

Summary – Lake Barkley Watershed (05130205)

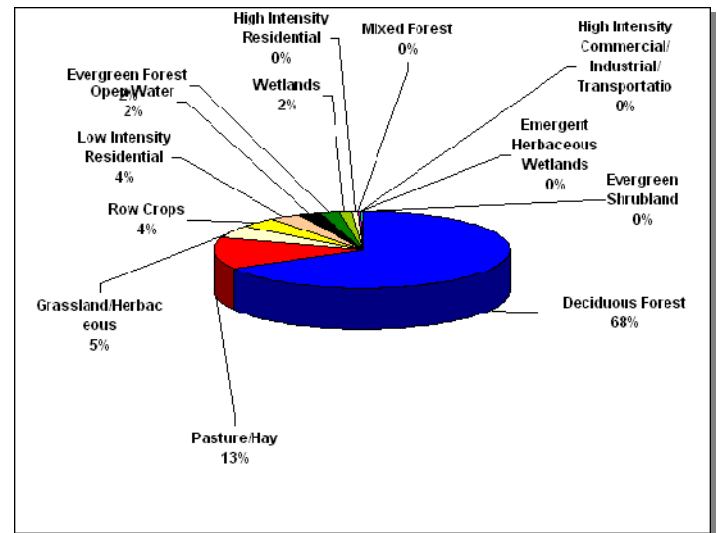
In 1996, the Tennessee Department of Environment and Conservation Division of Water Pollution Control adopted a watershed approach to water quality. This approach is based on the idea that many water quality problems, like the accumulation of point and nonpoint pollutants, are best addressed at the watershed 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 Lake Barkley 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.

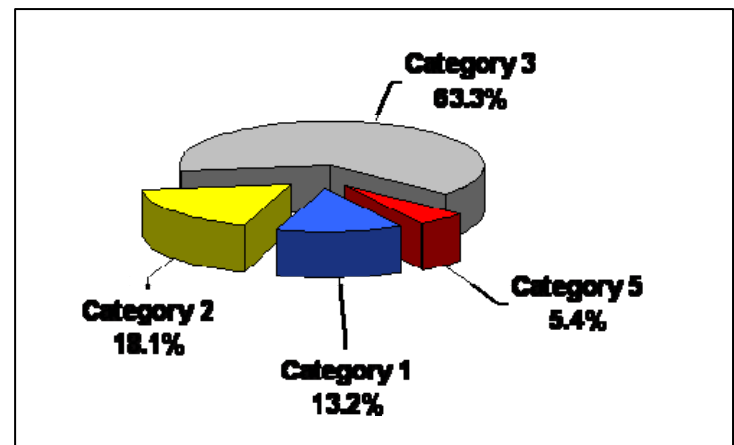
A detailed description of the watershed can be found in Chapter 2. The Lake Barkley Watershed is approximately 2,343 square miles (982 mi² in Tennessee) and includes parts of six counties. A part of the Cumberland River drainage basin, the watershed has 1,258.4 stream miles and 27,000 lake acres in Tennessee.

Seven wildlife management areas, six recreation areas, one state forest, one designated state natural area, one national wildlife refuge, one national military park, and two streams listed in the National Rivers Inventory are located in the watershed. Seventy-two rare plant and animal species have been documented in the Tennessee portion of the watershed, including two rare fish species and two rare crustacean species.



Land Use Distribution in the Tennessee Portion of the Lake Barkley Watershed.

A review of water quality sampling and assessment is presented in Chapter 3. Using the Watershed Approach to Water Quality, 352 sampling events occurred in the Tennessee portion of the Lake Barkley Watershed in 2000-2005. These were conducted at ambient, ecoregion or watershed monitoring sites. Monitoring results support the conclusion that 85.3% of stream miles assessed fully support one or more designated uses.



Water Quality Assessment of Streams and Rivers in the Tennessee Portion of the Lake Barkley Watershed. Assessment data are based on the 2006 Water Quality Assessment of 1,258.4 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.

Point source contributions to the Lake Barkley Watershed consist of 13 individual NPDES-permitted facilities. Other permits in the watershed (as of October 20, 2008) are Mining Permits (1), Aquatic Resource Alteration Permits (46), Tennessee Multi-Sector Permits (25), Construction General Permits (44), Water Treatment Plant Permits (5), CAFO Permits (1), and Ready Mix Concrete Plant Permits (2). 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.

HUC-8	HUC-10	HUC-12
05130205	0513020501	051302050101 Cumberland River
		051302050102 Half Pone Creek
		051302050103 Cumberland River
		051302050104 Big McAdoo Creek
		051302050105 Cumberland River
		051302050106 Budds Creek
		051302050107 Blooming Grove Creek
	0513020502	051302050201 Bartons Creek, Upper
		051302050202 Furnace Creek
		051302050203 Bartons Creek, Lower
		051302050204 Louise Creek
	0513020503	051302050301 Yellow Creek, Upper
		051302050302 Yellow Creek, Lower
		051302050303 East Fork Yellow Creek
	0513020504	051302050401 Cumberland River
		051302050402 Guices Creek
		051302050403 Wells Creek
		051302050404 Cumberland River
		051302050405 Cumberland River
		051302050406 Cumberland River
		051302050407 Saline Creek
	051302050408 Lake Barkley	

The Tennessee Portion of the Lake Barkley Watershed is Composed of twenty-two USGS-Delineated Subwatersheds (12-Digit Subwatersheds).

Chapter 5 is entitled *Water Quality Partnerships in the Lake Barkley 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, U.S. Corps of Engineers) and state agencies (TDEC/State Revolving Fund, TDEC Division of Water Supply, Tennessee Department of Agriculture, Tennessee Wildlife Resources Agency, and Kentucky Division of Water). Local initiatives of organizations active in the watershed (Cumberland River Compact, Five Rivers RC and D Council) are also described.

Point and Nonpoint source approaches to water quality problems in the Lake Barkley 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 Lake Barkley Watershed Water Quality Management Plan can be found at: <http://www.state.tn.us/environment/wpc/watershed/wsm/plans/>