reporting period (October 1 through September 30) from 2002 to 2006.*

WILDLIFE HABITAT MANAGEMENT			
	Upland Habitat Mgmt (acres)	Wetland Habitat Mgmt (acres)	Total Wildlife Habitat Mgmt Applied (acres)
FY 2003	1586	35	1621
FY 2004	754		754
FY 2005	723		723
FY 2006	1286		1286

Table A5-1j. Wildlife Habitat Management Conservation Practices in Partnership with NRCS in the Tennessee Portion of the Nolichucky River Watershed. *Data are from Performance & Results Measurement System (PRMS) for each fiscal year reporting period (October 1 through September 30) from 2002 to 2006.*

WATER SUPPLY			
	Pipeline (ft)	Pond (number)	Watering Facility (number)
FY 2004	10897		12
FY 2005	23,963	1	34
FY 2006	24248	2	23

Table A5-1k. Water Supply Conservation Practices in Partnership with NRCS in the Tennessee Portion of the Nolichucky River Watershed. *Data are from Performance & Results Measurement System (PRMS) for each fiscal year reporting period (October 1 through September 30) from 2002 to 2006.*

WASTE MANAGEMENT FACILITIES			
	Waste Storage Facility (number)	Composting Facility (number)	Total Facilities (number)
FY 2002	6	1	7
FY 2003	1		1

Table A5-1l. Waste Management Conservation Practices in Partnership with NRCS in the Tennessee Portion of the Nolichucky River Watershed. *Data are from Performance & Results Measurement System (PRMS) for each fiscal year reporting period (October 1 through September 30) from 2002 to 2006.*

HUC-12	NRCS PRACTICE CODE	NRCS PRACTICE NAME	NUMBER OF PRACTICES INSTALLED	LAND USE DISPLAY
060101080201	328	Conservation Crop Rotation	3	Pasture
	590	Nutrient Management	5	Pasture
	595	Pest Management	6	Headquarters (1) Pasture (5)
	666	Forest Stand Improvement	3	Forest
060101080202	328	Conservation Crop Rotation	3	Crop
	340	Cover Crop	1	Crop
	528	Prescribed Grazing	1	Pasture
	590	Nutrient Management	13	Crop (3) Pasture (10)
	595	Pest Management	14	Crop (3) Headquarters (1) Pasture (10)
	666	Forest Stand Improvement	7	Forest
060101080203	328	Conservation Crop Rotation	2	Crop
	330	Contour Farming	2	Crop
	340	Cover Crop	2	Crop
	590	Nutrient Management	2	Crop
	595	Pest Management	2	Crop
060101080204	590	Nutrient Management	3	Pasture
	595	Pest Management	7	Headquarters (4) Pasture (3)
060101080205	328	Conservation Crop Rotation	6	Crop
	511	Forage Harvest Management	7	Crop (4) Hay (3)
	528	Prescribed Grazing	7	Grazed Forest (2) Pasture (5)
	580	Streambank and Shoreline Protection	1	Hay
	590	Nutrient Management	39	Crop (5) Hay (4) Pasture (30)
	595	Pest Management	43	Crop (5) Hay (4) Headquarters (4) Pasture (30)
	645	Upland Wildlife Habitat Management	13	Forest
	666	Forest Stand Improvement	16	Forest

Table A5-2a.

HUC-12	NRCS PRACTICE CODE	NRCS PRACTICE NAME	NUMBER OF PRACTICES INSTALLED	LAND USE DISPLAY
060101080206	328	Conservation Crop Rotation	2	Crop
	340	Cover Crop	2	Crop
	511	Forage Harvest Management	1	Hay
	590	Nutrient Management	5	Crop (2) Hay (1) Pasture (2)
	595	Pest Management	5	Crop (2) Hay (1) Pasture (2)
060101080301	327	Conservation Cover	1	Crop
	328	Conservation Crop Rotation	1	Crop
	329	Residue and Tillage Management, No-Till/Strip Till/Direct Seed	3	Crop
	340	Cover Crop	1	Crop
	382	Fence	3	Pasture
	472	Use Exclusion	1	Water
	511	Forage Harvest Management	4	Crop (3) Hay (1)
	512	Pasture and Hay Planting	5	Crop (2) Hay (3)
	516	Pipeline	3	Pasture
	528	Prescribed Grazing	6	Pasture
	561	Heavy Use Area Protection	1	Pasture
	590	Nutrient Management	38	Crop (5) Hay (3) Pasture (30)
	595	Pest Management	41	Crop (5) Hay (3) Headquarters (3) Pasture (30)
	614	Watering Facility	4	Pasture
	645	Upland Wildlife Habitat Management	4	Forest (1) Grazed Forest (3)
	666	Forest Stand Improvement	10	Forest (7) Grazed Forest (3)

Table A5-2b.

HUC-12	NRCS PRACTICE CODE	NRCS PRACTICE NAME	NUMBER OF PRACTICES INSTALLED	LAND USE DISPLAY
060101080302	327	Conservation Cover	2	Crop
	328	Conservation Crop Rotation	1	Crop
	329	Residue and Tillage Management, No-Till/Strip Till/Direct Seed	8	Crop
	342	Critical Area Planting	1	Headquarters
	344	Residue Management, Seasonal	9	Crop
	378	Pond	1	Pasture
	382	Fence	1	Pasture
	472	Use Exclusion	1	Pasture
	511	Forage Harvest Management	2	Crop (1) Hay (1)
	512	Pasture and Hay Planting	1	Crop (1)
	561	Heavy Use Area Protection	1	Pasture (1)
	580	Streambank and Shoreline Protection	2	Crop (1) Headquarters (1)
	590	Nutrient Management	35	Crop (13) Hay (1) Pasture (21)
	595	Pest Management	37	Crop (13) Hay (1) Headquarters (1) Pasture (21) Wildlife (1)
	645	Upland Wildlife Habitat Management	2	Forest (1) Wildlife (1)
	666	Forest Stand Improvement	3	Forest (2) Wildlife (1)
060101080303	327	Conservation Cover	16	Crop
	328	Conservation Crop Rotation	1	Crop
	382	Fence	3	Forest (1) Pasture (2)
	472	Use Exclusion	1	Pasture
	511	Forage Harvest Management	6	Hay
	512	Pasture and Hay Planting	2	Hay
	528	Prescribed Grazing	3	Pasture
	561	Heavy Use Area Protection	2	Pasture
	590	Nutrient Management	34	Crop (18) Hay (6) Pasture (10)
	595	Pest Management	39	Crop (18) Hay (6) Headquarters (1) Pasture (12) Wildlife (2)

Table A5-2c.

HUC-12	NRCS PRACTICE CODE	NRCS PRACTICE NAME	NUMBER OF PRACTICES INSTALLED	LAND USE DISPLAY
060101080303	645	Upland Wildlife Habitat Management	10	Forest (8) Wildlife (2)
	666	Forest Stand Improvement	11	Forest (9) Wildlife (2)
060101080401	328	Conservation Crop Rotation	7	Crop
	340	Cover Crop	7	Crop
	382	Fence	6	Pasture
	472	Use Exclusion	2	Pasture
	512	Pasture and Hay Planting	2	Pasture
	516	Pipeline	4	Pasture
	528	Prescribed Grazing	12	Pasture
	578	Stream Crossing	2	Pasture
	590	Nutrient Management	27	Crop (7) Pasture (20)
	595	Pest Management	28	Crop (7) Headquarters (1) Pasture (20)
	614	Watering Facility	4	Pasture
	645	Upland Wildlife Habitat Management	2	Forest
	666	Forest Stand Improvement	2	Forest
060101080402	327	Conservation Cover	1	Crop
	328	Conservation Crop Rotation	7	Crop
	330	Contour Farming	1	Crop
	340	Cover Crop	12	Crop
	342	Critical Area Planting	1	Pasture
	378	Pond	1	Pasture
	382	Fence	8	Pasture
	472	Use Exclusion	2	Pasture (1) Wildlife (1)
	511	Forage Harvest Management	9	Hay
	512	Pasture and Hay Planting	2	Hay
	516	Pipeline	5	Pasture
	528	Prescribed Grazing	30	Grazed Forest (2) Pasture (28)
	533	Pumping Plant	1	Headquarters
	561	Heavy Use Area Protection	3	Pasture
	580	Streambank and Shoreline Protection	3	Pasture

Table A5-2d.

HUC-12	NRCS PRACTICE CODE	NRCS PRACTICE NAME	NUMBER OF PRACTICES INSTALLED	LAND USE DISPLAY
060101080402	590	Nutrient Management	64	Crop (16) Hay (9) Pasture (37) Wildlife (2)
	595	Pest Management	62	Crop (16) Hay (8) Headquarters (6) Pasture (31) Wildlife (1)
	614	Watering Facility	4	Pasture
	645	Upland Wildlife Habitat Management	12	Forest (8) Natural Area (1) Wildlife (3)
	647	Early Successional Habitat Development/Manage	2	Wildlife
	666	Forest Stand Improvement	11	Forest
060101080501	328	Conservation Crop Rotation	1	Crop
	340	Cover Crop	1	Crop
	472	Use Exclusion	1	Pasture
	511	Forage Harvest Management	2	Crop (1) Hay (1)
	528	Prescribed Grazing	2	Pasture
	580	Streambank and Shoreline Protection	4	Forest (1) Pasture (3)
	590	Nutrient Management	7	Crop (1) Hay (1) Pasture (5)
	595	Pest Management	8	Crop (1) Hay (1) Pasture (6)
	612	Tree/Shrub Establishment	2	Forest (1) Pasture (1)
	733	Cross Slope Farming	1	Crop
060101080502	328	Conservation Crop Rotation	11	Crop
	330	Contour Farming	1	Crop
	340	Cover Crop	10	Crop
	382	Fence	2	Pasture
	511	Forage Harvest Management	10	Crop (7) Hay (3)
	516	Pipeline	1	Pasture
	528	Prescribed Grazing	8	Pasture
	561	Heavy Use Area Protection	1	Pasture

Table A5-2e.

HUC-12	NRCS PRACTICE CODE	NRCS PRACTICE NAME	NUMBER OF PRACTICES INSTALLED	LAND USE DISPLAY
060101080502	590	Nutrient Management	22	Crop (8) Hay (3) Pasture (11)
	595	Pest Management	18	Crop (8) Hay (2) Pasture (8)
	614	Watering Facility	1	Pasture
	645	Upland Wildlife Habitat Management	2	Forest
	666	Forest Stand Improvement	2	Forest
	733	Cross Slope Farming	5	Crop
060101080503	328	Conservation Crop Rotation	6	Crop
	329	Residue and Tillage Management, No-Till/Strip	1	Crop
	340	Cover Crop	6	Crop
	382	Fence	2	Pasture
	511	Forage Harvest Management	9	Crop (2) Hay (7)
	516	Pipeline	5	Natural Area (1) Pasture (4)
	528	Prescribed Grazing	1	Pasture
	533	Pumping Plant	1	Natural Area
	561	Heavy Use Area Protection	2	Pasture
	580	Streambank and Shoreline Protection	1	Headquarters
	590	Nutrient Management	20	Crop (5) Hay (7) Pasture (8)
	595	Pest Management	22	Crop (5) Hay (7) Natural Area (1) Pasture (9)
	614	Watering Facility	2	Pasture
	645	Upland Wildlife Habitat Management		Forest
	666	Forest Stand Improvement	2	Forest
	733	Cross Slope Farming	4	Crop
060101080504	382	Fence	7	Hay (1) Pasture (6)
	393	Filter Strip	1	Natural Area
	472	Use Exclusion	1	Wildlife
	511	Forage Harvest Management	1	Hay
	516	Pipeline	6	Hay (1) Pasture (5)
	533	Pumping Plant	2	Pasture

Table A5-2f.

HUC-12	NRCS PRACTICE CODE	NRCS PRACTICE NAME	NUMBER OF PRACTICES INSTALLED	LAND USE DISPLAY
060101080504	561	Heavy Use Area Protection	6	Hay (1) Pasture (5)
	578	Stream Crossing	1	Natural Area
	590	Nutrient Management	3	Hay (1) Pasture (2)
	595	Pest Management	13	Hay (5) Headquarters (2) Pasture (6)
	614	Watering Facility	6	Hay (1) Pasture (5)
	645	Upland Wildlife Habitat Management	4	Forest
	666	Forest Stand Improvement	4	Forest
060101080505	328	Conservation Crop Rotation	4	Crop
	329	Residue and Tillage Management No-Till/Strip Till/Direct Seed	1	Crop
	340	Cover Crop	4	Crop
	382	Fence	8	Headquarters (1) Natural Area (1) Pasture (6)
	386	Field Border	2	Hay
	393	Filter Strip	1	Watershed Protection
	511	Forage Harvest Management	21	Crop (1) Hay (20)
	512	Pasture and Hay Planting	10	Crop (1) Forest (1) Hay (3) Wildlife (5)
	516	Pipeline	8	Pasture
	528	Prescribed Grazing	19	Pasture
	561	Heavy Use Area Protection	9	Natural Area (1) Pasture (8)
	574	Spring Development	1	Forest
	590	Nutrient Management	56	Crop (7) Hay (22) Pasture (26) Wildlife (1)
	595	Pest Management	60	Crop (7) Hay (22) Headquarters (4) Pasture (26) Wildlife (1)
	614	Watering Facility	7	Pasture

Table A5-2g.

HUC-12	NRCS PRACTICE CODE	NRCS PRACTICE NAME	NUMBER OF PRACTICES INSTALLED	LAND USE DISPLAY
060101080505	645	Upland Wildlife Habitat Management	10	Crop (1) Forest (2) Hay (2) Natural Area (2) Wildlife (3)
	666	Forest Stand Improvement	6	Forest
	733	Cross Slope Farming	4	Crop
060101080506	327	Conservation Cover	2	Crop (1) Hay (1)
	328	Conservation Crop Rotation	14	Crop (12) Hay (1) Headquarters (1)
	329	Residue and Tillage Management, No-Till/Strip	12	Crop
	338	Prescribed Burning	2	Wildlife
	340	Cover Crop	10	Crop
	382	Fence	12	Pasture (9) Wildlife (3)
	386	Field Border	3	Pasture (2) Watershed
	393	Filter Strip	4	Pasture
	412	Grassed Waterway	1	Headquarters
	511	Forage Harvest Management	19	Crop (4) Hay (14) Headquarters (1)
	512	Pasture and Hay Planting	8	Crop (5) Wildlife (2) Crop (1)
	516	Pipeline	19	Hay (2) Headquarters (3) Pasture (14)
	528	Prescribed Grazing	35	Pasture
	560	Access Road	1	Pasture
	561	Heavy Use Area Protection	13	Crop (1) Pasture (12)
	574	Spring Development	1	Pasture
	578	Stream Crossing	3	Pasture (1) Watershed Protection (1) Wildlife (1)
	580	Streambank and Shoreline Protection		
	584	Channel Stabilization	1	Watershed

Table A5-2h.

HUC-12	NRCS PRACTICE CODE	NRCS PRACTICE NAME	NUMBER OF PRACTICES INSTALLED	LAND USE DISPLAY
060101080506	590	Nutrient Management	94	Crop (32) Hay (12) Headquarters (2) Pasture (44) Watershed Protection (1) Wildlife (3)
	595	Pest Management	102	Crop (30) Hay (11) Headquarters (10) Natural Area (3) Pasture (42) Watershed Protection(1) Watershed Protection (1) Wildlife (4)
	614	Watering Facility	12	Crop (1) Hay (1) Pasture (10)
	642	Water Well	1	Wildlife
	645	Upland Wildlife Habitat Management	24	Forest (13) Grazed Forest (1) Natural Area (3) Pasture (2) Wildlife (5)
	666	Forest Stand Improvement	20	Forest
	733	Cross Slope Farming	1	Headquarters
060101080601	100	Comprehensive Nutrient Management	1	Headquarters
	313	Waste Storage Facility	2	Headquarters
	317	Composting Facility	1	Headquarters
	327	Conservation Cover	5	Crop
	328	Conservation Crop Rotation	2	Crop
	340	Cover Crop	2	Crop
	342	Critical Area Planting	1	Headquarters
	382	Fence	22	Hay (1) Headquarters (1) Pasture (20)
	484	Mulching	1	Headquarters
	511	Forage Harvest Management	16	Crop (2) Hay (14)
	512	Pasture and Hay Planting	10	Crop (3) Pasture (7)
	516	Pipeline	16	Headquarters (1) Pasture (15)
	528	Prescribed Grazing	29	Grazed Forest (3) Pasture (26)
	533	Pumping Plant	1	Headquarters

Table A5-2i.

HUC-12	NRCS PRACTICE CODE	NRCS PRACTICE NAME	NUMBER OF PRACTICES INSTALLED	LAND USE DISPLAY
060101080601	558	Roof Runoff Structure	2	Headquarters
	560	Access Road	1	Headquarters
	561	Heavy Use Area Protection	13	Headquarters (3) Pasture (10)
	578	Stream Crossing	4	Hay (1) Pasture (3)
	580	Streambank and Shoreline Protection	2	Pasture
	590	Nutrient Management	88	Crop (18) Hay (1) Pasture (69)
	595	Pest Management	84	Crop (18) Headquarters (4) Pasture (62)
	614	Watering Facility	10	Pasture
	645	Upland Wildlife Habitat Management	12	Forest (8) Grazed Forest (1) Wildlife (3)
	666	Forest Stand Improvement	9	Forest (8) Grazed Forest (1)
060101080602	328	Conservation Crop Rotation	1	Crop
	340	Cover Crop	1	Crop
	342	Critical Area Planting	1	Pasture
	382	Fence	8	Natural Area (1) Pasture (7)
	472	Use Exclusion	1	Wildlife
	511	Forage Harvest Management	4	Hay
	516	Pipeline	9	Forest (1) Headquarters (2) Pasture (6)
	528	Prescribed Grazing	6	Grazed Forest (1) Pasture (5)
	561	Heavy Use Area Protection	6	Pasture
	578	Stream Crossing	1	Pasture
	580	Streambank and Shoreline Protection	1	Pasture
	584	Channel Stabilization	1	Pasture
	590	Nutrient Management	27	Crop (1) Hay (4) Pasture (21) Wildlife (1)
	595	Pest Management	28	Crop (1) Hay (4) Headquarters (1) Pasture (21) Wildlife (1)

Table A5-2j.

HUC-12	NRCS PRACTICE CODE	NRCS PRACTICE NAME	NUMBER OF PRACTICES INSTALLED	LAND USE DISPLAY
060101080602	614	Watering Facility	6	Pasture
	645	Upland Wildlife Habitat Management	1	Wildlife
060101080603	328	Conservation Crop Rotation	4	Crop
	330	Contour Farming	2	Crop
	340	Cover Crop	4	Crop
	378	Pond	1	Pasture
	511	Forage Harvest Management	10	Crop (3) Hay (7)
	512	Pasture and Hay Planting	1	Crop
	516	Pipeline	8	Headquarters (2) Pasture (6)
	528	Prescribed Grazing	57	Pasture
	533	Pumping Plant	2	Pasture
	561	Heavy Use Area Protection	4	Pasture
	578	Stream Crossing	2	Pasture
	590	Nutrient Management	86	Crop (10) Hay (10) Pasture (66)
	595	Pest Management	101	Crop (10) Hay (9) Headquarters (16) Pasture (65) Watershed Protection (1)
	614	Watering Facility	4	Pasture
	633	Waste Utilization	2	Hay
	645	Upland Wildlife Habitat Management	1	Forest
	666	Forest Stand Improvement	16	Forest
060101080604	328	Conservation Crop Rotation	1	Crop
	511	Forage Harvest Management	5	Crop (2) Hay (3)
	528	Prescribed Grazing	5	Pasture
	590	Nutrient Management	41	Crop (18) Forest (1) Hay (3) Pasture (19)
	595	Pest Management	42	Crop (18) Forest (1) Hay (3) Headquarters (1) Pasture (19)
	666	Forest Stand Improvement	3	Forest

Table A5-2k.

HUC-12	NRCS PRACTICE CODE	NRCS PRACTICE NAME	NUMBER OF PRACTICES INSTALLED	LAND USE DISPLAY
060101080605	100	Comprehensive Nutrient Management	1	Headquarters
	313	Waste Storage Facility	1	Headquarters
	328	Conservation Crop Rotation	1	Crop
	329	Residue and Tillage Management	8	Crop
	331	Contour Orchard and Other Fruit Area	1	Crop
	340	Cover Crop	1	Crop
	356	Dike	3	Wildlife
	382	Fence	6	Pasture (4) Watershed
	511	Forage Harvest Management	3	Crop
	512	Pasture and Hay Planting	8	Wildlife
	516	Pipeline	1	Headquarters
	528	Prescribed Grazing	4	Pasture
	558	Roof Runoff Structure	1	Headquarters
	561	Heavy Use Area Protection	2	Pasture
	587	Structure for Water Control	3	Wildlife
	590	Nutrient Management	43	Crop (26) Hay (3) Pasture (12) Wildlife (2)
	595	Pest Management	43	Crop (25) Hay (3) Headquarters (1) Pasture (12) Wildlife (2)
	612	Tree/Shrub Establishment	5	Forest
	614	Watering Facility	2	Pasture
	644	Wetland Wildlife Habitat Management	4	Wildlife
	645	Upland Wildlife Habitat Management	4	Natural Area (2) Wildlife (2)
	657	Wetland Restoration	11	Forest (5) Wildlife (6)
	666	Forest Stand Improvement	1	Forest
	733	Cross Slope Farming	1	Crop
060101080701	100	Comprehensive Nutrient Management	1	Headquarters
	313	Waste Storage Facility	1	Headquarters
	328	Conservation Crop Rotation	5	Crop
	330	Contour Farming	1	Crop
	340	Cover Crop	9	Crop
	342	Critical Area Planting	1	Pasture
	362	Diversion	1	Headquarters
	382	Fence	15	Forest (3) Pasture (12)

Table A5-2l.

HUC-12	NRCS PRACTICE CODE	NRCS PRACTICE NAME	NUMBER OF PRACTICES INSTALLED	LAND USE DISPLAY
060101080701	391	Riparian Forest Buffer	1	Pasture
	393	Filter Strip	2	Headquarters (1) Pasture (1)
	472	Use Exclusion	2	Pasture
	511	Forage Harvest Management	10	Crop (1) Hay (9)
	512	Pasture and Hay Planting	2	Crop Pasture
	516	Pipeline	8	Headquarters (1) Pasture (7)
	528	Prescribed Grazing	12	Grazed Forest (1) Pasture (11)
	558	Roof Runoff Structure	1	Headquarters
	560	Access Road	3	Pasture
	561	Heavy Use Area Protection	13	Forest (1) Headquarters (1) Pasture (11)
	578	Stream Crossing	1	Pasture
	590	Nutrient Management	41	Crop (9) Hay (10) Pasture (22)
	595	Pest Management	44	Crop (9) Hay (10) Headquarters (2) Pasture (23)
	612	Tree/Shrub Establishment	1	Pasture
	614	Watering Facility	6	Headquarters (1) Pasture (5)
	666	Forest Stand Improvement	4	Forest
	733	Cross Slope Farming	2	Crop
060101080702	330	Contour Farming	2	Crop
	342	Critical Area Planting	1	Pasture
	344	Residue Management, Seasonal	5	Crop
	378	Pond	1	Grazed Forest
	382	Fence	3	Pasture
	511	Forage Harvest Management	34	Crop (1) Hay (5) Pasture (28)
	512	Pasture and Hay Planting	3	Crop (1) Hay (2)
	516	Pipeline	4	Pasture
	528	Prescribed Grazing	49	Crop (1) Hay (1) Pasture (47)
	561	Heavy Use Area Protection	5	Pasture

Table A5-2m.

HUC-12	NRCS PRACTICE CODE	NRCS PRACTICE NAME	NUMBER OF PRACTICES INSTALLED	LAND USE DISPLAY
060101080702	578	Stream Crossing	1	Pasture
	590	Nutrient Management	82	Crop (32) Hay (3) Pasture (47)
	595	Pest Management	85	Crop (33) Hay (3) Headquarters (2) Pasture (47)
	612	Tree/Shrub Establishment	1	Pasture
	614	Watering Facility	5	Pasture
	645	Upland Wildlife Habitat Management	4	Forest
	666	Forest Stand Improvement	3	Forest
060101080703	382	Fence	3	Pasture
	516	Pipeline	2	
	528	Prescribed Grazing	9	Pasture
	561	Heavy Use Area Protection	4	Pasture
	590	Nutrient Management	9	Pasture
	595	Pest Management	9	Pasture
	614	Watering facility	2	Pasture
	645	Upland Wildlife Habitat Management	2	Forest
	666	Forest Stand Improvement	2	Forest
060101080704	511	Forest Harvest Management	9	Hay (8) Pasture (1)
	512	Pasture and hay Planting	4	Hay
	516	Pipeline	2	Pasture
	528	Prescribed Grazing	15	Pasture
	561	Heavy use Area Protection	2	Pasture
	574	Spring Development	1	Pasture
	590	Nutrient Management	22	Hay (8) Pasture (14)
	595	Pest Management	24	Hay (8) Headquarters (1) Pasture (15)
	614	Watering facility	2	Pasture
060101080705	327	Conservation Cover	8	Crop
	328	Conservation Crop Rotation	20	Crop
	330	Contour Farming	5	Crop
	340	Cover Crop	6	Crop
	342	Critical Area Planting	1	Pasture
	344	Residue Management, Seasonal	4	Crop
	378	Pond	1	Grazed Forest

Table A5-2n.

HUC-12	NRCS PRACTICE CODE	NRCS PRACTICE NAME	NUMBER OF PRACTICES INSTALLED	LAND USE DISPLAY
060101080705	382	Fence	4	Pasture
	412	Grassed Waterway	4	Crop
	472	Use Exclusion	1	Pasture
	511	Forage Harvest Management	7	Hay (4) Pasture (3)
	512	Pasture and Hay Planting	2	Crop
	516	Pipeline	4	Pasture
	528	Prescribed Grazing	36	Crop (1) Grazed Forest (2) Pasture (33)
	561	Heavy Use Area Protection	7	Pasture
	578	Stream Crossing	1	Pasture
	590	Nutrient Management	53	Crop (20) Hay (4) Pasture (29)
	595	Pest Management	52	Crop (19) Hay (4) Pasture (29)
	614	Watering Facility	11	Pasture
	645	Upland Wildlife Habitat Management	8	Forest (3) Grazed Forest (3) Wildlife (2)
	666	Forest Stand Improvement	2	Forest

Table A5-2o.

Table A5a-o. BMPs Installed by NRCS in the Nolichucky River Watershed in 2006 and 2007.
Information was provided as part of Conservation Technical Assistance Grant 060701T47.

PRACTICE	NRCS CODE	NUMBER OF BMPs
Waste Mgt. System for Dairy	312	2
Conservation Cover	327	1
Critical Area Planting	342	9
Pond for Rotational Grazing System	378	14
Fence	382	31
Pasture & Hayland Establishment	512	18
Pipeline	516	1
Pipeline	516	6
Pumping Plant-Water Control	533	1
Roof Runoff Management	558	2
Heavy Use Area	561	20
Spring Development	574	2
Stream Crossing	576	3
Limited Steam Access	578	1
Streambank/Shoreline Protection	580	13
Trough or Tank	614	56
Waste Utilization	633	2
Waste Utilization	634	1
Well	642	1
Total BMPs		**184**

Table A5-2. Best Management Practices Installed by Tennessee Department of Agriculture and Partners in the Tennessee Portion of the Nolichucky River Watershed.

TADS SITE ID	WATER BODY	YEAR
4199603301	Big Bald Creek	1996
4199603701	Big Branch	1996
4199204901	Briar Creek	1992
4199504201	Briar Creek	1995
4199603601	Briar Creek	1996
4199704201	Briar Creek	1997
419981601	Briar Creek	1998
4199900701	Briar Creek	1999
420001201	Briar Creek	2000
420011301	Briar Creek	2001
420024701	Briar Creek	2002
420032601	Briar Creek	2003
420042201	Briar Creek	2004
420052501	Briar Creek	2005
4199103801	Broad Shoal Creek	1991
420041701	Camp Creek	2004

Table A5-3a.

TADS SITE ID	WATER BODY	YEAR
420032201	Cassi Creek	2003
419981001	Cherokee Creek	1998
4199103701	Clark Creek	1991
4199305201	Clear Fork	1993
420031201	College Creek	2003
4199204801	Davis Creek	1992
420032001	Davis Creek	2003
4199900601	Devil Fork	1999
4199205101	Dry Creek	1992
4199704001	Dry Creek	1997
420051101	Gap Creek	2005
419980401	Goodwater Branch	1998
4199103601	Granny Lewis Creek	1991
4199103602	Granny Lewis Creek	1991
4199210601	Higgins Creek	1992
4199503901	Higgins Creek	1995
420031101	Holley Creek	2003
4199404901	Horse Creek	1994
4199204701	Jennings Creek	1992
419951001	Jockey Creek	1995
4199104001	Jones Branch	1991
4199704101	Longarm Branch	1997
419971401	Middle Creek	1997
4199603201	Mill Creek	1996
419980901	Nolichucky Creek	1998
419980902	Nolichucky Creek	1998
419980903	Nolichucky Creek	1998
419980904	Nolichucky Creek	1998
419980905	Nolichucky Creek	1998
419980906	Nolichucky Creek	1998
419980907	Nolichucky Creek	1998
419980908	Nolichucky Creek	1998
419980909	Nolichucky Creek	1998
419980910	Nolichucky Creek	1998
419980911	Nolichucky Creek	1998
419980912	Nolichucky Creek	1998
419980913	Nolichucky Creek	1998
419980914	Nolichucky Creek	1998
419980915	Nolichucky Creek	1998
419980916	Nolichucky Creek	1998
419980917	Nolichucky Creek	1998
419980918	Nolichucky Creek	1998
419980919	Nolichucky Creek	1998
419980920	Nolichucky Creek	1998

Table A5-3b.

TADS SITE ID	WATER BODY	YEAR
419980921	Nolichucky Creek	1998
419980922	Nolichucky Creek	1998
419980923	Nolichucky Creek	1998
419980924	Nolichucky Creek	1998
419980925	Nolichucky Creek	1998
419980926	Nolichucky Creek	1998
419980927	Nolichucky Creek	1998
419980928	Nolichucky Creek	1998
419980929	Nolichucky Creek	1998
419980930	Nolichucky Creek	1998
419980931	Nolichucky Creek	1998
420010608	Nolichucky Creek	2001
420010609	Nolichucky Creek	2001
420010612	Nolichucky Creek	2001
420010613	Nolichucky Creek	2001
420010614	Nolichucky Creek	2001
420010622	Nolichucky Creek	2001
420010625	Nolichucky Creek	2001
420010626	Nolichucky Creek	2001
420010630	Nolichucky Creek	2001
420010631	Nolichucky Creek	2001
4199405001	North Indian Creek	1994
4199504301	North Indian Creek	1995
420032701	North Indian Creek	2003
419980301	Oven Creek	1998
4199305301	Painter Creek	1993
4199603401	Ramsey Creek	1996
419981801	Red Fork	1998
4199504101	Rice Creek	1995
419971301	Richland Creek	1997
419981901	Right Prong Rock Creek	1998
4199103901	Rock Creek	1991
4199110201	Rocky Fork	1991
4199110202	Rocky Fork	1991
4199210201	Rocky Fork	1992
4199210202	Rocky Fork	1992
4199310401	Rocky Fork	1993
4199310402	Rocky Fork	1993
4199410301	Rocky Fork	1994
4199410302	Rocky Fork	1994
4199510501	Rocky Fork	1995
4199510502	Rocky Fork	1995
4199610301	Rocky Fork	1996
4199610302	Rocky Fork	1996

Table A5-3c.

TADS SITE ID	WATER BODY	YEAR
4199710301	Rocky Fork	1997
4199710302	Rocky Fork	1997
419982601	Rocky Fork	1998
419982602	Rocky Fork	1998
4199901401	Rocky Fork	1999
4199901402	Rocky Fork	1999
420001901	Rocky Fork	2000
420001902	Rocky Fork	2000
420011701	Rocky Fork	2001
420011702	Rocky Fork	2001
420025201	Rocky Fork	2002
420025202	Rocky Fork	2002
420033301	Rocky Fork	2003
420033302	Rocky Fork	2003
420043101	Rocky Fork	2004
420043102	Rocky Fork	2004
420053101	Rocky Fork	2005
420053102	Rocky Fork	2005
4199603501	Round Knob Branch	1996
420024401	Sams Creek	2002
4199104101	Sarvis Cove Creek	1991
420031701	Sarvis Cove Creek	2003
4199404801	Sill Branch	1994
419951101	South Indian Creek	1995
419951201	Spivey Creek	1995
4199104201	Squibb Creek	1991
420031501	Squibb Creek	2003
420031801	Straight Creek	2003
4199504001	Tumbling Creek	1995
4199205001	West Fork Dry Creek	1992

Table A5-3d.

Table A5-4a-d. TWRA TADS Sampling Sites in the Tennessee Portion of the Nolichucky River Watershed.

APPENDIX IV

LAND USE/LAND COVER	AREAS IN HUC-12 SUBWATERSHEDS (ACRES)				
	0201	0202	0203	0204	0205
Bare Rock/Sand/Clay	12	86	51	10	30
Deciduous Forest	8,278	26,719	29,330	4,842	8,704
Developed Open Space	568	2,283	1,072	1,056	928
Emergent Herbaceous Wetlands					
Evergreen Forest	582	2,188	907	175	429
Grassland/Herbaceous	76	234	387	294	235
High Intensity Development	47	83			
Low Intensity Development	435	774	159	167	137
Medium Intensity Development	128	187	4	1	4
Mixed Forest	579	1,817	1,006	142	423
Open Water	64	9	280		157
Pasture/Hay	446	2,738	7,559	8,170	8,990
Row Crops	17	109	902	229	916
Shrub/Scrub	356	676	1,258	52	237
Woody Wetlands	16	24	122	11	85
Total	**11,604**	**37,927**	**43,037**	**15,149**	**21,275**

Table A4-1a.

LAND USE/LAND COVER	AREAS IN HUC-12 SUBWATERSHEDS (ACRES)				
	0206	0301	0302	0303	0401
Bare Rock/Sand/Clay	18	3	8		35
Deciduous Forest	3,205	9,745	21,891	10,330	4,996
Developed Open Space	1,826	473	1,062	346	1,374
Emergent Herbaceous Wetlands					
Evergreen Forest	55	78	1,236	510	101
Grassland/Herbaceous	276	62	148	32	349
High Intensity Development	42			1	
Low Intensity Development	647	122	115	178	251
Medium Intensity Development	149	75	44	20	6
Mixed Forest	92	72	856	538	60
Open Water	1				2
Pasture/Hay	13,962	522	1,150	352	16,709
Row Crops	536	6	13	11	1,396
Shrub/Scrub	50	79	161	73	54
Woody Wetlands	11	1	12	23	10
Total	**20,870**	**11,238**	**26,696**	**12,414**	**25,343**

Table A4-1b.

LAND USE/LAND COVER	AREAS IN HUC-12 SUBWATERSHEDS (ACRES)				
	0402	0501	0502	0503	0504
Bare Rock/Sand/Clay	23	6	6	22	30
Deciduous Forest	3,458	6,841	5,889	12,201	6,997
Developed Open Space	1,416	2,607	621	650	2,709
Emergent Herbaceous Wetlands					
Evergreen Forest	81	333	312	851	991
Grassland/Herbaceous	320	440	109	230	405
High Intensity Development		95			392
Low Intensity Development	348	950	58	28	1,797
Medium Intensity Development	23	225			610
Mixed Forest	45	314	347	558	434
Open Water		177	1	1	247
Pasture/Hay	17,396	22,091	6,051	6,282	17,495
Row Crops	1,723	1,298	339	325	614
Shrub/Scrub	56	87	90	84	64
Woody Wetlands	47	54	25	35	236
Total	**24,936**	**35,518**	**13,848**	**21,267**	**33,021**

Table A4-1c.

LAND USE/LAND COVER	AREAS IN HUC-12 SUBWATERSHEDS (ACRES)				
	0505	0506	0601	0602	0603
Bare Rock/Sand/Clay	49	14	57	13	18
Deciduous Forest	13,710	10,482	18,894	8,494	6,880
Developed Open Space	2,255	731	2,056	1,614	1,814
Emergent Herbaceous Wetlands					
Evergreen Forest	1,194	1,050	1,809	549	1,726
Grassland/Herbaceous	641	182	845	582	615
High Intensity Development	2			66	7
Low Intensity Development	434	49	214	1,072	255
Medium Intensity Development	8		9	299	45
Mixed Forest	715	650	899	349	1,212
Open Water	290		781	3	4
Pasture/Hay	28,146	5,452	13,817	14,242	17,009
Row Crops	1,166	196	1,968	661	426
Shrub/Scrub	142	81	657	131	432
Woody Wetlands	38	2	145	65	108
Total	**48,790**	**18,889**	**42,151**	**28,140**	**30,551**

Table A4-1d.

LAND USE/LAND COVER	AREAS IN HUC-12 SUBWATERSHEDS (ACRES)				
	0604	0605	0701	0702	0703
Bare Rock/Sand/Clay	14	36	44	30	23
Deciduous Forest	2,134	5,843	18,408	13,853	9,059
Developed Open Space	565	1,567	2,469	2,132	1,402
Emergent Herbaceous Wetlands					
Evergreen Forest	246	576	564	1,101	493
Grassland/Herbaceous	116	217	852	868	608
High Intensity Development	4	50	4	15	30
Low Intensity Development	195	360	451	703	398
Medium Intensity Development	11	124	19	46	75
Mixed Forest	298	708	386	554	289
Open Water	12	13	10	1	6
Pasture/Hay	3,607	12,568	21,828	26,450	13,778
Row Crops	194	174	932	2,065	314
Shrub/Scrub	91	226	133	207	77
Woody Wetlands	16	52	46	311	32
Total	**7,503**	**22,514**	**46,146**	**48,336**	**26,584**

Table A4-1e.

LAND USE/LAND COVER	AREAS IN HUC-12 SUBWATERSHEDS (ACRES)	
	0704	0705
Bare Rock/Sand/Clay	9	27
Deciduous Forest	5,420	7,510
Developed Open Space	452	1,607
Emergent Herbaceous Wetlands		
Evergreen Forest	356	1,579
Grassland/Herbaceous	185	809
High Intensity Development		63
Low Intensity Development	117	848
Medium Intensity Development	5	139
Mixed Forest	231	705
Open Water		9
Pasture/Hay	4,701	20,007
Row Crops	521	2,744
Shrub/Scrub	58	249
Woody Wetlands	36	203
Total	**12,091**	**36,499**

Table A4-1f.

Tables A4-1a-f. Land Use Distribution in the Tennessee Portion of the Nolichucky River Watershed by HUC-12. *Data are from 2001 Multi-Resolution Land Characterization (MRLC) derived by applying a generalized Anderson Level II system to mosaics of Landsat thematic mapper images collected every five years.*

HYDROLOGIC SOIL GROUPS
GROUP A SOILS have low runoff potential and high infiltration rates even when wet. They consist chiefly of sand and gravel and are well to excessively drained.
GROUP B SOILS have moderate infiltration rates when wet and consist chiefly of soils that are moderately deep to deep, moderately to well drained, and moderately coarse to coarse textures.
GROUP C SOILS have low infiltration rates when wet and consist chiefly of soils having a layer that impedes downward movement of water with moderately fine to fine texture.
GROUP D SOILS have high runoff potential, very low infiltration rates, and consist chiefly of clay soils.

Table A4-2. Hydrologic Soil Groups in Tennessee as Described in WCS. *Soils are grouped into four hydrologic soil groups that describe a soil's permeability and, therefore, its susceptibility to runoff.*

STATION	LOCATION	HUC 12	AREA (SQ MILES)	LOW FLOW (CFS)		
				1Q10	7Q10	3Q20
03465000	North Indian Creek	060101080202	15.90		2.5200	2.1300
03465500	Nolichucky River	060101080203	805.00	191.6530	224.2750	173.1210
03466208	Big Limestone Creek	060101080402				
03466228	Sinking Creek	060101080501	13.70			
03466500	Nolichucky River	060101080505	1,184.00			
03467500	Nolichucky River	060101080601	1,679.00		243.0000	124.0000
03467000	Lick Creek	060101080705	220.00	11.5000	12.6000	10.5000

Table A4-3. United States Geological Survey Continuous Record Gaging Stations in the Tennessee Portion of the Nolichucky River Watershed. *Additional information may be found at:* http://water.usgs.gov/osw/streamstats/

AGENCY	STATION	LOCATION	HUC 12
TDEC	1860	Nolichucky River @ RM 98.5	060101080201
USFS	40524	Martin Creek	060101080201
USFS	40525	Martin Creek	060101080201
USFS	40526	Martin Creek	060101080201
USFS	40527	Martin Creek	060101080201
USFS	40528	Martin Creek	060101080201
USFS	40529	Martin Creek	060101080201
TVA	475413	Nolichucky River @ RM 97.37	060101080201
TVA	475451	Martin Creek @ RM 0.04	060101080201
TVA	475511	Martin Creek @ RM 0.57	060101080201
EPA National Aquatic Resource Survey	OWW04440-1124		060101080201
USFS	40521	Rock Creek	060101080202
USFS	40522	Rock Creek	060101080202
USFS	40523	Rock Creek	060101080202
USEPA	431341	South Indian Creek	060101080202
USEPA	431341.1	South Indian Creek	060101080202
USEPA	431343	South Indian Creek	060101080202
USEPA	431345	South Indian Creek	060101080202
TVA	475452	North Indian Creek @ RM 6.61	060101080202
TDEC	DICK000.1UC	Dick Creek	060101080202
TDEC	DRY000.3UC	Dry Creek	060101080202
TDEC	DRY001.8UC	Dry Creek	060101080202
TDEC	NINDI001.2UC	North Indian Creek	060101080202
TDEC	RATTL000.1UC	Rattlesnake Creek	060101080202
TDEC	1865	Nolichucky River @ RM 72.5	060101080203
TVA	475093	Nolichucky River @ RM 86.08	060101080203
TDEC	BCOVE000.2UC	Bumpas Cove Creek	060101080203
TDEC	CLARK000.2WN	Clark Creek	060101080203
TDEC	DEACO000.2UC	Deacon Creek	060101080203
TDEC	DRY000.3WN	Dry Creek	060101080203
TDEC	ECO66E09	Clark Creek	060101080203
TDEC	TISSUE27	Nolichucky River @ RM 89.0	060101080203
TDEC	CHERO001.0WN	Cherokee Creek	060101080204
TDEC	CHERO002.5WN	Cherokee Creek	060101080204
TVA	475459	Nolichucky River @ RM 70.39	060101080205

Table A4-4a.

AGENCY	STATION	LOCATION	HUC 12
TDEC	ASBUR000.1WN	Asbury Creek	060101080205
TDEC	CASSI000.1WN	Cassi Creek	060101080205
TVA	475446	Little Limestone Creek @ RM 10.86	060101080206
TVA	475512	Little Limestone Creek @ RM 7.05	060101080206
TVA	475513	Little Limestone Creek @ RM 9.18	060101080206
TVA	475593	Little Limestone Creek @ RM 6.79	060101080206
TVA	475594	Little Limestone Creek @ RM 7.22	060101080206
TVA	475595	Little Limestone Creek @ RM 11.78	060101080206
TVA	475596	Little Limestone Creek @ RM 12.48	060101080206
TVA	475597	Little Limestone Creek @ RM 12.57	060101080206
TVA	475598	Little Limestone Creek @ RM 9.6	060101080206
TVA	475599	Little Limestone Creek @ RM 10.3	060101080206
TDEC	BACON000.2WN	Bacon Creek	060101080206
TDEC	BROWN000.1WN	Brown Creek	060101080206
TDEC	LLIME007.0WN	Little Limestone Creek	060101080206
TDEC	LLIMESTONE06.8	Little Limestone Creek @ RM 6.8	060101080206
TDEC	BBALD000.2UC	Big Bald Creek	060101080302
TDEC	BCOVE000.1UC	Big Cove Creek	060101080302
TDEC	BIG000.2UC	Big Branch	060101080302
TDEC	CARTE000.2UC	Carter Branch	060101080302
TDEC	CLEAR000.1UC	Clear Branch	060101080302
TDEC	CRIDG000.1UC	Coffee Ridge Creek	060101080302
TDEC	DEVIL000.2UC	Devil Creek	060101080302
TDEC	ECO66D06	Tumbling Creek	060101080302
TVA	475450	South Indian Creek @ RM 3.14	060101080303
TDEC	BLACK000.2UC	Black Branch Creek	060101080303
TDEC	ECO66E11	Lower Higgins Creek	060101080303
TDEC	BLACK000.1WN	Blackley Creek	060101080401
TDEC	CLEAR000.5WN	Clear Fork @ RM 0.5	060101080401
TDEC	CLEAR001.4WN	Clear Fork @ RM 1.4	060101080401
TDEC	CLEAR003.7WN	Clear Fork @ RM 3.7	060101080401
TDEC	CLEAR1T0.3WN	Clear Creek	060101080401
TVA	475453	Big Limestone Creek @ RM 0.61	060101080402
TVA	475514	Big Limestone Creek @ RM 2.8	060101080402
TVA	475515	Big Limestone Creek @ RM 4.4	060101080402
TDEC	BLIME000.5GE	Big Limestone Creek @ RM 0.5	060101080402
TDEC	BLIME002.9WN	Big Limestone Creek @ RM 2.9	060101080402

Table A4-4b.

AGENCY	STATION	LOCATION	HUC 12
TDEC	BLIME004.0WN	Big Limestone Creek @ RM 4.0	060101080402
TDEC	BLIME007.7WN	Big Limestone Creek @ RM 7.7	060101080402
TDEC	CARSO000.1WN	Carson Creek @ RM 0.1	060101080402
TDEC	CARSO001.8WN	Carson Creek @ RM 1.8	060101080402
TDEC	CEDAR000.3GE	Cedar Creek @ RM 0.3	060101080402
TDEC	CEDAR000.4GE	Cedar Creek @ RM 0.4	060101080402
TDEC	1870	Nolichucky River	060101080501
USFS	40224	Nolichucky River	060101080501
USFS	40225	Nolichucky River	060101080501
USFS	40226	Nolichucky River	060101080501
TVA	475079	Nolichucky River @ RM 66.7	060101080501
TVA	476124	Nolichucky River @ RM 57.2	060101080501
TDEC	COLLE000.3GE	College Creek	060101080501
EPA National Aquatic Resource Survey	OWW04440-0612	Ripley Creek	060101080501
TDEC	SINKI000.5GE	Sinking Creek	060101080501
TDEC	SINKI001.3GE	Sinking Creek	060101080501
USFS	40221	Nolichucky River	060101080502
USFS	40222	Nolichucky River	060101080502
USFS	40223	Nolichucky River	060101080502
USFS	40227	Horse Creek	060101080502
TDEC	ALEXA000.1GE	Alexander Creek	060101080502
TDEC	CANNO000.3GE	Cannon Creek	060101080502
TDEC	CAMP000.7GE	Camp Creek	060101080503
TDEC	CAMPCRIS02	Camp Creek @ RM 6.6	060101080503
TDEC	CAMPCRIS03	Camp Creek @ RM 4.0	060101080503
TDEC	CAMPCRIS04	Camp Creek @ RM 1.5	060101080503
TDEC	DAVIS001.0GE	Davis Creek	060101080503
TDEC	DRY000.7GE	Dry Creek	060101080503
TVA	476666	Richland Creek @ RM 0.5	060101080504
TVA	475479	Richland Creek @ RM 6.23	060101080504
TVA	475480	Richland Creek @ RM 5.1	060101080504
TVA	475481	Richland Creek @ RM 3.3	060101080504
TVA	475482	Richland Creek @ RM 2.13	060101080504
TVA	475483	Richland Creek @ RM 2.85	060101080504
TVA	475484	East Fork Richland Creek @ RM 0.1	060101080504
TVA	475486	Richland Creek @ RM 4.17	060101080504
TVA	475971	Nolichucky River @ RM 46.1	60101080504
TVA	475973	Nolichucky River @ RM 50.3	060101080504

Table A4-4c.

AGENCY	STATION	LOCATION	HUC 12
TVA	476665	Nolichucky River @ RM 47.90	060101080504
TVA	476952	Nolichucky River @ RM 46.0R	060101080504
TDEC	BIRD000.4GE	Bird Creek	060101080504
TDEC	RICHL001.3GE	Richland Creek @ RM 1.3	060101080504
TDEC	RICHL006.0GE	Richland Creek @ RM 6.0	060101080504
TVA	475460	Nolichucky River @ RM 45.92	060101080505
TVA	475798	Nolichucky River @ RM 45.7	060101080505
TVA	476313	Nolichucky River @ RM 27.8	060101080505
TDEC	BALES000.2GE	Bales Creek	060101080505
TDEC	BUFFA000.1GE	Buffalo Creek	060101080505
TDEC	CANEY000.2GE	Caney Branch	060101080505
TDEC	DRY000.2GE	Dry Branch	060101080505
TDEC	LMEAD000.1GE	Little Meadow Creek @RM 0.1	060101080505
TDEC	MEADO002.7GE	Meadow Creek @ RM 2.7	060101080505
TDEC	MEADO004.1GE	Meadow Creek @ RM 4.1	060101080505
TDEC	NOLIC039.3GE	Nolichucky River	060101080505
TDEC	NOLICHUCKY028.0	Nolichucky River @ RM 28.0	060101080505
TDEC	PIGEO000.9GE	Pigeon Creek @ RM 0.9	060101080505
TDEC	PIGEO002.8GE	Pigeon Creek @ RM 2.8	060101080505
TDEC	PIGEO005.7GE	Pigeon Creek @ RM 5.7	060101080505
TDEC	BACK000.1GE	Back Creek @ RM 0.1	060101080506
TDEC	CEDAR000.1GE	Cedar Creek @ RM 0.1	060101080506
TDEC	COVE001.0GE	Cove Creek @ RM 1.0	060101080506
TDEC	COVE003.1GE	Cove Creek @ RM 3.1	060101080506
TDEC	DKITC000.1GE	Devils Kitchen Branch @ RM 0.1	060101080506
TDEC	DODD000.5GE	Dodd Branch @ RM 0.5	060101080506
TDEC	DRY000.4GE	Dry Branch @ RM 0.4	060101080506
TDEC	1880	Nolichucky River	060101080601
TVA	475077	Nolichucky River @ RM 5.3	060101080601
TVA	475078	Nolichucky River @ RM 14.0	060101080601
TVA	475970	Nolichucky River @ RM 20.8	060101080601
TVA	476312	Nolichucky River @ RM 27.8	060101080601
TVA	476314	Nolichucky River @ RM 27.8	060101080601
TVA	476737	Nolichucky River @ RM 14.6	060101080601
TVA	477043	Nolichucky River @ RM 0.5	060101080601
TVA	477150	Nolichucky River @ RM 10.3	060101080601
TVA	477319	Nolichucky River @ RM 8.5	060101080601
TVA	477321	Nolichucky River @ RM 9.8	060101080601
TVA	477428	Nolichucky River @ RM 1.0	060101080601

Table A4-4d.

AGENCY	STATION	LOCATION	HUC 12
TVA	477429	Nolichucky River @ RM 1.5	060101080601
TVA	477430	Nolichucky River @ RM 2.0	060101080601
TVA	477431	Nolichucky River @ RM 2.6	060101080601
TDEC	BEAR000.1CO	Bear Creek @ RM 0.1	060101080601
TDEC	BUCK000.1CO	Buck Branch @ RM 0.1	060101080601
TDEC	COOPE000.1GE	Cooper Branch @ RM 0.1	060101080601
TDEC	LICK01.0	Lick Creek	060101080601
TDEC	CRAZY1T0.2GE	Crazy Creek	060101080602
TDEC	DULAN000.5GE	Dulaney Branch	060101080602
TDEC	ECO67G01	Little Chucky Creek	060101080602
TDEC	ARNOT000.15HS	Arnott Creek	060101080603
TDEC	BENT007.2HA	Bent Creek @ RM 7.2	060101080603
TDEC	BSPRI000.3HA	Big Spring Branch @ RM 0.3	060101080603
TDEC	CSPRI000.1HS	Cold Spring Branch @ RM 0.1	060101080603
TDEC	ECO67G05	Bent Creek	060101080603
TVA	476051	Long Creek @ RM 3.0	060101080605
TDEC	BAILE000.1HA	Bailey Branch @ RM 0.1	060101080605
TDEC	CARTE000.4JE	Carter Branch @ RM 0.4	060101080605
TDEC	CEDAR001.0JE	Cedar Creek @ RM 1.2	060101080605
TDEC	CRIDE000.2JE	Crider Creek @ RM 0.2	060101080605
TDEC	DRY000.1HA	Dry Branch @ RM 0.1	060101080605
TDEC	DRY000.2JE	Dry Branch @ RM 0.2	060101080605
TDEC	BRIGH000.1GE	Bright Branch @ RM 0.1	060101080701
TDEC	CLEAR000.5GE	Clear Creek @ RM 0.5	060101080701
TDEC	CRABT000.1GE	Crabtree Branch @ RM 0.1	060101080701
TDEC	DAILE001.0GE	Dailey Creek @ RM 1.0	060101080701
TDEC	DAVIS000.3GE	Davis Branch @ RM 0.3	060101080701
TDEC	DLICK000.4GE	Double Lick Branch @ RM 0.4	060101080701
TDEC	DODD000.8GE	Dodd Creek @ RM 0.8	060101080701
TDEC	DOTY000.2GE	Doty Creek @ RM 0.2	060101080701
EPA National Aquatic Resource Survey	OWW04440-0420	Clear Creek	060101080701
TVA	475455	Lick Creek @ RM 33.69	060101080702
TDEC	BABB000.7GE	Babb Creek @ RM 0.7	060101080702
TDEC	CANEY000.3GE	Caney Creek @ RM 0.3	060101080702
TDEC	CDIAL000.1GE	Cuerton Dial Branch @ RM 0.1	060101080702
TDEC	DRY000.1GE	Dry Branch @ RM 0.1	060101080703
TDEC	COACH000.3GE	Coach Branch @ RM 0.3	060101080704

Table A4-4e.

AGENCY	STATION	LOCATION	HUC 12
TVA	475456	Lick Creek @ RM 3.77	060101080705
TVA	475979	Lick Creek @ RM 3.8	060101080705
TDEC	BLACK000.5GE	Black Creek @ RM 0.5	060101080705
TDEC	BLACK001.2GE	Black Creek @ RM 1.2	060101080705

Table A4-4f.

Tables A4-4a-f. STORET Water Quality Monitoring Stations in the Nolichucky River Watershed*. TDECWPC, Tennessee Department of Environment and Conservation Division of Water Pollution Control; UT, Unnamed Tributary.*

PERMIT NUMBER	COUNTY	DESCRIPTION	WATERBODY	HUC-12
NRS06.419	Unicoi	Culvert Replacement	UT to Spring Creek	060101080201
NR0506.008	Unicoi	Bank Stabilization	North Indian Creek	060101080202
NR0506.009	Unicoi	Creek Crossing	North Indian Creek	060101080202
NR0506-001	Unicoi	Bank Stabilization	North Indian Creek	060101080202
NR0506-002	Unicoi	Bank Stabilization	North Indian Creek	060101080202
NR0606.023	Unicoi	Stream Crossing	Back Creek	060101080202
NR0606.027	Unicoi	Construction of Minor Road Crossings	UT to North Indian Creek	060101080202
NR0606.028	Unicoi	Construction of Minor Road Crossings	Rock Creek	060101080202
NR0606.085	Unicoi	Minor Road Crossings	North Indian Creek	060101080202
NR0606.102	Unicoi	Stream Restoration	UT to Cordwood Branch	060101080202
NR0606.132	Unicoi	Water Line Relocation	Wolf Pen Branch	060101080202
NR0706.006	Unicoi	Utility Line Crossings	Sciota Creek	060101080202
NR0706.034	Unicoi	Bank Stabilization	North Indian Creek	060101080202
NRS04.057	Unicoi	Bridges and Approaches	North Indian Creek	060101080202
NRS06.124	Unicoi	Impoundment of Headwater Stream	UT to Cordwood Branch	060101080202
NR0606.104	Carter	Bank Stabilization	Dry Creek	060101080203
NR0706.036	Washington	Bank Stabilization	Nolichucky River	060101080203
NR0606.002	Washington	Culverted Road Crossing	Cherokee Creek	060101080204
NR0606.082	Washington	Bank Stabilization	Cherokee Creek	060101080204
NR0606.088	Washington	Driveway Crossing	Cherokee Creek	060101080204
NR0606.126	Carter	Stream Restoration	UT to Cherokee Creek	060101080204
NR0606.127	Carter	Stream Crossing	UT to Cherokee Creek	060101080204
NR0606.089	Washington	Culvert Replacement	Asbury Creek	060101080205
NR0606.124	Washington	Driveway Crossing	Asbury Creek	060101080205
NR0706.038	Washington	Maintenance Activities	UT	060101080205
NR0706.035	Washington	Bank Stabilization	Little Limestone Creek	060101080206
NRS02.166	Washington	Sewer Extension	UT to Little Limestone Creek	060101080206
NRS02.409	Washington	Construction of a Dry-Bed Detention Basin	Little Limestone Creek	060101080206
NRS03.009	Washington	Sewer Line Crossing	Little Limestone Creek	060101080206
NRS03.201	Washington	Sewer Line Crossing	Little Limestone Creek	060101080206
NRS03.218	Washington	Bridges and Approaches	Little Limestone Creek	060101080206
NRS03.348	Washington	Re-establish Drainage Way	Unnamed/Wetland	060101080206
NRS05.379	Washington	Construction and Removal of Minor Road Crossings	Little Limestone Creek	060101080206
NR0606.005	Unicoi	Bridge Replacement	Rice Creek	060101080301
NR0606.148	Washington	Utility Line Crossings	UT to Muddy Fork	060101080401
NR0706.012	Washington	Water Line Extension	Muddy Fork	060101080401
NR0706.013	Washington	Water Line Extension	UT to Muddy Fork	060101080401
NRS03.064	Washington	Bridges and Approaches	Clear Fork Creek	060101080401
NR0606.081	Washington	Bank Stabilization	Jockey Creek	060101080402

Table A4-5a.

PERMIT NUMBER	COUNTY	DESCRIPTION	WATERBODY	HUC-12
NR0606.134	Washington	Minor Alterations to Wetlands	Not Identifited	060101080402
NR0706.014	Washington	Road and Utility Line Crossings	UT to Muddy Creek	060101080402
NR0706.016	Washington	Culvert Replacement	Carson Creek	060101080402
NR0706.030	Greene	Bridge Replacement	Jockey Creek	060101080402
NR0706.049	Greene	Bridge Maintenance	Jockey Creek	060101080402
NR0606.010	Greene	Water Line Crossing	UT to Hall Branch, Holly Creek, & Moon Creek	060101080501
NRS03.051	Greene	Bridge Maintenance	Nolichucky River	060101080501
NRS04.332	Greene	Bridges and Approaches	Frank Creek	060101080501
NRS04.332B	Greene	Bridges and Approaches	Frank Creek	060101080501
NRS04.332C	Greene	Bridges and Approaches	Frank Creek	060101080501
NR0506.006	Greene	Cobble Removal	Horse Creek	060101080502
NR0506-005	Greene	Cobble and Woody Debris Removal	Horse Creek	060101080502
NR0706.007	Greene	Bank Stabilization	Camp Creek	060101080503
NR0606.034	Greene	Sanitary Sewer Stream Crossings	Frank Creek	060101080504
NR0606.035	Greene	Sanitary Sewer Stream Crossings	Frank Creek	060101080504
NR0606.036	Greene	Sanitary Sewer Stream Crossings	UT to Frank Creek	060101080504
NR0606.037	Greene	Sanitary Sewer Stream Crossings	Frank Creek	060101080504
NR0606.038	Greene	Sanitary Sewer Stream Crossings	Frank Creek	060101080504
NR0606.043	Greene	Construction and Removal of Minor Road Crossings.	Tipton Creek	060101080504
NR0606.047	Greene	Construction and Removal of Minor Road Crossings	Mud Creek	060101080504
NR0606.083	Greene	Construction and Removal of Minor Road Crossings	UT to Davy Crockett Lake	060101080504
NR0606.136	Greene	Water Line Crossing	UT to Richland Creek	060101080504
NR0606.137	Greene	Water Line Crossing	UT to Little Chuckey Creek	060101080504
NR0606.007	Greene	Stream Crossing, Bank Stabilization, Bioengineering	Meadow Creek	060101080505
NRS03.140	Greene	Bridges and Approaches	Nolichucky River	060101080505
NRS04.387	Greene	Bridges and Approaches	Nolichucky River	060101080505
NRS04.387B	Greene	Bridges and Approaches	Nolichucky River	060101080505
NRS04.387C	Greene	Bridges and Approaches	Nolichucky River	060101080505
NRS04.229	Cocke	Road Repair	South Fork Creek	060101080601
NRS04.229B	Cocke	Road Repair	North Fork Creek	060101080601
NRS04.229C	Cocke	Road Repair	Nolichucky River	060101080601
NRS04.229D	Cocke	Road Repair	North Fork Clear Creek	060101080601
NRS04.229E	Cocke	Road Repair	Clear Creek	060101080601

Table A4-5b.

PERMIT NUMBER	COUNTY	DESCRIPTION	WATERBODY	HUC-12
NR0506.018	Greene	Construction and Removal of Minor Road Crossings	UT to Little Chuckey Creek	060101080602
NR0606.048	Greene	Construction and Removal of Minor Road Crossings	UT to Gap Creek	060101080602
NR0606.057	Greene	Bridge Construction	Little Chuckey Creek	060101080602
NR0606.112	Greene	Bridge Replacement	Little Chuckey Creek	060101080602
NR0606.116	Greene	Minor Alterations to Wetlands	WWC to Little Chuckey Creek	060101080602
NR0706.002	Greene	Minor Alterations to Wetlands	UT to Little Chuckey Creek	060101080602
NR0706.003	Greene	Stream Restoration and Habitat Enhancement	UT to Little Chuckey Creek	060101080602
NR0706.004	Greene	Minor Road Crossings	UT to Little Chuckey Creek	060101080602
NRS03.397	Greene	Construction and Removal of Minor Road Crossings	Little Chucky Creek/Wetland	060101080602
NRS03.397B	Greene	Construction and Removal of Minor Road Crossings	Little Chucky Creek	060101080602
NRS03.397C	Greene	Construction and Removal of Minor Road Crossings	Little Chucky Creek	060101080602
NRS03.397D	Greene	Construction and Removal of Minor Road Crossings	Little Chucky Creek	060101080602
NRS06.066	Jefferson	Construction and Removal of Minor Road Crossings	Slatey Branch	060101080602
NRS03.314	Hawkins	Stream Relocation	Whitehorn Creek	060101080603
NRS02.424	Jefferson	Bridge Replacement	Long Creek	060101080605
NRS02.424B	Jefferson	Bridge Replacement	Long Creek	060101080605
NRS03.282	Hamblen	Water Withdrawal	Nolichucky River	060101080605
NRS05.337	Jefferson	Construction and Removal of Minor Road Crossings	UT to Long Creek	060101080605
NR0606.145	Greene	Bridge Replacement	Lick Creek	060101080701
NRS04.090	Washington	Bridges and Approaches	Little Limestone Creek	060101080701
NR0606.091	Greene	Construction and Removal of Minor Road Crossings	UT to Pigeon Creek	060101080702
NR0606.096	Greene	Construction and Removal of Minor Road Crossings	UT to Wattenbarger Branch	060101080702
NR0606.105	Greene	Utility Line Crossings	Grassy Creek, Hennard Creek, Wattenbarger Branch, Kite Creek, & Gardner Creek	060101080702
NR0606.144	Greene	Bridge Construction	Snow Camp Branch	060101080702
NRS05.313	Greene	Bank Stabilization	Horse Creek	060101080702
NRS05.319	Greene	Intake Structure	Lick Creek	060101080702
NR0706.044	Greene	Stream Restoration	UT to Walkertown Branch	060101080703
NRS03.160	Greene	Bridges and Approaches	Gass Creek	060101080703
NR0606.004	Greene	Construction and Removal of Minor Road Crossings	Gap Creek	060101080704
NR0606.111	Greene	Bridge Construction	Mink Creek	060101080705
NR0706.032	Greene	Bridge Replacement	Lick Creek	060101080705
NRS03.139	Cocke	Road Repair	UT to Mink Creek	060101080705

Table A4-5c.

PERMIT NUMBER	COUNTY	DESCRIPTION	WATERBODY	HUC-12
NRS03.139B	Cocke	Road Repair	UT to French Broad River	060101080705
NRS03.139C	Cocke	Road Repair	UT to French Broad River	060101080705

Table A4-5d.

Tables A4-5a-d. ARAPs (Aquatic Resource Alteration Permit) issued June 2002 through June 2007 in the Tennessee Portion of the Nolichucky River Watershed. UT, Unnamed Tributary.

PERMIT NUMBER	PERMITEE	COUNTY	LIVESTOCK	WATERBODY	HUC-12
TN0078247	Doug Fox Farm	Washington	Broiler Poultry	Nolichucky River @ RM 76	060101080205
TNA000104	Martin Farms	Greene	Poultry	Nolichucky River	060101080205
TNA000134	J. Douglas Fox	Washington	Poultry	Nolichucky River	060101080205
TNA000098	Birdwell Enterprise	Greene	Poultry	Meadow Creek	060101080505
TN0078611	Jack D. Renner	Greene	Poultry	Nolichucky River @ RM 19.5	060101080601
TN0078662	McNabb Farm	Greene	Broiler Poultry	Lick Creek	060101080601
TNA000038	Jack D. Renner	Greene	Poultry	Nolichucky River	060101080601
TNA000053	McNabb Farm	Greene	Poultry	Lick Creek	060101080601
TNA000137	Jones Farm	Greene	Poultry	Little Chucky Creek	060101080602
TNA000153	Alfred Shaw	Greene	Poultry	UT & Little Chucky Creek	060101080602
TNA000179	Chucky Forks Farm	Greene	Poultry	Little Chuckey Creek & Nolichucky River	060101080602
TN0078344	Ray Farms, L.P.	Hamblen	Poultry	Bent Creek	060101080603
TNA000009	A & B Poultry	Greene	Poultry	Lick Creek	060101080701
TNA000027	TNT Poultry	Greene	Poultry	Lick Creek	060101080701
TNA000028	Meadowview Valley Poultry	Greene	Poultry	Lick Creek	060101080701
TNA000108	B & D Farms	Greene	Poultry	Lick Creek	060101080701
TNA000084	Woodlawn Gelbvieh	Greene	Poultry	Plumb Creek	060101080702
TNA000026	Lloyd E. Davis	Greene	Poultry	Gap Creek	060101080704
TN0078778	Shaw Family Farms	Greene	Broiler Poultry	Lick Creek & Mink Creek	060101080705
TNA000154	Shaw Family Farms	Greene	Broiler Poultry	No Discharge	060101080705

Table A4-6. CAFO (Concentrated Animal Feed Operation) Permittees in the Tennessee Portion of the Nolichucky River Watershed. UT, Unnamed Tributary.

PERMIT NUMBER	COUNTY	PERMITTEE: DESCRIPTION	AREA	WATERBODY	HUC-12
TNR160398	Unicoi	Impact Plastics, Inc.: Plant Addition	5.10	Martin Creek	060101080201
TNR160427	Unicoi	Unicoi County Memorial Hospital: Lot Improvements	2.90	Storm Water Drainage System to Martin Creek	060101080201
TNR160099	Unicoi	City of Johnson City Water and Sewer Department: Water Line Installation	7.00	North Indian Creek	060101080202
TNR160260	Unicoi	Town of Erwin: Erwin Linear Park	1.59	North Indian Creek	060101080202
TNR160498	Unicoi	Unicoi County Board of Education: Athletic Field	1.74	UT of North Indian Creek	060101080202
TNR160505	Unicoi	Effler Construction, Inc.: Borrow Pit	1.10	UT to North Indian Creek	060101080202
TNR160540	Unicoi	Wal-Mart Real Estate Business Trust: Wal Mart SuperCenter	15.70	Existing Storm Drain to North Indian Creek andUT to North Indian Creek	060101080202
TNR160686	Unicoi	Randy Trivette: Erwin Linear Park	2.70	North Indian Creek and Rock Creek	060101080202
TNR160717	Unicoi	Murphy Oil USA	0.60	North Indian Creek	060101080202
TNR160732	Unicoi	Jackhammer G. P.: Advance Auto Parts	1.10	Rock Creek	060101080202
TNR160779	Unicoi	Don Plemons: Home Site Development	1.00	North Indian Creek	060101080202
TNR160811	Unicoi	Franklin Commercial Properties LLC: Rocky Bottom Centre	1.50	UT to North Indian Creek	060101080202
TNR160852	Unicoi	Eastern Eight Community Development Corporation: The Village at Cherrywood Subdivision	2.90	UT to North Indian Creek	060101080202
TNR190211	Unicoi	TDOT: SR 36 Interchange	16.00	UT to North Indian Creek & North Indian Creek	060101080202
TNR190545	Washington	TVA - Jonesborough-Erwin, Maintenance	2.00	Keplinger Creek	060101080203
TNR160215	Washington	Wolfe Development: Mockingbird Place Subdivision	23.10	UT to Cherokee Creek	060101080204
TNR160386	Washington	Zollie Berry: Auction Site	18.20	Bacon Branch	060101080204
TNR160424	Washington	Johnson City Power Board: Walters Primary Substation	9.00	UT to Cherokee Creek	060101080204
TNR160620	Washington	Wolfe Development: Mockingbird Place Subdivision	26.70	UT to Cherokee Creek	060101080204
TNR160203	Washington	Scott Wills: Medlin Farm	20.00	UT to Nolichucky River	060101080205
TNR160287	Washington	Moody Dunbar, Inc: Demolition of Existing Structures	2.50	UT to Nolichucky River	060101080205
TNR190536	Washington	TDOT - Culvert Replacement	1.58	Asbury Creek	060101080205

Table A4-7a.

PERMIT NUMBER	COUNTY	PERMITTEE: DESCRIPTION	AREA	WATERBODY	HUC-12
TNR160189	Washington	Quad City Builders: Patriot Point Subdivision	18.20	UT to Little Limestone	060101080206
TNR160201	Washington	Source One Development: The Colonial Townhomes	2.40	Little Limestone Creek	060101080206
TNR160202	Washington	Lee Roy Griffith and Gaye Griffith: Griffith Property	28.64	Onion Creek	060101080206
TNR160202A	Washington	Jim Frosley: Griffith Property	0.00	Onion Creek	060101080206
TNR160202B	Washington	Ken Nelson: Griffith Property	0.00	Onion Creek	060101080206
TNR160202C	Washington	Shannon Allman: Griffith Property	0.00	Onion Creek	060101080206
TNR160214	Washington	Billy Reese Hulse Living Trust: John Sevier Subdivision	32.76	Little Limestone Creek	060101080206
TNR160216	Washington	PETW Partnership: Rough Grading	7.50	UT to Little Limestone Creek	060101080206
TNR160254	Washington	Wolfe Development: Mulberry Bend Subdivision	41.00	Bacon Branch	060101080206
TNR160270	Washington	Jessie Taylor - Carolyn Lewis P.O.A.	45.50	Limestone Creek	060101080206
TNR160284	Washington	West Hills Tractor, Inc.: Parking Area Excavation	1.50	UT to Little Limestone Creek	060101080206
TNR160357	Washington	Reese Hulse: Quail Landing Subdivision	21.48	Feist Branch	060101080206
TNR160382	Washington	Town of Jonesborough: Non-Point Source Pollution Project	4.80	Little Limestone Creek	060101080206
TNR160394	Washington	Charles Curtis McGee: Subdivision	12.17	Brown Branch	060101080206
TNR160405	Washington	Steve Bacon and Don Bacon: Halifax Subdivision	6.70	UT to Little Limestone Creek	060101080206
TNR160414	Washington	Blue Sky Hospitality, LLC: American Inn Hotel	5.50	Little Limestone Creek	060101080206
TNR160430	Washington	Town of Jonesborough: Wastewater Treatment Plant Upgrade	5.00	Little Limestone Creek	060101080206
TNR160431	Washington	Town of Jonesborough: Gravity Sewer	3.50	Little Limestone Creek	060101080206
TNR160436	Washington	Wayman and Danny Bailey: Rough Grading	5.00	Unnamed Stream	060101080206
TNR160469	Washington	Wolfe Development: Mill Creek Subdivision	70.00	UT to Little Limestone Creek	060101080206
TNR160473	Washington	Wayman Bailey and Danny Bailey: The Meadows Subdivision	65.00	UT to Little Limestone Creek	060101080206
TNR160487	Washington	Reese: Sand Valley Estates	49.74	UT Brown Branch	060101080206

Table A4-7b.

PERMIT NUMBER	COUNTY	PERMITTEE: DESCRIPTION	AREA	WATERBODY	HUC-12
TNR160497	Washington	Mr. Shane Abraham, Universal Tool & Engineering: Colonial Townhomes	3.00	Little Limestone Creek	060101080206
TNR160508	Washington	Town of Jonesborough: Lost State of Franklin Scenic Trail	2.03	Little Limestone Creek	060101080206
TNR160526	Washington	TCI Groups, Inc.: Rough Grading & Other Preparation for Further Development	4.00	UT to Little Limestone Creek	060101080206
TNR160576	Washington	Town of Jonesborough: Sewer Upgrade	2.80	Little Limestone Creek	060101080206
TNR160580	Washington	AT Partners: Colony Brooke Condominiums	4.90	Little Limestone Creek	060101080206
TNR160603	Washington	Reese Hulse: Hulse Property	6.72	Barkley Branch & UT to Little Limestone Creek	060101080206
TNR160609	Washington	Town of Jonesborough: Water Main	7.50	Little Limestone Creek & Barkley Branch	060101080206
TNR160640	Washington	S. W. Carey: Appalachian Gypsum	6.40	UT to Little Limestone Creek	060101080206
TNR160641	Washington	Lighthouse Missionary Baptist Church	6.00	Bacon Branch	060101080206
TNR160663	Washington	Kelly Wolfe: Rough Grading	2.10	UT to Little Limestone Creek	060101080206
TNR160704	Washington	Terry Orth: Avalon Grove	16.50	Little Limestone Creek	060101080206
TNR160728	Washington	Carl Reed: Apostolic Holiness Church	2.32	UT to Brown Branch	060101080206
TNR160746	Washington	DaBo Builders LLC: Chelsea's Place Condominiums	5.60	Little Limestone Creek	060101080206
TNR160754	Washington	Wolfe Development: Mill Creek Subdivision	70.00	UT to Little Limestone Creek	060101080206

Table A4-7c.

PERMIT NUMBER	COUNTY	PERMITTEE: DESCRIPTION	AREA	WATERBODY	HUC-12
TNR160757	Washington	Joe Wilson, Alan Shelton, Carl Little: Red Foxx Run Subbdivision	98.50	Feist Branch	060101080206
TNR160765	Washington	Tony Keys: Jonesborough Church of Christ	1.21	UT to Brown Branch	060101080206
TNR160767	Washington	Steve Bacon Halifax: Subdivision Phase II	9.50	Little Limestone Creek	060101080206
TNR160805	Washington	General Dynamics: Road Grading	1.70	Bacon Branch	060101080206
TNR160864	Washington	Orth Construction: Ashley Meadows Subdivision	16.18	Little Limestone Creek & Boones Creek	060101080206
TNR160878	Washington	Hilbert Circle Condominiums	1.50	Brown Branch	060101080206
TNR190370	Washington	TDOT: SR 353 Bridge and Approaches	1.74	Little Limestone Creek	060101080206
TNR160433	Washington	Wolfe Development: Subdivision	13.00	UT to Muddy Creek	060101080302
TNR160366	Washington	Roy Payne: Payne Ridge Estates	8.50	UT to Muddy Creek	060101080401
TNR160395	Washington	Jim Myers: Sugar Hollow Estates	39.75	UT to Big Limestone & Leesburg Branch	060101080401
TNR160404	Washington	Alan Shelton and Joe Wilson: Olde Farm Subdivision	2.00	UT to Muddy Fork	060101080401
TNR160887	Washington	Town of Jonesborough: Water Line Improvements	1.10	UT to Muddy Creek	060101080401
TNR160929	Washington	City of Johnson City, Department of Water & Sewer Services: Water Line Extension	3.70	Muddy Fork	060101080401
TNR190263	Washington	TDOT: SR 75 Bridge and Approaches	1.36	Clear Fork Creek	060101080401
TNR160269	Washington	Carrol Kyker: Subdivision	30.77	Not Identified	060101080402
TNR160396	Washington	Jim Myers: Leesburg Estates	7.29	UTs to Big Limestone Creek	060101080402
TNR160501	Washington	Mr. Robin Carden: Mountain Meadows Subdivision	2.50	Carson Creek	060101080402
TNR160537	Washington	Buddy Day: Steeple View Subdivision	36.52	UT to Big Limestone Creek	060101080402
TNR160624	Washington	Mulberry Manor: Mulberry Manor Subdivision	20.14	Headwater of Big Limestone Creek	060101080402
TNR160701	Washington	Todd Carter: Sunset Estates	17.00	UT to Big Limestone Creek	060101080402
TNR160799	Washington	Washington County Department of Education: Washington County K-8 School	29.75	UT to Big Limestone Creek	060101080402

Table A4-7d.

PERMIT NUMBER	COUNTY	PERMITTEE: DESCRIPTION	AREA	WATERBODY	HUC-12
TNR160857	Washington	Washington County: Utility Services to Grandview Elementary	1.20	UT to Big Limestone Creek	060101080402
TNR160872	Washington	Washington County: Industrial Buildings	29.00	UT to Muddy Fork	060101080402
TNR160911	Washington	W. B. Spratlin, Johnson City Chemical Company: Borrow Site	3.00	Big Limestone Creek	060101080402
TNR160128	Greene	Morgan Farm Development: Morgan Farm Subdivision	39.00	UT to Moon Creek	060101080501
TNR160166	Greene	City of Tusculum: Tusculum Linear Park	4.30	Moon Creek	060101080501
TNR160285	Greene	Meadows of Greeneville, LLC: The Meadows Subdivision	13.00	College Creek	060101080501
TNR160337	Greene	Summers-Taylor Inc.: Temporary Storage Sites	8.49	Moon Creek	060101080501
TNR160457	Greene	Ken Hartman: Blackberry Landing Subdivision	17.04	UT to Frank Creek	060101080501
TNR160470	Greene	Ray Jones: Classic Car Wash	1.22	UT to Moon Creek	060101080501
TNR160486	Greene	Mantha Properties: Aaron Rents	0.92	Storm Drain to Frank Creek	060101080501
TNR160534	Greene	Ray Jones: Classic Car Wash	1.39	UT to Moon Creek	060101080501
TNR160552	Greene	Mount Zion Church: Fellowship Hall	1.14	UT to Sinking Creek	060101080501
TNR160647	Greene	JA Investments: FMC Medical	1.00	UT to Moon Creek	060101080501
TNR160679	Greene	Cross Anchor UD: Water Line Replacement	6.40	Holley Creek, Moon Creek, & UT to Hall Branch	060101080501
TNR160681	Greene	Longview Development, LLC: Longview Subdivision	82.00	Frank Creek	060101080501
TNR160689	Greene	Allen Johnson: Site Grading	2.31	Frank Creek	060101080501
TNR160696	Greene	David K. Quillen Builders: Quillen Office Building	1.57	UT to Moon Creek	060101080501
TNR160806	Greene	Back Yard Burgers Restaurant	1.43	Not Identified	060101080501
TNR160823	Greene	Greeneville Water & Light Commission: Sewer Line Installation	3.60	Frank Creek	060101080501
TNR160871	Greene	McDonald's Corporation	2.00	UT to Frank Creek & College Creek	060101080501
TNR160888	Greene	Donnie & Sammy Brooks: Old Stage Ridges Residential Development	10.20	Moon Creek	060101080501

Table A4-7e.

PERMIT NUMBER	COUNTY	PERMITTEE: DESCRIPTION	AREA	WATERBODY	HUC-12
TNR190720	Greene	TVA: John Sevier - Tusculum, Transmission Line	20.00	Holley Creek, College Creek, Moon Creek, & Sinking Creek	060101080501
TNR160281	Washington	Ray Shelton Estate: Land Divided into 4 Lots	1.32	Not Identified	060101080502
TNR160798	Greene	HBL Enterprises: Pinnacle Ridges Residential Development	39.00	UT to Alexander Branch	060101080502
TNR160188	Greene	Laughlin Memorial Hospital: Medical Office and Parking Garage	6.60	Holley Creek	060101080504
TNR160213	Greene	O'Reilly Auto Parts	1.18	Moon Creek	060101080504
TNR160278	Greene	Philip M. Bachman Jr./Myron Bernard: Area Fill	1.70	Holly Creek	060101080504
TNR160295	Greene	Greeneville Water Commission: Sewer Line	4.50	Simpson Creek	060101080504
TNR160420	Greene	First Baptist Church of Greeneville: Sanctuary Building	1.10	Storm Water Drains to Richland Creek	060101080504
TNR160425	Greene	Megan & Me Investments, Inc.: Little Caesar's and Retail Space	1.50	Holley Creek	060101080504
TNR160428	Greene	Town of Greeneville: Greeneville Landfill No. 1	3.50	Richland Creek	060101080504
TNR160442	Greene	Mike Hayes: Shiloh Shoals Subdivision	8.90	Holley Creek	060101080504
TNR160458	Greene	Glen Hills Utility District: Water Line Construction	5.83	Richland Creek	060101080504
TNR160555	Greene	Hunter Ridge Development, LLC: Hunter Ridge Subdivision	11.30	Tipton Creek	060101080504
TNR160596	Greene	Greeneville Water Commission: Sanitary Sewer Upgrade	2.00	UT to Frank Creek and UT to Holley Creek	060101080504
TNR160656	Greene	Greene County YMCA: Addition	2.50	UT to Richland Creek	060101080504
TNR160667	Greene	Kenny Hartman: Hickory Ridge Subdivision	28.92	Holley Creek	060101080504
TNR160725	Greene	Greeneville Light And Power System: Pioneer Substation	12.00	Holley Creek	060101080504
TNR160729	Greene	Greeneville Light and Power System: Crossroads Substation	1.80	Wolf Branch	060101080504
TNR160745	Greene	Fullflex, Inc.: Parking Area	0.90	UT to Richland Creek	060101080504
TNR160770	Greene	HMS Partnership	54.46	Nolichucky River	060101080504
TNR160870	Greene	Glen Hills Utility District: Water System Improvements	1.12	UT to Little Chuckey Creek & Richland Creek	060101080504

Table A4-7f.

PERMIT NUMBER	COUNTY	PERMITTEE: DESCRIPTION	AREA	WATERBODY	HUC-12
TNR160935	Greene	Robert Proffitt: Lot Clearing	2.00	UT to Richland Creek	060101080504
TNR190303	Greene	TDOT:SR 107, Tusculum Blvd.	1.00	Holley Creek	060101080504
TNR160089	Greene	Kenneth Weems: Savanna Crossing Residential Development	9.70	UT to Pigeon Creek	060101080505
TNR190473	Greene	TDOT - Bridge Replacement	13.80	Nolichucky River	060101080505
TNR132188	Jefferson	Tom Young: Lewis Hall Subdivision	32.00	UT to Nolichucky River	060101080601
TNR160326	Greene	Bewley Properties: Site Grading	5.12	UT to Possum Creek	060101080602
TNR160326A	Greene	Bewley Properties: Site Grading	8.30	UT to Crazy Creek	060101080602
TNR160326B	Greene	Bewley Properties: Site Grading	8.30	UT to Crazy Creek	060101080602
TNR160449	Greene	Phil Scharfstein: West Andrew Johnson Highway Car Wash	1.40	UT to Crazy Creek	060101080602
TNR160459	Greene	Greeneville Water Commission: Gravity Sewer, Force Main, and Pump Station Installation	3.50	UT to Crazy Creek & Crazy Creek	060101080602
TNR160466	Greene	Glen Hills Utility District: Water Line Extensions	7.00	Little Meadow Creek & Little Chuckey Creek	060101080602
TNR160477	Greene	DPKY Development, LLC: Hidden Oaks	6.10	UT to Crazy Creek	060101080602
TNR160483	Greene	Tracy Gass: Storm Drain Systems and Detention Basins	3.28	UT to Little Chuckey Creek	060101080602
TNR160591	Greene	WLC Properties, LLC: EqoQuest Site Development and Road Construction	21.00	UT to Little Chucky Creek & UT to Gap Creek	060101080602
TNR160617	Greene	Richard Bowie: 24 Hour Self Storage	1.01	UT to Crazy Creek	060101080602
TNR160699	Greene	Blue Springs Village Limited Partnership: Blue Springs Village	5.90	UT to Gap Creek	060101080602
TNR160737	Greene	Greene County Tennis Association: Tennis Court Facility	4.00	UT to Little Chucky Creek	060101080602
TNR160800	Greene	Holston Home for Children: Parking Area	1.50	UT to Crazy Creek	060101080602
TNR160818	Greene	Alan Campbell: Waste Storage Ponds & Borrow Area	11.50	Little Chucky Creek & Nolichucky River	060101080602
TNR160834	Greene	John Deere Power Products: Truck Lot Expansion	15.00	Little Chuckey Creek	060101080602
TNR160915	Greene	Greene County: Department of Safety Office Building	3.80	Little Chuckey Creek	060101080602
TNR160927	Greene	Heritage Community Bank: Branch Bank Building	1.30	UT to Crazy Creek	060101080602

Table A4-7g.

PERMIT NUMBER	COUNTY	PERMITTEE: DESCRIPTION	AREA	WATERBODY	HUC-12
TNR190392	Greene	TDOT:Hal Henard Rd	26.03	UT to Little Chucky Creek & Little Chucky Creek	060101080602
TNR190553	Greene	TDOT: Ecoquest Int. Access Road	5.70	Unnamed Stream & Sinkhole	060101080602
TNR190624	Greene	TDOT -SR 349 Small Structure Replacement	1.44	UT to Little Chucky Creek	060101080602
TNR132519	Hamblen	Young's Construction: Pine Crest Subdivision	3.60	Bent Creek	060101080603
TNR160283	Hawkins	U. S. Fence, Inc.: Storage Area	37.50	Whitehorn Creek	060101080603
TNR160316	Hawkins	Crockett Lee: Water and Sewer Line Construction	2.45	Whitehorn Creek	060101080603
TNR131353	Hamblen	Tidi Waste Systems, Inc.: Class I Landfill	98.20	UT to Nolichucky River	060101080604
TNR190417	Hamblen	TDOT: SR 113 Small Structure Replacement	2.46	Willow Creek Turkey Creek	060101080604
TNR131639	Jefferson	Darrell Keene, Tom Meades: Zirkle Meadows Subdivision	13.00	Long Creek	060101080605
TNR132187	Jefferson	Appalachian Electric Cooperative: White Pine Substation Modifications	1.90	Long Creek	060101080605
TNR190265	Jefferson	TDOT:SR 32 Bridge and Approaches	8.05	Long Creek	060101080605
TNR190322	Hamblen	TVA-John Sevier - White Pine Transmission Line	8.00	Turkey Creek Sinking Creek	060101080605
TNR190561	Jefferson	TDOT: I 81 and SR 341 Improvements	36.53	Sinkholes, UT to Long Creek, Crider Creek	060101080605
TNR160218	Washington	William Keplinger: Briarpatch Subdivision	12.20	Clear Creek	060101080701
TNR160392	Greene	Shane Dunn: The Gallery Subdivision	15.50	Hughes Branch	060101080702
TNR160784	Greene	Mountain Laurel Environmental Corp: Class IV Landfill Expansion	9.90	UT to Roaring Fork	060101080703
TNR190354	Greene	TDOT: S.R. 70 Bridge & Approach	1.50	Gass Creek	060101080703
TNR131901	Hamblen	BASF Corporation: Removal of Coal Mounds	3.05	Nolichucky River	060101080705

Table A4-7h.

PERMIT NUMBER	COUNTY	PERMITTEE: DESCRIPTION	AREA	WATERBODY	HUC-12
TNR160130	Greene	Hawkins County Gas Utility District: Gas Main Extension	14.40	Stony Creek, Mud Creek, Riley Creek, Whitehorn Creek	060101080705
TNR160274	Greene	Donald Rodgers: Rogers Petroleum	12.00	Stony Creek	060101080705

Table A4-7i.

Tables A4-7a-i. CGPs (Construction General Permit) issued June 2002 through June 2007 in the Tennessee Portion of the Nolichucky River Watershed. Area, acres of property associated with construction activity; UT, Unnamed Tributary.

PERMIT NUMBER	PERMITEE	SIC CODE	SIC NAME	WATERBODY	HUC-12
TN0076341	Vulcan Construction Materials, LP (Graystone Sand & Gravel)	1442	Construction Sand & Gravel	Dry Creek	060101080303
TN0066010	Rinker Materials South Central (Locust Mount Quarry)	1422	Crushed & Broken Limestone	Clear Fork	060101080401
TN0065846	Nolichucky Sand Company, Inc. (Nolichucky River Dredging Operation)	1442	Construction Sand & Gravel	Nolichucky River	060101080501
TN0066681	Vulcan Construction Materials, LP (Afton Quarry)	1422	Crushed & Broken Limestone	Karst Topography & Unknown Drainage Way	060101080501
TN0065773	Nolichucky Sand Company, Inc. (Area #1)	1442	Construction Sand & Gravel	Dry Creek	060101080503
TN0072303	Vulcan Construction Materials, LP (Birds Bridge Dredge)	1442	Construction Sand & Gravel	Nolichucky River	060101080504
TN0065994	Vulcan Construction Materials, LP (Morristown Quarry)	1422	Crushed & Broken Limestone	Flat Creek	060101080601
TN0076201	Berry Hills Corporation (Quarry 1)	1446	Industrial Sand	Little Poor Valley Creek	060101080603
TN0060879	Vulcan Construction Materials, LP (Greeneville Quarry)	1422	Crushed & Broken Limestone	Possum Creek	060101080703
TN0068896	Vulcan Construction Materials, LP (Midway Quarry)	1422	Crushed & Broken Limestone	UT to Pond Creek	060101080705

Table A4-8. Permitted Mining Facilities in the Tennessee Portion of the Nolichucky River Watershed. SIC, Standard Industrial Code; UT Unnamed Tributary.

PERMIT NUMBER	PERMITEE	SIC	SIC NAME	MADI	WATERBODY	HUC-12
TN0002038	Nuclear Fuel Services	2819	Industrial Inorganic Chemicals, NEC	Major	Nolichucky River @ RM 94.6	060101080201
TN0005053	TWRA Erwin Fish Hatchery	0921	Fish and Hatcheries Preserves	Minor	Love Spring Creek @ RM 0.5	060101080201
TN0023001	Erwin STP	4952	Sewerage Systems	Major	Nolichucky River @ RM 94.4	060101080201
TN0004677	USDI-FWS Erwin National Fish Hatchery	0921	Fish and Hatcheries Preserves	Minor	Tate Spring Branch @ RM 0.8 to North Indian Creek @ RM 2.7	060101080202
TN0023973	Hoover Precision Products, Inc	3562	Ball and Roller Bearings	Minor	McInturff Branch @ RM 0.16 to North Indian Creek @ RM 1.0	060101080202
TN0021547	Jonesborough STP	4952	Sewerage Systems	Minor	Little Limestone Creek @ RM 12.5	060101080206
TN0024406	Davy Crockett High School	4952	Sewerage Systems	Minor	Little Limestone Creek @ RM 8.8	060101080206
TN0057983	Aerojet Ordnance Tennessee	3369	Nonferrous Foundries, Except Aluminum and Copper	Minor	Little Limestone Creek @ RM 8.7 & 8.8	060101080206
TN0056332	John M. Reed Home, Inc.	4952	Sewerage Systems	Minor	Big Limestone Creek @ RM 3.8	060101080402
TN0001899	Jarden Zinc Products, Inc.	3341	Secondary Smelting and Refining of Nonferrous Metals	Major	Sinking Creek @ RM 2.9, Nolichucky River @ RM 60.5, & Sinking Creek @ RM 2.8	060101080501
TN0054844	Plus Mark, Inc.	2754	Commercial Printing, Gravure	Minor	Sinking Creek @ RM 2.8	060101080501
TN0057266	Suburban Terrace Apts & Rest	4952	Sewerage Systems	Minor	Moon Creek @ RM 2.8	060101080501
TN0057371	TDEC Davy Crockett's Birthplace	4952	Sewerage Systems	Minor	Nolichucky River @ RM 68.3	060101080501
TN0058271	Chuckey Elementary School	4952	Sewerage Systems	Minor	Rheatown Creek @ RM 0.9	060101080501

Table A4-9a.

PERMIT NUMBER	PERMITEE	SIC	SIC NAME	MADI	WATERBODY	HUC-12
TN0021229	Denzil Bowman WTP (Greeneville STP)	4952	Sewerage Systems	Minor	Davy Crockett Reservoir (Nolichucky River @ RM 47.5)	060101080504
TN0040673	Nolichucky Elementary School	4952	Sewerage Systems	Minor	Meadow Creek @ RM 2.9	060101080505
TN0058301	South Greene High School	4952	Sewerage Systems	Minor	Cove Creeek @ RM 3.5	060101080506
TN0054887	Centerview Elementary School	4952	Sewerage Systems	Minor	Slate Creek @ RM 3.3	060101080601
TN0068187	Liberty Fibers Corporation	2823 2824	Cellulosic Manmade Fibers, Manmade Organic Fibers Except Cellulosic	Major	Nolichucky River @ RM 7.6, Nolichucky River @ RM 7.4, & Flat Creek	060101080604
TN0058343	Ottway Elementary School	4952	Sewerage Systems	Minor	Lick Creek @ RM 41.1	060101080702
TN0063932	Baileyton STP	4952	Sewerage Systems	Minor	Lick Creek @ RM 49.2	060101080702
TN0058254	McDonald Elementary School	4952	Sewerage Systems	Minor	War Branch @ RM 0.5 to Lick Creek	060101080705
TN0059366	Lick Creek Valley (Mosheim) WTP	4952	Sewerage Systems	Minor	Lick Creek @ RM 23.3	060101080705
TN0073466	Cansler Farm Site #3			Minor	Pond Creek @ RM 0.9 to Mink Creek @ RM 1.3 to Lick Creek @ RM 16.0	060101080705

Table A4-9b.

Tables A4-9a-b. Municipal and Industrial Permittees in the Tennessee Portion of the Nolichucky River Watershed. SIC, Standard Industrial Code; MADI, Major Discharge Indicator; UT, Unnamed Tributary; WWC Wet Weather Conveyance.

PERMIT NUMBER	PERMITTEE	WATERBODY	HUC-12
TNG110164	Summers-Taylor Concrete Plant - Industrial Drive	UT to Nolichucky River	060101080202
TNG110132	Greeneville Concrete Plant	Holley Creek @ RM 5.1 to Nolichucky River @ RM 57	060101080504
TNG110332	Summers-Taylor, Inc.	Nolichucky River	060101080601

Table A4-10. RMCP (Ready Mix Concrete Plant) Permittees in the Tennessee Portion of the Nolichucky River Watershed. UT, Unnamed Tributary.

PERMIT NUMBER	PERMITTEE	SECTOR	WATERBODY	AREA	HUC-12
TNR050306	PolyPipe, Inc.	Y	Martin Creek	7.00	060101080201
TNR050873	Nuclear Fuel Services, Inc.	C	Banner Spring Branch, Martin Creek, & Nolichucky River	48.30	060101080201
TNR051127	NN Ball & Roller Inc.	AB	Martin Creek	2.50	060101080201
TNR052032	T & M Used Cars and Salvage	M	Martin Creek @ RM 1.8	2.00	060101080201
TNR052033	Whitson's Used Cars	M	Odom Branch	0.99	060101080201
TNR053756	Studsvik Process Facility, LLC	Y	Martin Creek	0.80	060101080201
TNR053969	Nuclear Fuel Services-Industrial Park	C	Martin Creek & Nolichucky River	3.72	060101080201
TNR054356	Vance Metal Fabricators Inc	F	Spring Branch	2.61	060101080201
TNR056473	Whitson's Used Auto Parts	M	Ditch to Odom Branch	3.00	060101080201
TNR056583	AREVA NP	C	Martin Creek to Nolichucky River @ RM 95	4.70	060101080201
TNR056864	AB Plastics, A Division of Morrill Motors	Y	Martins Creek	1.36	060101080201
TNR050393	Valtimet, Inc.	F	Sinkhole	2.87	060101080202
TNR051897	Progress Rail Services	N	Indian Creek	5.10	060101080202
TNR053143	Morgan Insulations, Inc.	E	North Indian Creek	3.00	060101080202
TNR053240	Erwin Yard	P	North Indian Creek to Nolichucky River	3.00	060101080202
TNR053967	Hoover Precision Products, Inc.	AB	North Indian Creek	15.00	060101080202
TNR054541	Duncan Mechanical Inc	F	Indian Creek	1.54	060101080202
TNR056474	Indiana Hardwoods at Erwin	A	Storm Sewer to North Indian Creek	2.50	060101080202
TNR051655	Little John's Auto Salvage	M	Dry Creek	4.50	060101080203
TNR051855	Unaka Forestry Products, Inc	A	Dry Creek	11.00	060101080203
TNR054250	Garland Hardwoods, Inc.	A	Bacon Branch	1.00	060101080204
TNR050909	Superior Metal Products Inc.	AA	Painter Creek to Nolichucky River	6.10	060101080205
TNR053393	Greeneville/Greene County Airport Authority	S	Opossum Branch	1.42	060101080205
TNR051099	Aerojet Ordnance Tennessee Inc.	F	Little Limestone Creek	6.60	060101080206
TNR051799	81 Auto Yard	M	Little Limestone Creek	10.36	060101080206
TNR053389	M.A. Hanna Rubber Processing	Y	Not Identified	8.00	060101080206
TNR053782	Mac's Auto Yard	M	Little Limestone	7.00	060101080206
TNR055963	PolyOne Corporation	Y	Little Limestone Tributary	4.00	060101080206
TNR056463	Washington Farmers Cooperative		Little Limestone Creek	3.19	060101080206
TNR051399	Morrill Motors, Inc. (Rocky Fork Plant)	AC	South Indian Creek	0.63	060101080302
TNR050199	MTD Inc.	AA	Richland Creek	0.50	060101080303
TNR056678	Washington County Asphalt Plant	D	UT to Clear Fork	23.89	060101080401

Table A4-11a.

PERMIT NUMBER	PERMITTEE	SECTOR	WATERBODY	AREA	HUC-12
TNR051153	Quint-C Pallet Co., Inc.	A	Big Limestone Creek	6.50	060101080402
TNR056686	Bush Hog	AB	Big Limestone Creek, Nolichucky River,& Davy Crocket Lake	18.00	060101080402
TNR050632	Greeneville Iron & Paper Co	N	Frank Creek	30.00	060101080501
TNR050778	Delfasco	AA	Moon Creek	12.35	060101080501
TNR050906	Plus Mark Inc.	X	Pudding Creek	70.00	060101080501
TNR050920	Parker Hannifin Corp., Ross Operations	AB	UT to Frank Creek	64.00	060101080501
TNR051351	Alltrista Zinc Products, L.P.	F	Sinking Creek	57.40	060101080501
TNR053130	Greene County Materials	AB		10.00	060101080501
TNR053544	Greeneville Casting Inc.	F	Frank Creek	13.50	060101080501
TNR053978	Terra-Mulch Products LLC	B	Storm Water Runoff to Hice Branch to Nolichucky River.	5.00	060101080501
TNR054190	SCA Packaging North	Y	Halley Creek	1.00	060101080501
TNR055056	Precision Machine & Welding	AB	Hall Branch to Sinking Creek	1.50	060101080501
TNR050065	A-1 Auto Salvage & Part Inc.	M	Holy Creek	28.00	060101080504
TNR050200	MTD Inc.	AA	Simpson Creek & Richland Creek	0.93	060101080504
TNR050314	Hurd Corporation	AA	Richland Creek	10.00	060101080504
TNR050457	Meco Corporation	AA	Holly Creek	18.30	060101080504
TNR050671	Dairy Farmers of America	U	Richland Creek	10.00	060101080504
TNR050779	Delfasco TN Division Plant 1	AA	Richland Creek	2.50	060101080504
TNR050835	Donaldson Company, Inc.	AB	Holley Creek	13.00	060101080504
TNR050974	Malone's Wrecker & Repair	M	WWC to Possum Creek	10.30	060101080504
TNR051011	Universal America, Inc.	E	Moore Spring to Holley Creek	11.00	060101080504
TNR051108	Chardon Electrical Components	Y	Holley Creek	7.50	060101080504
TNR051147	C-E Minerals - Teco Plant	E	UT to Holley Creek	2.49	060101080504
TNR051510	G. C. Capital, LLC- Five Rivers Industrial Complex	AC	Holley Creek	25.00	060101080504
TNR051526	Myers Used Parts	M	WWC to Pigeon Creek	10.00	060101080504
TNR051907	Orangeburg Industries, Inc.	Y	Not Identified	5.50	060101080504
TNR053028	BTL Industries, Inc.	AC	Not Identified	4.30	060101080504
TNR053154	Miller Industries/Vulcan Carriers	AB	Richland Creek	9.82	060101080504
TNR053869	Angus-Palm	AB	UT to Richard Creek	22.00	060101080504
TNR054340	Southern Tool	AB	Richland Creek	0.50	060101080504
TNR054366	LMR Plastics	Y	Holly Creek to Nolichucky River	5.00	060101080504

Table A4-11b.

PERMIT NUMBER	PERMITTEE	SECTOR	WATERBODY	AREA	HUC-12
TNR054384	Kaydon Corp	AB	Storm Water Runoff to Greeneville Water Commission/ Johnson Creek.	9.27	060101080504
TNR054570	CVN Systems	AB	Holly Creek	2.97	060101080504
TNR056403	Denzil Bowman WTP	T	Richland Creek	15.00	060101080504
TNR056582	CE Minerals	E	Holley Creek to Nolichucky River	23.00	060101080504
TNR053520	Morristown Iron & Metal	N	Turkey Creek	17.18	060101080505
TNR051047	Summers-Taylor Asphalt Plant	D	Vulcan Materials Quarry Hole	5.00	060101080601
TNR055983	Armstrong Cabinet Products	A	Stubblefield Creek to Spring Creek to Cherokee Lake	5.34	060101080601
TNR050003	Lectro Chem Metal Finishing Company	AA	Gap Creek @ Mile 1.2	4.25	060101080602
TNR050070	Hendrickson Used Cars & Parts	M	Unnamed Stream to Hartman Branch	10.00	060101080602
TNR050082	Appalachian Forest Products, LLC	A	UT to Lick Creek	15.40	060101080602
TNR050207	Industrial Metal Fabricators, Inc.	AA	Gap Creek & Little Chuckey Creek	10.00	060101080602
TNR054413	American Technology and Research Industries	AB	Not Identified	12.50	060101080602
TNR054427	TI Group Automotive Systems	AB	UT	2.70	060101080602
TNR056620	Rolling Frito-Lay Sales, LP - Greenville Bin	P	Gap Creek	0.10	060101080602
TNR056876	John Deere Power Products	AB	Little Chucky Creek @ RM 20	14.27	060101080602
TNR050430	Young's Furniture Mfg Co Inc	A	Sinkhole to Ground Water	14.50	060101080603
TNR050648	U.S. Fence (Wood Division)	A	White Horn Creek	8.02	060101080603
TNR051472	US Fence, Inc. Treating Division	A	White Horn Creek	15.85	060101080603
TNR051800	Erwin Industries, Inc. Plastics Division	Y	Whitehorn Creek	7.35	060101080603
TNR053631	Norfolk Southern - Bulls Gap	P	Whitehorn Creek	1.00	060101080603
TNR053986	Russellville Terminal	P	The Hale Branch of Bent Creek to Nolichucky River	5.56	060101080603
TNR055980	Blanken's Auto Salvage	M	WWC	7.10	060101080603
TNR050031	Renfro Construction Co., Inc.	D	UT to Flat Creek	12.00	060101080604
TNR051230	Triangle Pacific Corp. Plant #2	W	Turkey Creek to Cherokee Lake	6.50	060101080604
TNR052087	Triangle Pacific Corp. Plant #1	W	Stubblefield Creek to Spring Creek to Cherokee Lake	5.34	060101080604
TNR055984	Armstrong Cabinet Products	A	Turkey Creek to Cherokee Lake	6.50	060101080604

Table A4-11c.

PERMIT NUMBER	PERMITTEE	SECTOR	WATERBODY	AREA	HUC-12
TNR056701	Lakeway Recycling & Landfill Sanitation	L	Flat Creek to Nolichucky River	98.00	060101080604
TNR056828	BASF Lowland	L	Nolichucky River	1.09	060101080604
TNR056844	Jolley Rock Investments, LLC	C	Nolichucky River via Liberty Fibers Permitted (TN0068187)	59.00	060101080604
TNR050066	Lakeway Auto Salvage	M	Ditch to Sinking Creek	2.00	060101080605
TNR050674	Strange Auto Parts	M	Ditch to Long Creek	25.00	060101080605
TNR051267	Lakeway Recycling & Sanitation, Inc.	L	Nolichucky River	58.00	060101080605
TNR051384	Jack's Auto Parts, Inc.	M	UT to Sinking Creek	15.00	060101080605
TNR051534	International Paper Company	B	Sinking Fork Creek	15.60	060101080605
TNR051662	Old Dominion Freight Line, Inc	P	UT of Crider Creek	7.90	060101080605
TNR051677	Seven Wheels, Inc.	P	Sinking Creek	3.00	060101080605
TNR052097	Roadway Express Inc. (R30)	P	Crider Creek to Long Creek to French Broad River	10.30	060101080605
TNR056617	Rolling Frito-Lay Sales, LP - Morristown Bin	P	Sinking Fork	0.20	060101080605
TNR056699	Alcan Packaging-Fragrance & Cosmetics Americas	Y	UT to Sinking Fork to Long Creek to Nolichucky River	8.00	060101080605
TNR056885	Koch Foods LLC of Morristown Deboning	U	Sinking Fork	1.29	060101080605
TNR051155	David's Used Cars	M	Ditch to Unnamed Stream to Lick Creek	7.00	060101080702
TNR051849	Berkline Distribution Warehouse	W	Spring Creek & Cedar Creek	18.00	060101080702
TNR053133	Lea Industries Inc.	W	Nearby Sinkhole Via City of Morristown Storm Drain	34.90	060101080702
TNR053482	Mountain Empire Oil Company	P	UT to Hughes Branch	2.81	060101080702
TNR050867	Jerry's Used Cars & Parts LLC	M	WWC to Roaring Fork Creek to Possum Creek	15.00	060101080703
TNR051046	Summers-Taylor Asphalt Plant	D	Abandoned Quarry Hole	6.00	060101080703
TNR054261	American Technology & Research	Y	UT to Roaring Fork Creek	0.70	060101080703
TNR055898	Mountain Laurel Environmental Corporation	L	UT to Roaring Fork	1.20	060101080703
TNR050687	Falcon Products, Inc.	W	Sinking Creek	6.90	060101080705
TNR052030	DTR, Tennessee, Inc.	Y	UT @ RM 23.38 to Lick Creek	7.00	060101080705
TNR053073	Gale Smyth Antique Auto Parts	M	UT to Lick Creek	18.00	060101080705
TNR053147	Insul-Therm Acquisition Corp.	E	Pond Creek	11.86	060101080705
TNR053148	Minco, Inc.	E	Pond Creek	6.13	060101080705
TNR054472	Vistawall, Inc./Division of Butler Manufacturing Company, Inc.	F	Lick Creek	15.00	060101080705

Table A4-11d.

PERMIT NUMBER	PERMITTEE	SECTOR	WATERBODY	AREA	HUC-12
TNR055047	East Tennessee Forest Products	A	Lick Creek	6.00	060101080705
TNR055990	Everhart Transportation, Inc.	P	Not Identified	7.70	060101080705
TNR056392	MD Recycling, Inc.	F	Seven Springs Branch to Lick Creek @ RM 22	20.00	060101080705

Table A4-11e.

Tables A4-11a-e. TMSPs (Tennessee Multi Sector Permit) issued in the Tennessee Portion of the Nolichucky River Watershed. Area, acres of property associated with industrial activity; UT Unnamed Tributary, WWC, Wet Weather Conveyance. See Table A4-13 for Sector Details.

PERMIT NUMBER	PERMITEE	WATERBODY	HUC-12
TN0079090	Witt Utility District WTP	Long Creek @ Approximate RM 2.8	060101080605
TN0004791	North Greene WTP	Lick Creek @ RM 49.7	060101080702

Table A4-12. WTP (Water Treatment Plant) Permittees in the Tennessee Portion of the Nolichucky River Watershed.

SECTOR	TMSP SECTOR NAME
A	Timber Products Facilities
AA	Facilities That Manufacture Metal Products including Jewelry, Silverware and Plated Ware
AB	Facilities That Manufacture Transportation Equipment, Industrial or Commercial Machinery
AC	Facilities That Manufacture Electronic and Electrical Equipment and Components, Photographic and Optical Goods
AD	Facilities That Are Not Covered Under Sectors A Thru AC (Monitoring Required)
AE	Facilities That Are Not Covered Under Sectors A Thru AC (Monitoring Not Required)
B	Paper and Allied Products Manufacturing Facilities
C	Chemical and Allied Products Manufacturing Facilities
D	Asphalt Paving, Roofing Materials, and Lubricant Manufacturing Facilities
E	Glass, Clay, Cement, Concrete, and Gypsum Product Manufacturing Facilities
F	Primary Metals Facilities
G	Metal Mines (Ore Mining and Dressing) (RESERVED)
H	Inactive Coal Mines and Inactive Coal Mining-Related Facilities
I	Oil or Gas Extraction Facilities
J	Construction Sand and Gravel Mining and Processing and Dimension Stone Mining and Quarrying Facilities
K	Hazardous Waste Treatment Storage or Disposal Facilities
L	Landfills and Land Application Sites
M	Automobile Salvage Yards
N	Scrap Recycling and Waste and Recycling Facilities
O	Steam Electric Power Generating Facilities
P	Vehicle Maintenance or Equipment Cleaning areas at Motor Freight Transportation Facilities, Passenger Transportation Facilities, Petroleum Bulk Oil Stations and Terminals, the United States Postal Service, or Railroad Transportation Facilities
Q	Vehicle Maintenance Areas and Equipment Cleaning Areas of Water Transportation Facilities
R	Ship or Boat Building and Repair Yards
S	Vehicle Maintenance Areas, Equipment Cleaning Areas or From Airport Deicing Operations located at Air Transportation Facilities
T	Wastewater Treatment Works
U	Food and Kindred Products Facilities
V	Textile Mills, Apparel and other Fabric Product Manufacturing Facilities
W	Furniture and Fixture Manufacturing Facilities
X	Printing and Platemaking Facilities
Y	Rubber and Miscellaneous Plastic Product Manufacturing Facilities
Z	Leather Tanning and Finishing Facilities

Table A4-13. TMSP Sectors and Descriptions.