

Ecoregions of Tennessee

Ecoregions denote areas of general similarity in ecosystems and in the type, quality, and quantity of environmental resources; they are designed to serve as a spatial framework for the research, assessment, management, and monitoring of ecosystems and ecosystem components. Ecoregions are directly applicable to the immediate needs of state agencies, such as the Tennessee Department of Environment and Conservation (TDEC), for selecting regional stream reference sites and identifying high-quality waters, developing ecoregion-specific chemical and biological water quality criteria and standards, and augmenting TDEC's watershed management approach. Ecoregion frameworks are also relevant to integrated ecosystem management, an ultimate goal of most federal and state resource management agencies.

The approach used to compile this map is based on the premise that ecological regions can be identified through the analysis of the patterns and the composition of biotic and abiotic phenomena that affect or reflect differences in ecosystem quality and integrity (Wiken 1986; Omernik 1987, 1995). These phenomena include geology, physiography, vegetation, climate, soils, land use, wildlife, and hydrology. The relative importance of each characteristic varies from one ecological region to another regardless of the hierarchical level. A Roman numeral hierarchical scheme has been adopted for different levels of ecological regions. Level I is the coarsest level, dividing North America into 15 ecological regions, with level II dividing the continent into 52 regions. At level III, the continental United States contains 99 regions (United States Environmental Protection Agency [USEPA] 1997). Level IV is a further subdivision of level III ecoregions. Explanations of the methods used to define USEPA's ecoregions are given in Omernik (1995), Griffith et al. (1994, 1997), and Gallant et al. (1989).

This level III and IV ecoregion map was compiled at a scale of 1:250,000; it depicts revisions and subdivisions of earlier level III ecoregions that were originally compiled at a smaller scale (USEPA 1996; Omernik 1987). The

poster is part of a collaborative project primarily between the USEPA National Health and Environmental Effects Research Laboratory - Corvallis, OR., and TDEC's Division of Water Pollution Control. Collaboration and consultation also occurred with the United States Department of Agriculture - Natural Resources Conservation Service (NRCS), the United States Department of Agriculture - Forest Service (USFS), USEPA Region IV, and with other State of Tennessee agencies.

This project is associated with an interagency effort to develop a common framework of ecological regions. Reaching that objective requires recognition of the differences in the conceptual approaches and mapping methodologies that have been used to develop the most commonly used existing ecoregion-type frameworks, including those developed by the USFS (Bailey et al. 1994), the USEPA (Omernik 1987, 1995), and the NRCS (U.S. Department of Agriculture 1981). As each of these frameworks is further developed, the differences between them lessen. Regional collaborative projects such as this one in Tennessee, where some agreement can be reached among multiple resource management agencies, is a step in the direction of attaining commonality and consistency in ecoregion frameworks for the entire nation.

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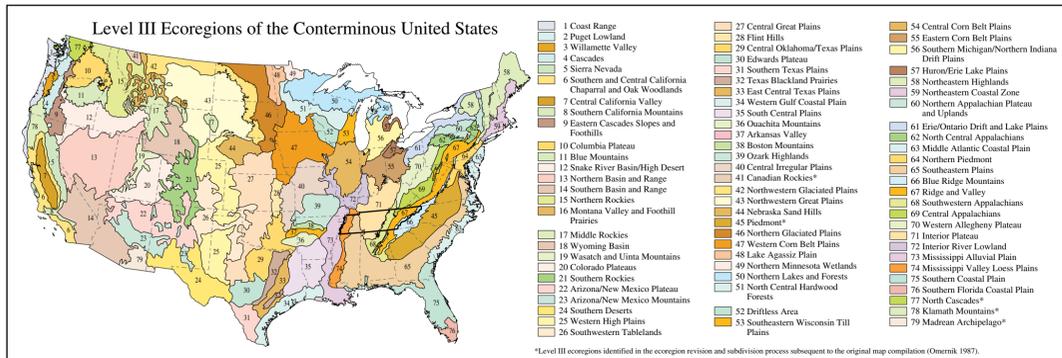
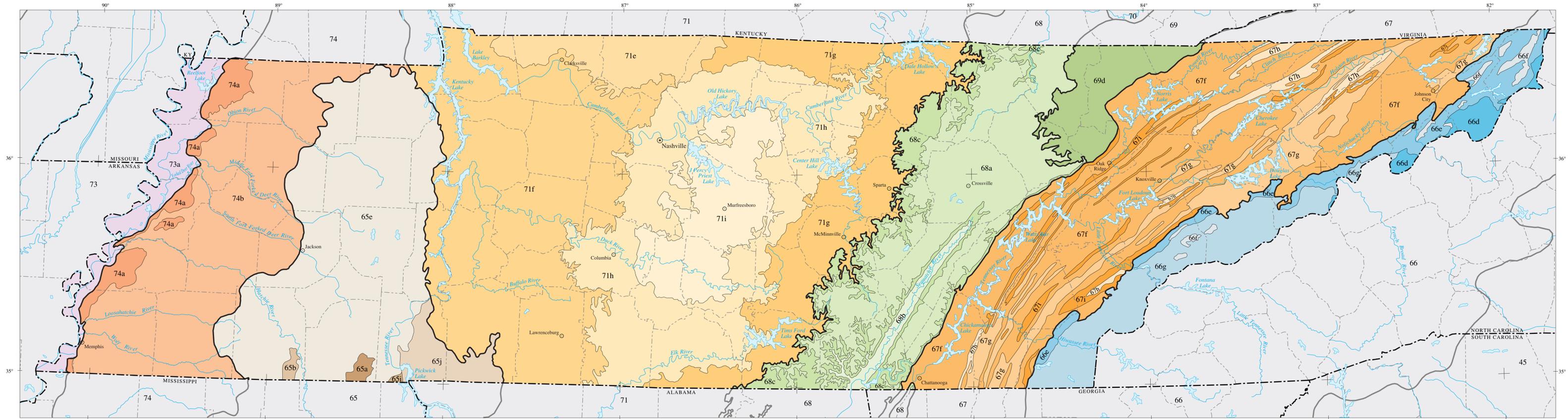
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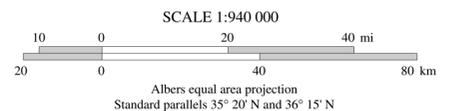


- 65a Southeastern Plains
- 65b Blackland Prairie
- 65b Flatwoods/Alluvial Prairie Margins
- 65e Southeastern Plains and Hills
- 65i Fall Line Hills
- 65j Transition Hills
- 66 Blue Ridge Mountains
- 66d Southern Igneous Ridges and Mountains
- 66f Southern Sedimentary Ridges
- 66f Limestone Valleys and Coves
- 66g Southern Metasedimentary Mountains

- 67 Ridge and Valley
- 67f Southern Limestone/Dolomite Valleys and Low Rolling Hills
- 67g Southern Shale Valleys
- 67h Southern Sandstone Ridges
- 67i Southern Dissected Ridges and Knobs
- 68 Southwestern Appalachians
- 68a Cumberland Plateau
- 68b Sequatchie Valley
- 68c Plateau Escarpment

- 69 Central Appalachians
- 69d Cumberland Mountains
- 71 Interior Plateau
- 71e Western Pennyroyal Karst
- 71f Western Highland Rim
- 71g Eastern Highland Rim
- 71h Outer Nashville Basin
- 71i Inner Nashville Basin

- 73 Mississippi Alluvial Plain
- 73a Northern Mississippi Alluvial Plain
- 74 Mississippi Valley Loess Plains
- 74a Bluff Hills
- 74b Loess Plains



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