Wildlife Resources: river corridors with significant animal numbers and diversity, key habitat areas, or recreational and commercial opportunities

Selection of Study Rivers

For each category, resource team members developed minimum standards to be used for the identification of study rivers. The minimum standards reflect those attributes or characteristics that lend resource significance to a river and establish a minimum level of eligibility for inclusion in the assessment. Such standards ensure the evaluation of those rivers recognized by resource experts as having significant resource values. Specific minimum standards for each resource category are presented in subsequent chapters.

Using the Hydrologic Unit Map of Kentucky (U.S. Geological Survey, 1974) as a base, rivers or river segments that met the established minimum standards were selected for the assessment. Rivers not appearing on the hydrologic map were selected for study if specifically identified as significant by resource experts. The minimum length of a study river or segment, if any, was determined by each resource team. Some resource values are typically confined to the river, while others extend a considerable distance from the river to adjacent land areas. In addition, numerous river segments were selected for study under more than one resource category.

The following guidelines were used to delineate the actual river study segment:

- entire segment met the resource category minimum standards with resource values and uses present throughout the study segment
- downstream and upstream endpoints of the study segment were defined using a readily identifiable natural or cultural landmark (e.g., confluence with another river, a bridge crossing, or a county boundary) or the distance in river miles from a landmark
- identification of counties through which the study segment passed
- length of the study segment in miles (to the nearest tenth of a mile)

Initially, a total of 306 study rivers (32,159 river miles) were identified by resource teams for evaluation in the rivers assessment. A preliminary list of study rivers, including a description of the resource categories and minimum standards, was distributed to the public for nomination of additional study rivers. As a result of nominations received, an additional 53 study rivers were identified for inclusion in the assessment.

River Resource Evaluation Process

A description of the evaluation process for each resource category is presented in chapters describing each category. Resource teams developed the methodology to evaluate study rivers in each resource category, using both quantitative and qualitative criteria and a numeric rating system. Evaluations were based on verifiable data whenever possible, although expert judgment was used as necessary. Study rivers in each resource category were evaluated independently of their significance for other resource values. For example, a study segment was evaluated for its significance as a fishery without reference to its significance for cultural resources.

Assignment of Value Classes

Based on the established methodology, resource teams assigned one of three value classes to each study river segment within the appropriate resource category. The value class denotes the relative significance of a river segment within a given resource category. In cases where all data

necessary to fully evaluate a study segment were not available, the specific data unavailable is noted.

Class 1 (Superior) - river segments and related corridors with resource values that are of state-wide or national significance.

Class 2 (Highly Significant) - river segments and related corridors with resource values that are of regional significance.

Class 3 (Significant) - river segments and related corridors with resource values that are of local significance.

SYNTHESIS OF INFORMATION BY RESOURCE CATEGORY

River-related resources and uses evaluated through the assessment process are presented in a variety of formats organized by resource category chapters. Individual chapters are generally organized as follows:

- **Resource Category Maps** - Study rivers evaluated in each resource category were mapped to illustrate geographic distribution.
- **Evaluation Process** - The methods used to evaluate each study river within a resource category are described including minimum criteria to select study rivers and evaluation criteria typically accompanied with weighting factors.
- **Resource Category Findings** - The results of information gained through the evaluation process are presented as major findings by resource category. In addition, a complete listing of study rivers is organized by value class.

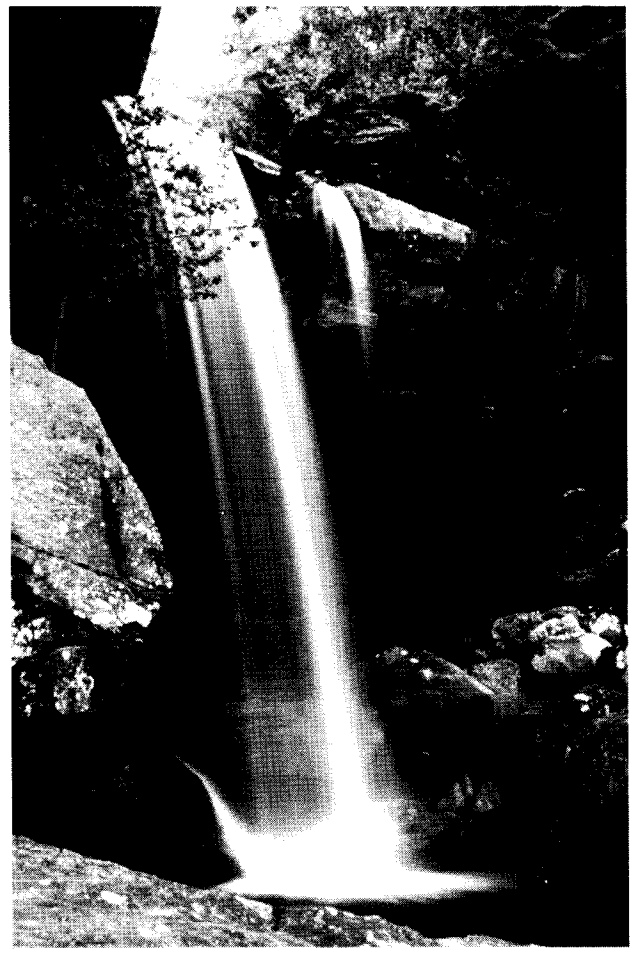
SYNTHESIS OF INFORMATION BY RIVER BASINS

River resource value classes are listed for each study river organized by river basin. A map delineating Kentucky's twelve river basins is located at the beginning of the chapter. A listing of study rivers within each basin describes the segments studied and indicates counties, segment lengths, and value classes.

SYNTHESIS OF INFORMATION BY RIVER SEGMENT

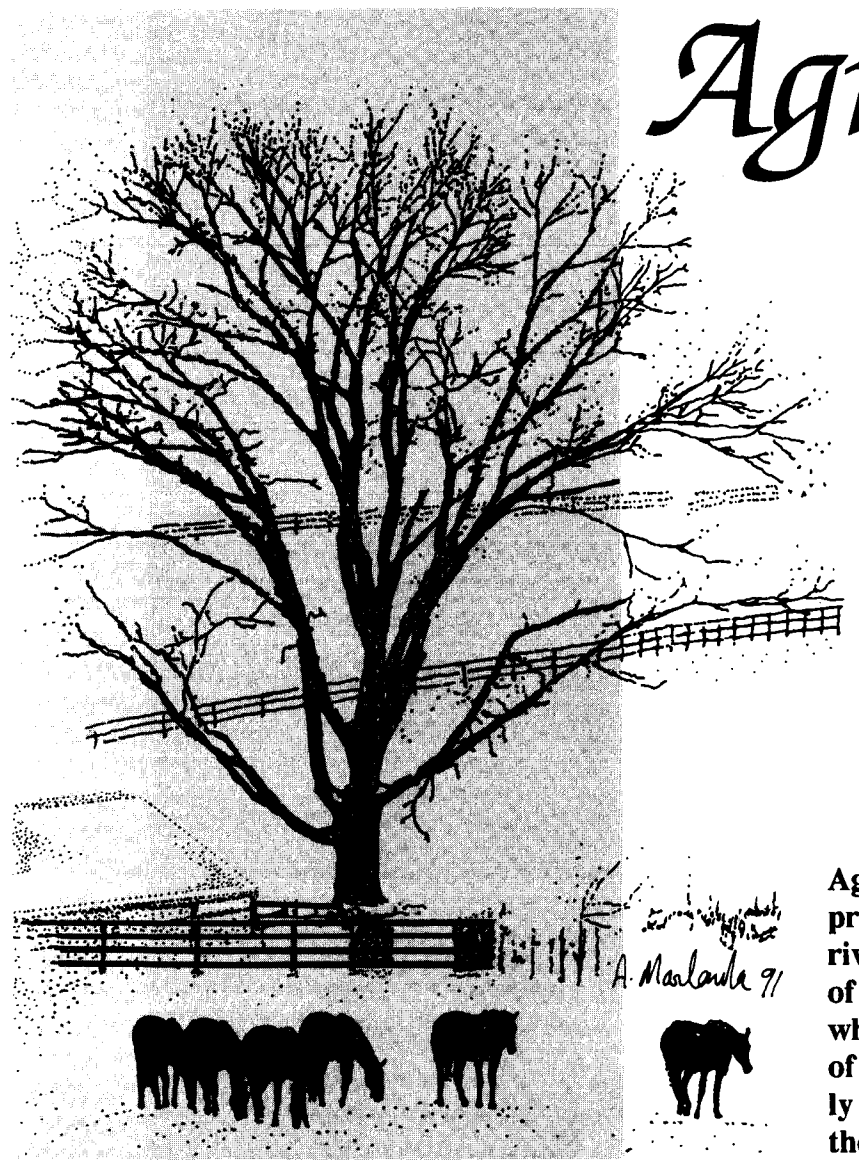
Resource values are displayed collectively by river segment in a matrix format. The value class ranking for all resource categories studied is given for each segment.

Eagle Creek Falls



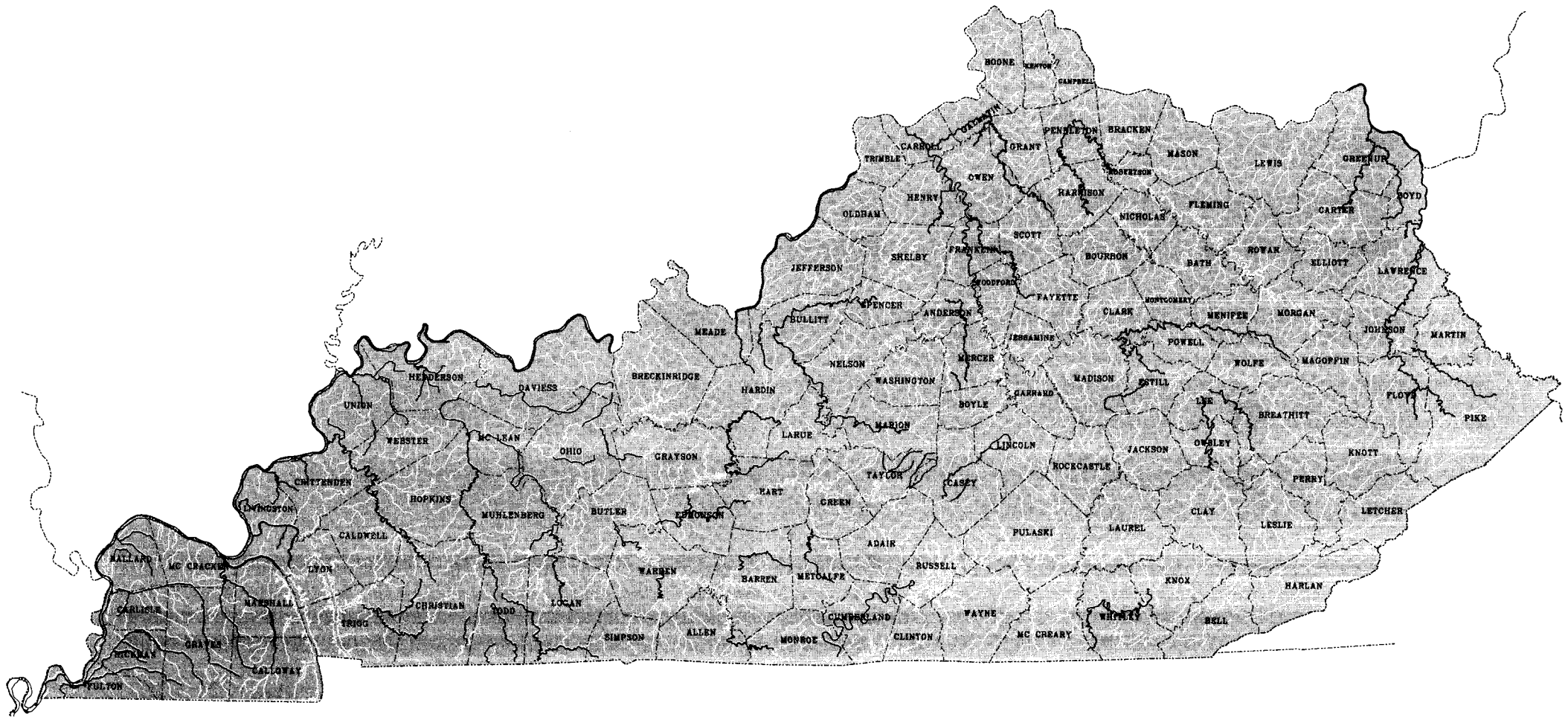
James Archambeault

Agricultural Lands



Agricultural lands are frequently found along river corridors within rich and productive floodplain and bottomland areas. Due to the fertile soils within these river corridors and the proximity to abundant water supplies, a large percentage of Kentucky's agricultural lands lie along rivers and streams. Agricultural lands, which include prime riparian farm and timber lands, are used for the production of crops, livestock, timber, horticultural plants and fruit. These lands are extremely important for food production and provide a major economic contribution to the state.

Agricultural Lands Study Rivers



EVALUATION METHODOLOGY

River and stream corridors that include agricultural lands were evaluated to determine those areas most significant for agricultural and timber production. Agricultural lands are prime riparian areas used or having the potential for producing high yields of crops and timber production. Each study river included within the agricultural lands resource category met one of the following **minimum standards:**

- occurrence of prime farmland (land available for use with the best combination of physical and chemical characteristics for producing food, feed, forage, fiber or oilseed crops) or prime timberland (soil phase with an estimated yield greater than 85 cubic feet per acre using oak as an indicator species) within the river corridor, occurrence of land within the river corridor in agricultural or timber production or land capable of supporting crop production
- occurrence of areas within the river corridor that have livestock operations or in which the river is a primary water supply for livestock or crop irrigation

Each river segment with significant agricultural and timber lands was evaluated according to the presence of prime farmlands, prime timberlands and/or farmable lands. Areas considered in the evaluation consisted of alluvial lands and those lands immediately adjacent to rivers. Study rivers with prime farmlands and timberlands and farmable lands were ranked the highest while those rivers with fewer production capabilities were ranked lower. The evaluation of timberland and farmland was based on soil types using the general soils map for Kentucky.

Class 1 - study rivers with prime farmland, prime timberland and farmable land

Class 2 - study rivers with prime farmland and farmable land; prime timberland and farmable land; or prime farmland and prime timberland

Class 3 - Study rivers with farmable land, prime farmland, or prime timberland

FINDINGS

Bottomland hardwood acreage is shrinking across the state while demands for food and timber are increasing. The deep alluvial valleys in Kentucky's river corridors are among the most productive in the country and prime farmland and timberland need to be protected and maintained in production.

A total of 113 segments (8.3% of the rivers studied in the assessment) and 3,467.1 miles (9.0% of the total miles studied in the assessment) were evaluated in the agricultural lands category. Agricultural rivers ranged from two miles (Spring Creek in Grayson County) to 270.5 miles (Ohio River). The best agricultural lands tended to be along large rivers located in western and central Kentucky. The Ohio and Green rivers ranked highest among all of the rivers evaluated.

Nineteen rivers covering 791.8 miles were identified as Class 1 agricultural rivers. Class 1 rivers ranged in length from 4.4 to 270.5 miles, averaging 41.7 miles. The majority are located in the western part of the state.

Thirty-four rivers covering 1,056.3 miles were identified as Class 2 agricultural rivers. These rivers ranged in length from 2.8 to 126.1 miles, averaging 31.1 miles. Class 2 rivers are evenly distributed throughout the state.

Sixty rivers covering 1,619.0 miles were identified as Class 3 agricultural rivers. These rivers ranged in length from two to 131.2 miles, averaging 27.0 miles. Class 3 rivers are located throughout the state.

Table 4. Summary of Agricultural Land Evaluations

	Class 1	Class 2	Class 3	Total
Number of Segments	19	34	60	113
Miles	791.8	1056.3	1619.0	3467.1

SOURCES OF INFORMATION

Kentucky Division of Conservation and U.S. Soil Conservation Service, *Kentucky Digitized General Soils Map*, July 1986

Kentucky Division of Conservation, *Kentucky Soil and Water Conservation Commission Long Range Plan*, January 1982.

Kentucky Conservation Districts, *Conservation District Long Range Plans.*

U.S. Department of the Interior, *Water Use in Kentucky*, U.S. Geological Survey, 1980.

Farmland near Kentucky River

Scott Hankla