

LAND USE



Historic Land Cover/Land Use

Historical land cover within the uplands of the Current River Watershed primarily consisted of pine and mixed pine/oak woodland with an open understory of grasses and shrubs (MDC 1997a). Occasional prairie and savanna openings were also common in some areas. Land cover of the sideslopes consisted of oak and oak/pine forests with occasional glade and woodland type openings associated with exposed slopes and ridges having shallow soils. Valley bottom land cover consisted of mixed hardwood forest with occasional fen openings.

The Ozarks are believed to have first been explored approximately 14,000 years ago by semi nomadic Native American tribes which subsisted as hunters and foragers (Rafferty 1980, Jacobson and Primm 1994). Approximately 1000 B.C., tribes on the fringes of the Ozarks became less nomadic, existing in more permanent villages and incorporating agricultural practices as a means of subsistence. Tribes in the Ozarks interior did not begin adopting these practices until A.D. 900. By A.D. 1500 this culture had disappeared as large agricultural based villages began to grow along the eastern fringe of the Ozarks and along the Mississippi River. During this period the interior of the Ozarks was used primarily as a seasonal hunting ground as well as a source for flint and chalcedony (a type of quartz) for making tools. It is believed that a climatic shift to cooler, drier summers and the resulting failure of maize crops on which early agriculture was based, may have caused an abrupt abandonment of the larger villages. Remnants of these villages and tribes reassembled to form the Osage Tribe which existed throughout much of the Ozarks and was present as European settlement of the area began to occur in the late 1700s and early 1800s (Jacobson and Primm 1994). Native American use of fire, as well as naturally occurring incidences of fire (i.e. lightning strikes), are believed to have been a large factor in determining the types of vegetation found by Schoolcraft and others as exploration of the Ozarks interior began to occur after the Louisiana Purchase of 1803. Native Americans are believed to have set fires for many reasons including harassment of enemies as well as an aid in hunting. These fires stimulated warm-season grasses such as bluestem and eliminated woody undergrowth thus creating open woodlands or savannas.

European settlement of the Ozark fringe began in the early 1700,s under French and, later,

Spanish political control. After the Louisiana Purchase of 1803, American settlers began settling the same areas earlier occupied by the Spanish and French. The Osage, in treaty with the federal government, relinquished claims to much of the Ozarks interior in 1808, although they refused to relinquish their hunting rights in this area (Rafferty 1980). Settlement of the Ozarks Interior increased after the war of 1812 (Jacobson and Primm 1994). Many of the early settlers came from states such as Indiana, Illinois, Kentucky, Virginia, and Tennessee (Rafferty 1983). Most of these states were previously considered the frontier prior to the Louisiana Purchase, thus many settlers brought along skills they had learned for survival in frontier territory. Early settlers subsisted by hunting and fishing as well as maintaining gardens in the small bottomland areas which they cleared. In addition early settlers raised livestock which grazed on the open range of the slopes and uplands in the summer. In the winter livestock were fed from forage crops cultivated and harvested from the bottom lands (Jacobson and Primm 1994). The annual practice of burning was continued by early settlers in order to enhance the



livestock forage of the uplands. In addition to the influx of settlers of European origin which occurred after the war of 1812, Native American tribes such as the Cherokee, Shawnee, and Delaware, which had been displaced from the East, began moving through the region (Jacobson and Primm 1994). As the population of the area increased, more settlers were forced to settle the uplands (Ryan and Smith 1991). Fenced pasture began to replace the practice of open range. These two factors reduced the use of fire on the uplands, thus decreasing the grassland and savanna type land cover (Ryan and Smith 1991; Jacobson and Primm 1994). This region was only sparsely settled until the late 1800's, when the economic values of the vast timber resources were discovered.

The virgin forests of the Ozarks remained relatively undisturbed by logging until the late 1800s (Cunningham and Hauser 1989). Part of the reason for this was due to the rugged nature of the topography which made railroad construction (one of the main means of lumber transport) a less feasible proposition than in other less rugged areas of the country. However, as the forest resources of the Eastern United States were depleted and more settlers began moving onto the sparsely forested western plains, the demand for lumber in the Ozarks increased. Undoubtedly, the cheap price of land having uncut timber was also very attractive to eastern speculators. In some instances uncut timber land often sold for \$1.00 an acre (Cunningham and Hauser 1989). This led to the construction of railroads in the region in the 1800s. Initially, the distribution of the first extensive commercial timber cutting in the Ozarks was limited by the distribution of shortleaf pine and transportation routes provided by rivers and railroads (Jacobson and Primm 1994). Shortly thereafter, however, the exploitation of hardwood species began. Larger shortleaf pine trees were harvested for lumber, while a variety of sizes of hardwood trees were harvested for products such as railroad ties, charcoal, barrel staves, and flooring (Rafferty 1983, Cunningham and Hauser 1989). The pine lumber and railroad tie industry were very prevalent within the area surrounding the Current River. The many different products produced from the timber of the area resulted in a wide range of species and sizes harvested. The population of the area sprang up as did several lumber towns including some within or bordering the Current River Watershed such as West Eminence, Birch Tree, Grandin, Midco, and Winona.

Initially, the Current River was used as a major transport route for loose logs and ties. Ties and logs were transported to yards or slides all along the Current River (Cunningham 1990). At the appropriate time, usually early summer, logs and ties were slid off steep bluffs into the river. They were

then floated to the takeout points of Vanburen and Doniphan where booms, which extended two thirds of the way across the river, were used to catch the logs and ties. Large volumes of loose ties and logs often proved to be a nuisance as well as a danger for persons who lived in the area. Loose ties were often hazardous to persons crossing the river and in some instances completely prevented persons from crossing the river at fords. In addition, log and tie jams were, in some instances, so severe as to block river flow and cause flooding in some low lying areas. These problems had the effect of increasing negative public opinion against the floating of loose ties and logs. In 1915, the assistant secretary of war issued regulations limiting the size of tie and log drives. In light of the new regulations, many operators were forced to begin rafting ties and logs. This was accomplished by nailing the ties or rafts together with strips of lumber. Rafting logs and ties had their own associated problems. The failure of a raft to negotiate a bend in the river in some instances meant disaster. In addition, members of the Izaak Walton league began blaming tie rafts for the poor quality of the sport fishery caused by the destruction of bass spawning beds. This prompted several major lumber companies to halt tie and log rafting during the April 15-June 1 spawning season.

Along with the eastern-backed lumber companies came the logging practices that had decimated much of the forests of the Eastern United States. These “cut and get out” operations, as they have been referred to in Cunningham and Hauser (1989), paid little or no attention to forest regeneration; focusing only on feeding the gigantic lumber mills located in the area. The mills at Grandin, Missouri were capable of consuming 70 acres of forest a day (MDC 1991). With little or no attempt to reforest cut-over areas, land which had previously been dominated by pine and mixed pine-oak forest began to regenerate to thick oak sprouts (Nigh 1988).



As the logging industry began to decline in the area, residents turned increasingly toward farming the rugged cut-over land in an attempt to eke out a means of survival. Initially row crop farming was attempted in some areas. This is exemplified by a peak occurring between 1899 and 1920 in the acres of corn harvested within the major counties of the Current River Watershed as shown in [Figure Lu01](#). This type of land use would have undoubtedly contributed to erosion and thus sedimentation and an increased gravel load in the streams of the regions watersheds such as the Current River. In addition, lumber companies as well as land speculators, eager to dispose of taxable cut-over land, began to offer the land for sale through nationwide advertising (Rafferty 1983; Cunningham and Hauser 1989). In many instances the land was advertised as being more productive than what it actually was.

As the century progressed, much of the area was found to be unsuitable for large scale row-cropping. Figure Lu01 shows the relatively rapid decline of acres harvested of corn in Carter, Dent, Ripley, Shannon and Texas Counties. In many counties of the Ozarks, livestock populations experienced



sharp increases as row cropping declined. In contrast, with the exception of Texas County, there appears to have been no substantial increase of cattle and hog populations in any of the major counties of the Current River Watershed relative to other counties in the region (Figure Lu02). Livestock numbers in Ripley and Shannon County experienced sporadic growth and decline between 1920 and 1980. In contrast, the livestock populations of Carter County remained relatively stable from 1920 to 1997. Livestock population trends in Dent County resembled those of Texas County from 1920 to 1980. However, Dent County livestock populations never experienced as

explosive a rate of growth.

The era of natural resource management began in the Current River Watershed in the early portion of the century. In 1909, an exploratory trip was undertaken by a group of interested persons headed by Missouri Governor Hadley (Kohler and Schuchard 1984). This trip brought the area to statewide attention and inspired a 50 year debate regarding the Current River Basin and its resources. The debate centered around whether the streams and surrounding area should be preserved, used as a recreational development, or dammed for hydroelectric power. Tourism began to be more prevalent in the area; and between 1920 and 1930 the state of Missouri began development of parks at Big Spring, Round Spring, and Montauk (Kohler and Schuchard 1984). In the early 1930s, the USFS began purchasing land in the Current River/Jacks Fork area (Kohler and Schuchard 1984). Initial natural resource development was accomplished by the Civilian Conservation Corps (CCC), a work program of the Great Depression, under the guidance of the United States Forest Service (USFS). Much of this work involved pine reforestation (Kohler and Schuchard 1984). The USFS also attempted to educate local landowners regarding reforestation. In addition, creation of the Missouri Department of Conservation in 1936 provided for more intensive management of the area's fish and wildlife resources. It also provided additional opportunities for working with private landowners regarding natural resource management on private lands. In the meantime the debate over conservation vs. exploitation of the areas resources continued. Talk of impounding portions of the Current River continued to be the focus of this debate through the early 1950s at which time President Truman created the Arkansas-Red-White River Basin Interagency Committee for the purpose of a flood control survey (Kohler and Schuchard 1984). The committee's work resulted in the recommendation that the streams of the basin not only not be impounded but should be "preserved in their natural states" (Kohler and Schuchard 1984). This led to the report entitled "Plan for the Preservation and Development of Recreation Resources -Current and Eleven Point River Country, Missouri". Many in the Ozarks were deeply divided over the recommendations of the report. Public hearings were held which often involved heated debate regarding the proposal of the report (Kohler and Schuchard 1984). The Missouri House of Representatives passed a resolution in 1959 requesting the United States Congress create a national recreation area along the Current and Eleven Point Rivers. Initial legislation was drafted by the National Park Service. Still, those opposed insisted on additional research of the idea. President Eisenhower signed a bill allocating funding for research of the area in 1959. The results of the research suggested the inclusion of the Current and Jacks Fork Rivers in a national monument. Compromises were made after the first attempt at legislation creating the "Ozark Rivers National Monument" failed. Then in 1963, legislation establishing the "Ozark National River" was introduced. Further compromise was agreed to in which only land along the Current and Jacks Fork River would be included in the park and the bill creating the "Ozark National Scenic Riverways" was passed in both the House of Representatives and Senate. The bill was signed into law by President

Johnson in 1964 with the purchase of land beginning in 1966. The legislation, aimed at preserving an American river system with the creation of the Ozark National Scenic Riverways, was the first of its kind (Kohler and Schuchard 1984). It paved the way for the National Wild and Scenic Rivers Act of 1968. The Ozark National Scenic Riverways was dedicated in 1972.

In an effort to determine the effects of land use changes on stream disturbance in the Ozark Region, Jacobson and Primm (1994) evaluated present (1993) conditions of Ozark streams, pre-settlement period historical descriptions, stratigraphic observations, and accounts of oral-history responses on river changes during the last 90 years for the Jacks Fork River and Little Piney Creek Watersheds. This led Jacobson and Primm (1994) to the conclusion that Ozark streams are disturbed from their natural conditions. Jacobson and Primm (1994) state that this “disturbance has been characterized by accelerated aggradation of gravel, especially in formerly deep pools, accelerated channel migration and avulsion, and growth of gravel point bars”. Jacobson and Primm (1994) also suggest that “land use changes have disturbed parts of the hydrologic or sediment budgets or both”.

As part of the effort to determine the effects Jacobson and Primm (1994) summarized the land use changes from pre-settlement conditions to the 1970's in the Jack's Fork Watershed which drains into the Current River Watershed ([Table Lu01](#)).

“Different types of land use have taken place on different parts of the landscape, and at different times, resulting in a complex series of potential disturbances. Uplands have been subjected to suppression of a natural regime of wildfire, followed by logging, annual burning to support open range, patchy and transient attempts at cropping, a second wave of timber cutting, and most recently, increased grazing intensity. Valley side slopes have been subjected to logging, annual burning, and a second wave of logging. Valley bottoms were the first areas to be settled, cleared, and farmed; removal of riparian vegetation decreased the erosional resistance of the bottom lands. More recently, some areas of bottomland have been allowed to grow back into forest. The net effects of this complex series of land-use changes are difficult to determine and separate from natural variability.”

Jacobson and Primm (1994) offer the following observations which summarize the probable, qualitative changes to runoff, soil erosion, and riparian erosional resistance on parts of the Ozarks landscape relative to man's impact ([Table Lu02](#)):

1. Initial settlement of the Ozarks may have initiated moderate channel disturbance because of decreased erosional resistance of cleared bottom lands. This trend would have been countered by decreased annual runoff and storm runoff that accompanied fire suppression in the uplands.
2. Because of low-impact skidding methods and selective cutting during initial logging for pine during the Timber-boom period, logging would have had minimal effects on runoff and soil erosion. Low-impact methods and selective cutting continued to be the norm in timber harvesting of hardwoods until the late 1940's, when mechanization and diversified markets for wood products promoted more intensive cutting. Locally, log and tie jams, tie slides, and logging debris may have added to channel instability by diverting flow, but because aggradation and instability also occurred on streams not used for floating timber, these factors were not necessary to create channel disturbance.
3. Significant channel disturbance probably began in the Timber-boom period because of continued clearing of bottom land forests and road building in the riparian zone. This hypothesis is supported by

evidence that significant stream disturbance began before the peak of upland destabilization in the post-timber-boom period. Extreme floods during 1895 to 1915 may have combined with lowered erosional thresholds on bottom lands to produce the initial channel disturbance.

4. The regional practice of annual burning to maintain open range had the most potential to increase annual and storm runoff and soil erosion because of its considerable areal extent and repeated occurrence. Burning would have been most effective in increasing runoff and erosion on the steep slopes that had been recently cut over during the timber boom. Generally, accelerated soil erosion was not observed after burning, and relict gullies presently (1993) are not apparent on valley-side slopes and uplands. These observations support the hypothesis that burning did not produce substantial quantities of sediment.

5. The greatest potential for soil erosion on valley slopes and upland areas occurred during the post-timber-boom period when marginal upland areas were cultivated for crops. Accelerated erosion of plowed fields was observed and noted by oral-history respondents and by soil scientists working in the Ozarks during the post-timber-boom period.

6. Valley bottoms have the longest history of disturbance from their natural condition because they were the first to be settled, cleared, and farmed. The lowered resistance to stream erosion that results from removing or thinning riparian woodland would have been a significant factor, especially on small to medium sized streams for which bank stability and roughness provided by trees are not overwhelmed by discharge. Disturbance of bottom land riparian forest increased as free-range grazing, crop production, and use of valley bottoms for transportation expanded and reached a peak in the post-timber-boom period. Headward extension of the channel network because of loss of riparian vegetation may have increased conveyance of the channel network (and hence flood peaks downstream) and removed gravel from storage in first and second order valleys at accelerated rates. This hypothesis is supported by a lack of other source areas for gravel and by observations that gravel came from small stream valleys, not off the slopes.

7. During present (1993) conditions, channel instability seems somewhat decreased in areas where the riparian woodland has recovered, but stability is hampered by high sedimentation rates because of large quantities of gravel already in transport and effects of instability in upstream reaches that lack a riparian corridor.

8. Land use statistics indicate that the present trend in the rural Ozarks is toward increased populations of cattle and increased grazing density. This trend has the potential to continue the historical stream-channel disturbance by increasing storm runoff and sediment supply and thus remobilization of sediment already in transit.”

Human populations of the major counties (Carter, Dent, Ripley, Shannon, and Texas) of the Current River Watershed experienced little or no net growth between 1900 and 1990 ([Figure Lu03](#))(OSEDA 1998). In reality all counties, with the exception of Dent, experienced net declines in population during this time period. Carter and Shannon Counties experienced the most substantial declines in population with decreases of 17.8% and 32.3% respectively.

The 1990 human population within the Current River Watershed was estimated to be 24,890 persons (Blodgett J. and CIESIN 1996). Population density in 1990 was approximately 9 persons per square mile as compared to the overall population density for Missouri which was approximately 73

persons per square mile ([Figure Lu04](#)). Of course, one must take into account the effect of the states urban centers on this estimate.

Projections of human population increase of Missouri counties have been calculated by the Missouri Office of Administration (MOA), Division of Budget and Planning for three different projection scenarios in a report entitled "Projections of the Population of Missouri Counties By Age, Gender, and Race: 1990 to 2020" (MOA 1994). Combined population estimates for Butler, Carter, Dent, Howell, Ripley Reynolds, Shannon, and Texas Counties from 1990-2020 have been used to calculate percent increase in population for all three scenarios. The difference in scenarios is based on calculated long-term, recent, and zero migration. The scenarios project a combined population increase of 6.4%, 16.6%, and 6.7% respectively by the year 2020.

Ecological Classification

The Ecological Classification System (ECS) is a management tool which provides a means of "describing distribution of current and potential natural resources in a manner that considers land capability upfront" using a knowledge of landform, geology, soils, and vegetation patterns (MDC 1997a). There are several levels of classification within the ECS. For purposes of this document the three lowest levels are dealt with. These levels are, in descending order, section, subsection, and land type association (LTA). The Current River Watershed intersects two sections, 4 subsections and 18 LTAs.

The sections intersected by the Current River Watershed include the Ozark Highlands Section and the Mississippi Alluvial Basin. The Ozark Highlands Section consists of very old and highly weathered plateaus which, coupled with its physiographic diversity and central geographic location relative to the continent, has created a region of unique ecosystems harboring many endemic species (MDC 1997a). Most of the watershed occurs within this section. Only a relatively small portion of the watershed occurs within the Mississippi Alluvial Basin Section. This section consists of "flat, weakly to moderately dissected alluvial plains" (USFS 1994). Overall, approximately 90% of this section has been ditched and drained for agricultural use.

The subsections intersected by Current River Watershed include the Current River Hills, Central Plateau, Black River Ozark Border, and the White and Black River Alluvial Basin ([Figure Lu05](#)).

The Current River Hills Subsection

"The Current River Hills Subsection is described within the MDC Ozark Region Resource Inventory (1997a) as encompassing "the hilly to rugged lands associated with the Current, Jacks Fork, and Eleven Point River Valleys. These Valleys have primarily cut through Roubidoux sandstone/dolomite, and Gasconade or Eminence dolomites. Soils are mainly deep and very cherty, but vary in depth, amount of chert and depth to clays. Original vegetation consisted largely of oak and oak-pine woodland and forest with scattered glades and savannas. Streams are both losing and gaining. Gaining reaches are often spring-fed and moderate to relatively high gradient" (MDC 1997a).

The Central Plateau Subsection

The Central Plateau Subsection "represents the high, flat to gently rolling plains that are the least eroded remnant of the Salem Plateau. Underlain primarily by Jefferson City-Cotter dolomites or Roubidoux sandstone/dolomite, the plains are often mantled in a thin layer of loess and have droughty

soils. Streams are mainly intermittent, low gradient headwater streams that are often losing. Savannas and woodlands were originally the dominant vegetation types” (MDC 1997a).

The Black River Ozark Border

The Black River Ozark Border “Flanks the Current River Hills and the St. Francis Knobs and basins on their southeast and is adjacent to the Bootheel. It is a flat to moderately hilly landscape underlain by the Roubidoux Formation with valleys cutting into the cherty Gasconade Dolomite. A blanket of loess covers most of the flatter elevated surfaces, increasing in depth toward the Bootheel. The subsection historically supported both oak and pine-oak woodland and forest, and is still largely timbered today” (Nigh 1999).

White and Black River Alluvial Basin

The White and Black River Alluvial Basin “...occupies the lowlands west of Crowleys Ridge...” (Nigh 1999). This subsection intersects a relatively small portion of the Current River Watershed in the watersheds Southeast corner.

Land Type Associations (LTAs) represent the smallest level of the three levels previously mentioned (Figure Lu05). LTAs intersecting the Current River Watershed include the Following:

Ash Hill Low Sand Hills and Terraces
Black River Silty Lowland
Black River Oak-Pine Woodland/Forest Hills
Current River Oak-Pine Woodland/Forest Hills
Current River Oak Forest Breaks
Current-Eleven Point Pine-Oak Woodland Dissected Plain
Eleven Point River Oak-Pine Woodland/Forest Hills
Eminence Igneous Glade/Oak Forest Knobs
Flatwoods Oak Savanna/Woodland Plain
Grandin Pine-Oak Woodland Dissected Plain
Licking Oak Savanna/Woodland Plain
Little Piney Oak Woodland Dissected Plain
Ripley County Oak Woodland Dissected Plain
Salem Oak Savanna/Woodland Plain
Southeastern Oak Savanna/Woodland
Summersville Oak Savanna/Woodland Plain
Upper Meramec Oak Woodland Dissected Plain

Upper Gasconade Oak Woodland Dissected Plain

[Table Lu03](#) gives descriptions of LTAs within the watershed.

The Ecological Classification System could prove to be a useful tool for planning and implementing management activities by providing an indication of what natural resource management options will be more adapted to specific areas thus increasing the success of management decisions as well as helping to ensure that management decisions are ecologically enhancing.

Current Land Cover

Approximately 80.1% of the Current River Watershed is forested based on analysis of MoRAP (1999) Missouri Land Cover data. Grassland is the second most prevalent land cover accounting for about 16.0% of the total watershed area. The land cover categories of wetland and water each account for approximately 0.2% of the watershed area, while the categories of cropland and urban account for approximately 0.1% each of the total watershed area ([Table Lu04](#), Figures [Lu06](#) and [Lu07](#)). Forest cover is the most dominant land cover type in all eleven digit hydrologic units within the watershed. The Upper Middle Current River unit has the highest percentage of forest cover at 95.9%, while the Little Black River unit has the lowest at 54.9%. This unit also has, by far, the largest percentages of grassland and cropland at 26.1% and 17.7% respectively.

Soil and Water Conservation Projects

There currently are no SALT, SALT AgNPS, or EARTH projects within the Current River Watershed. In addition, no 319 soil projects exist within the Watershed (Shannon , personal communication). Four PL-566 project watersheds have existed within the watershed (NRCS 2001). The Pike Creek and Black Creek PL-566 Watersheds are 93,032 acres and 4,720 acres respectively. Both watershed projects are listed as terminated or not active with no impoundments having been built. The Upper and Lower Little Black River PL-566 Watersheds are 124,749 and 124,390 acres respectively. In the Upper Little Black, 12 impoundments have been built with drainage areas ranging between 786 and 8,944 acres and pool sizes ranging from 11 to 70 acres. One impoundment has been built in the Lower Little Black. This structure has a drainage area of 9,597 acres and a pool area of 80 acres. The Upper and Lower Little Black Watershed Projects have not been closed out, however no future work is anticipated (Deckard, personal communication) ([Figure Lu08](#)).

Public Land

A knowledge of land ownership within a watershed is an important key to understanding various characteristics of a watershed as well as addressing watershed related issues and concerns. Within the Current River Watershed, approximately 32% (420,576 acres) of land is under public ownership ([Table Lu05](#) and [Figure Lu09](#)). The United States Forest Service (USFS) holds the largest amount of publicly owned land totaling 235,279 acres. This is followed by the Missouri Department of Conservation (MDC)(141,270 acres), National Park Service (NPS)(42,605 acres) and Missouri Department of Natural Resources (MDNR) (1,332 acres). The public land within the watershed includes approximately 226 miles of permanent public stream frontage and 28 stream accesses.

Analysis of land ownership percentages within eleven digit hydrologic units reveals that units in the upper and lower Current River Watershed have the least percentage of publicly owned land. The

Little Black Unit has the smallest percentage of public land at 3.4% ([Table Lu06](#) and [Figure Lu10](#)). This land is managed by the MDC and USFS. The Pike Creek Unit, located in the middle of watershed, has the highest percentage of public land at 60.1%. The majority of this land is managed by the USFS.

Figure Lu01. Historical acreage estimates of corn harvested in Carter, Dent, Ripley, Shannon, and Texas Counties (MASS 2000).

Acres Harvested

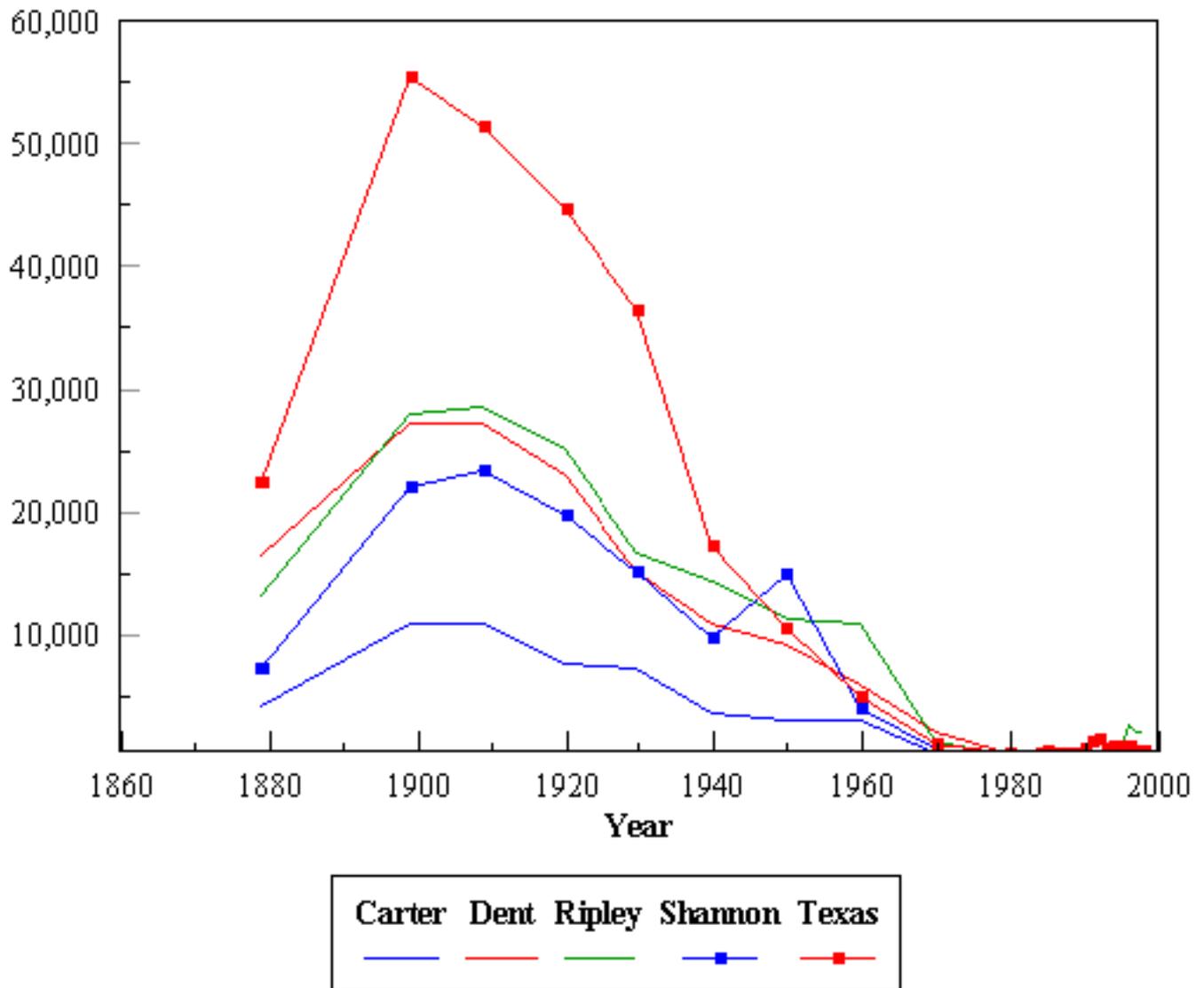
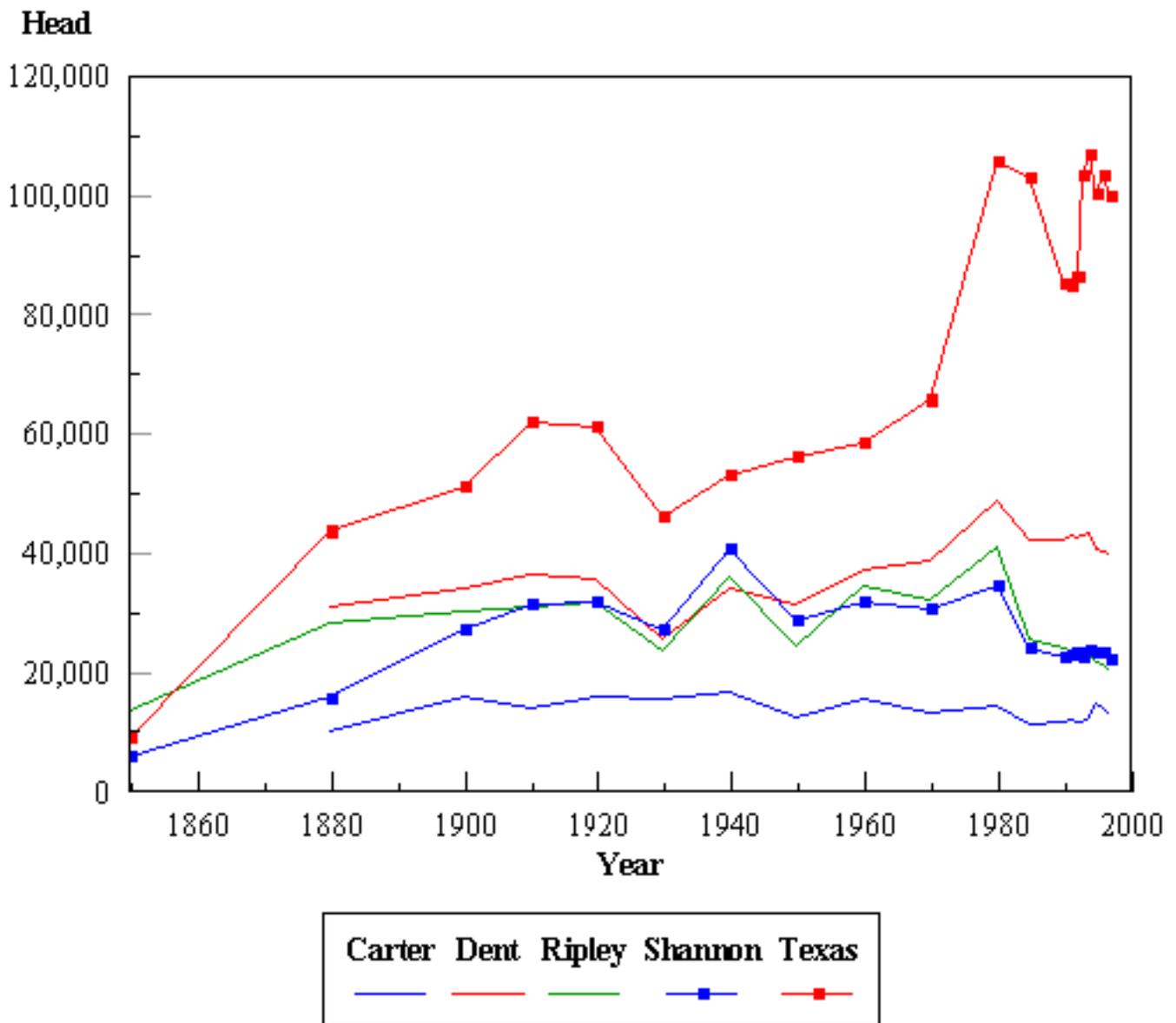


Figure Lu02. Cattle and hog population trends for Carter, Dent, Ripley, Shannon, and Texas Counties (MASS 2000).



FigureLu03. Human population trends for Carter, Dent, Ripley, Shannon, and Texas Counties (OSED A 1998). Population growth rates given in parenthesis.

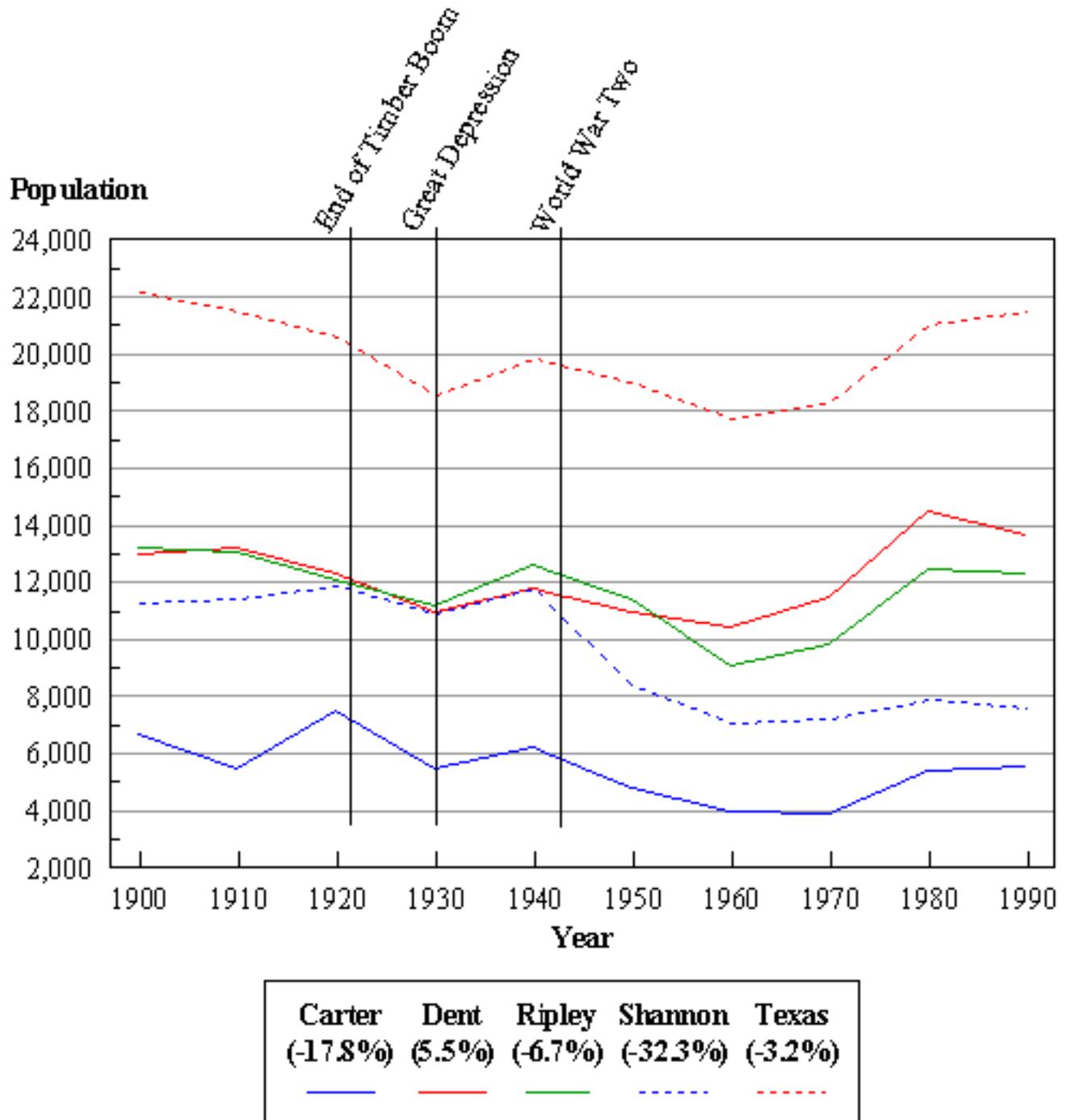
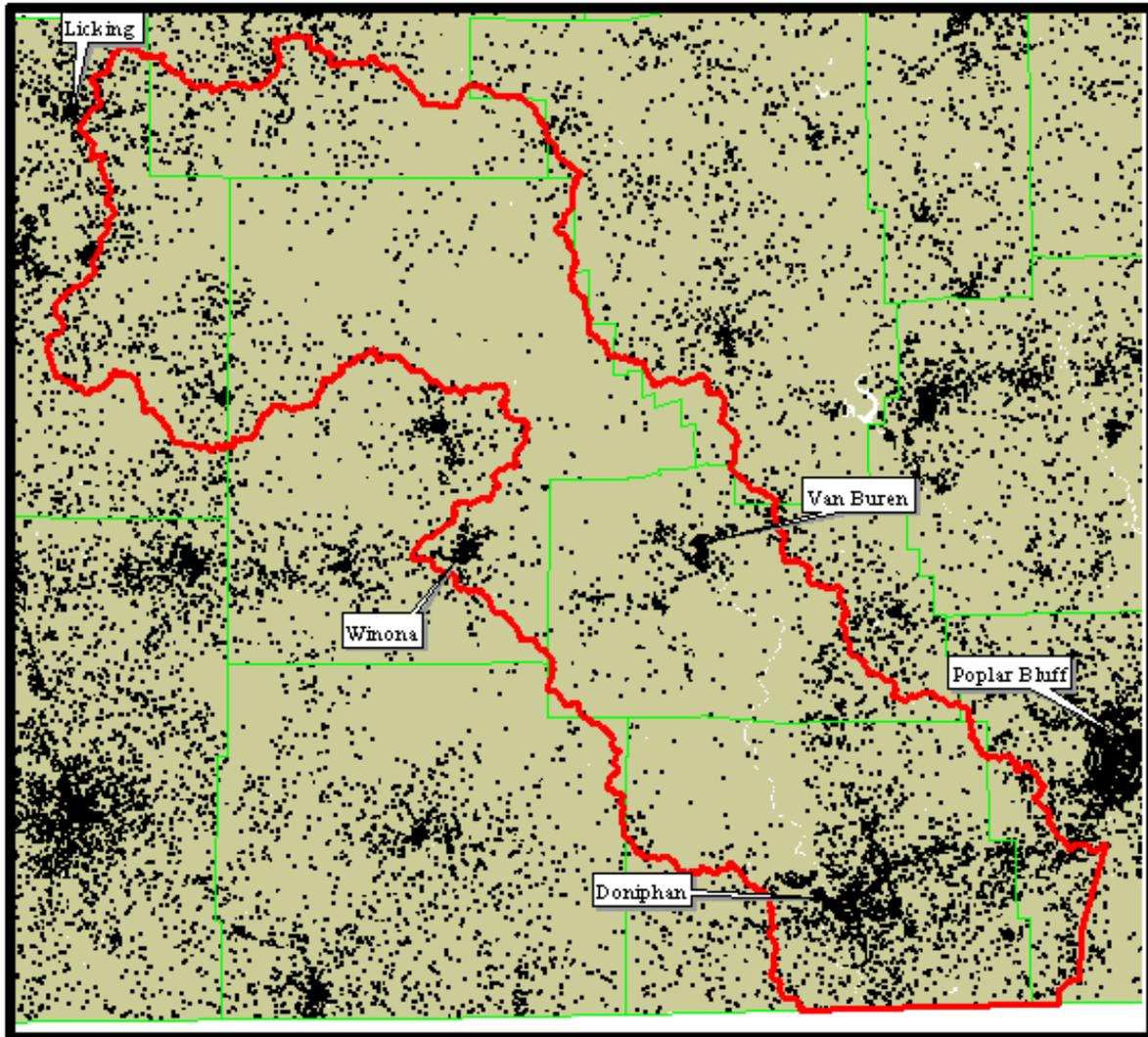


Figure Lu04.

Current River Watershed Population Distribution (1990)



20 0 20 Miles

Legend

-  Watershed Boundary
-  County Boundary
- One dot = 5 persons*

*Based on census blocks. Blocks with less than 5 persons are blank.

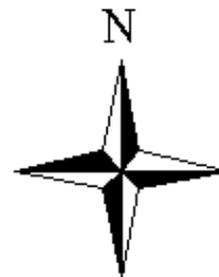
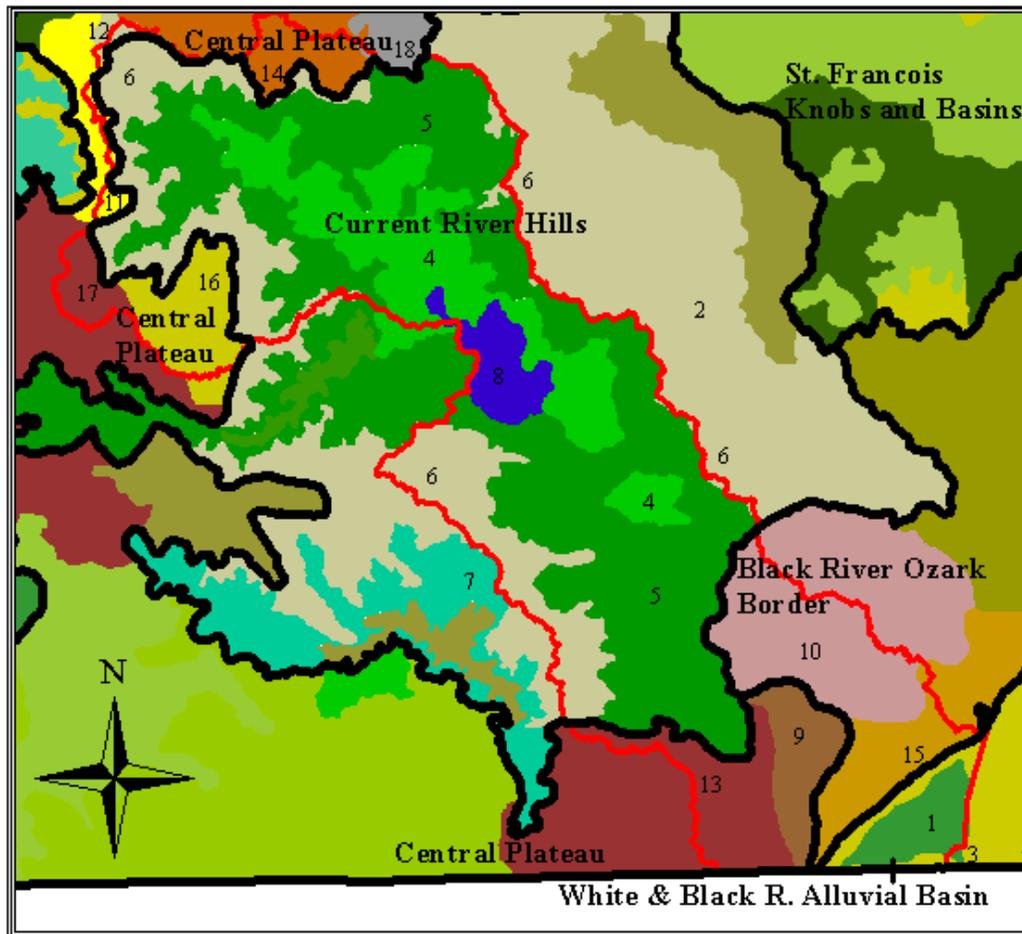


Figure Lu05.

Current River Watershed Ecological Classification System



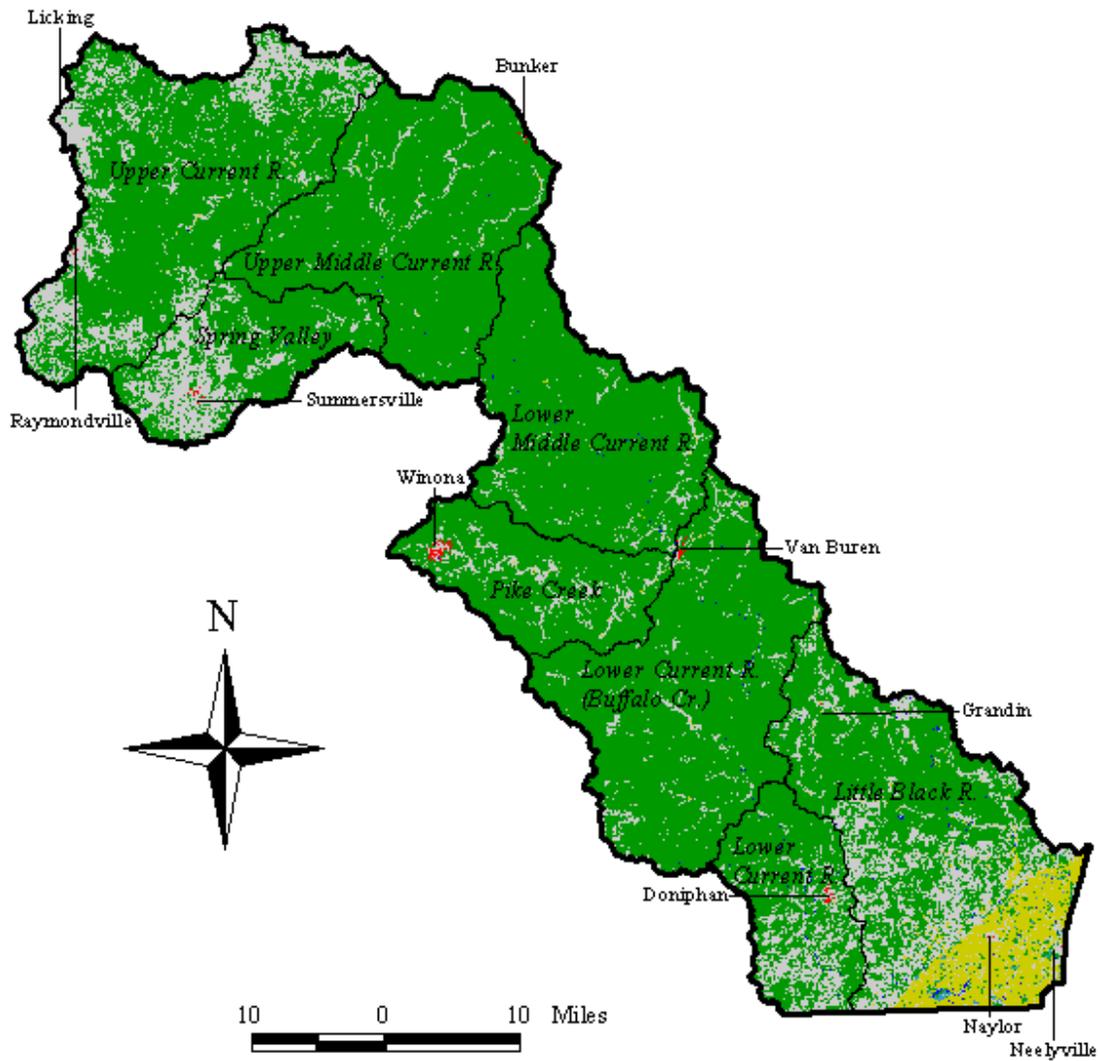
Watershed Boundary Ecological Subsection Boundary (MoRAP 1997)

Land Type Association (Based on MoRAP 1997)

- Ash Hill Low Sand Hills & Terraces (1)
- Black River Oak-Pine Woodland/Forest Hills (2)
- Black River Silty Lowland (3)
- Current River Oak Forest Breaks (4)
- Current River Oak-Pine Woodland/Forest Hills (5)
- Current-Eleven Point Pine-Oak Woodland Dissected Plain (6)
- Eleven Point River Oak-Pine Woodland/Forest Hills (7)
- Eminence Igneous Glade/Oak Forest Knobs (8)
- Flatwoods Oak Savanna/Woodland Plain (9)
- Grandin Pine-Oak Woodland Dissected Plain (10)
- Licking Oak Savanna/Woodland Plain (11)
- Little Piney Oak Woodland Dissected Plain (12)
- Ripley County Oak Woodland Dissected Plain (13)
- Salem Oak Savanna/Woodland Plain (14)
- Southeastern Oak Savanna/Woodland Plain (15)
- Summersville Oak Savanna/Woodland Plain (16)
- Upper Gasconade Oak Woodland Dissected Plain (17)
- Upper Meramec Oak Woodland Dissected Plain (18)

Figure Lu06.

Current River Watershed Land Cover



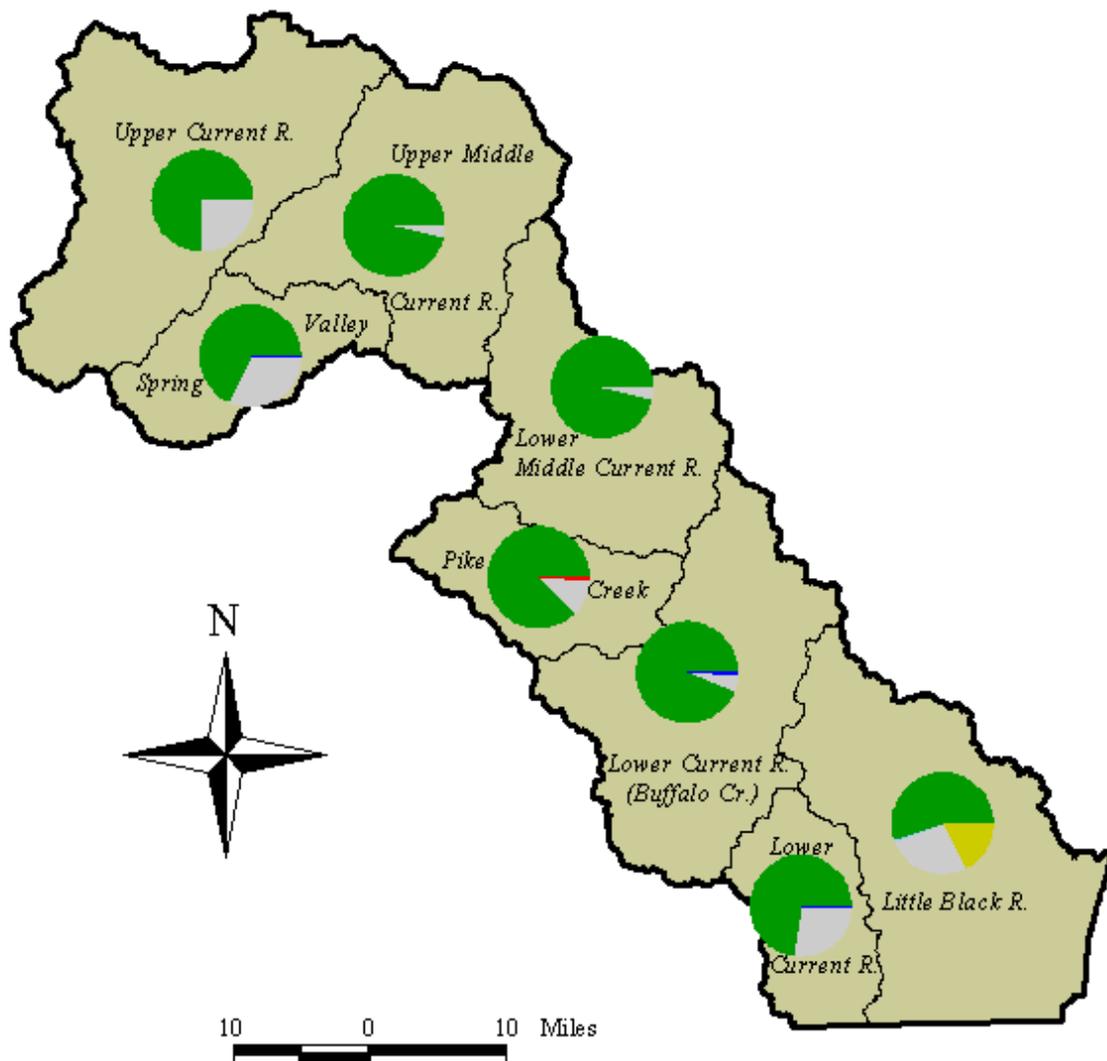
Legend

- Eleven Digit Hydrologic Unit Boundary
- Land Cover***
 - Forest
 - Wetland
 - Grassland
 - Cropland
 - Urban
 - Water

*Based on MoRAP (1999)

Figure Lu07.

Current River Watershed Eleven Digit Hydrologic Unit Land Cover



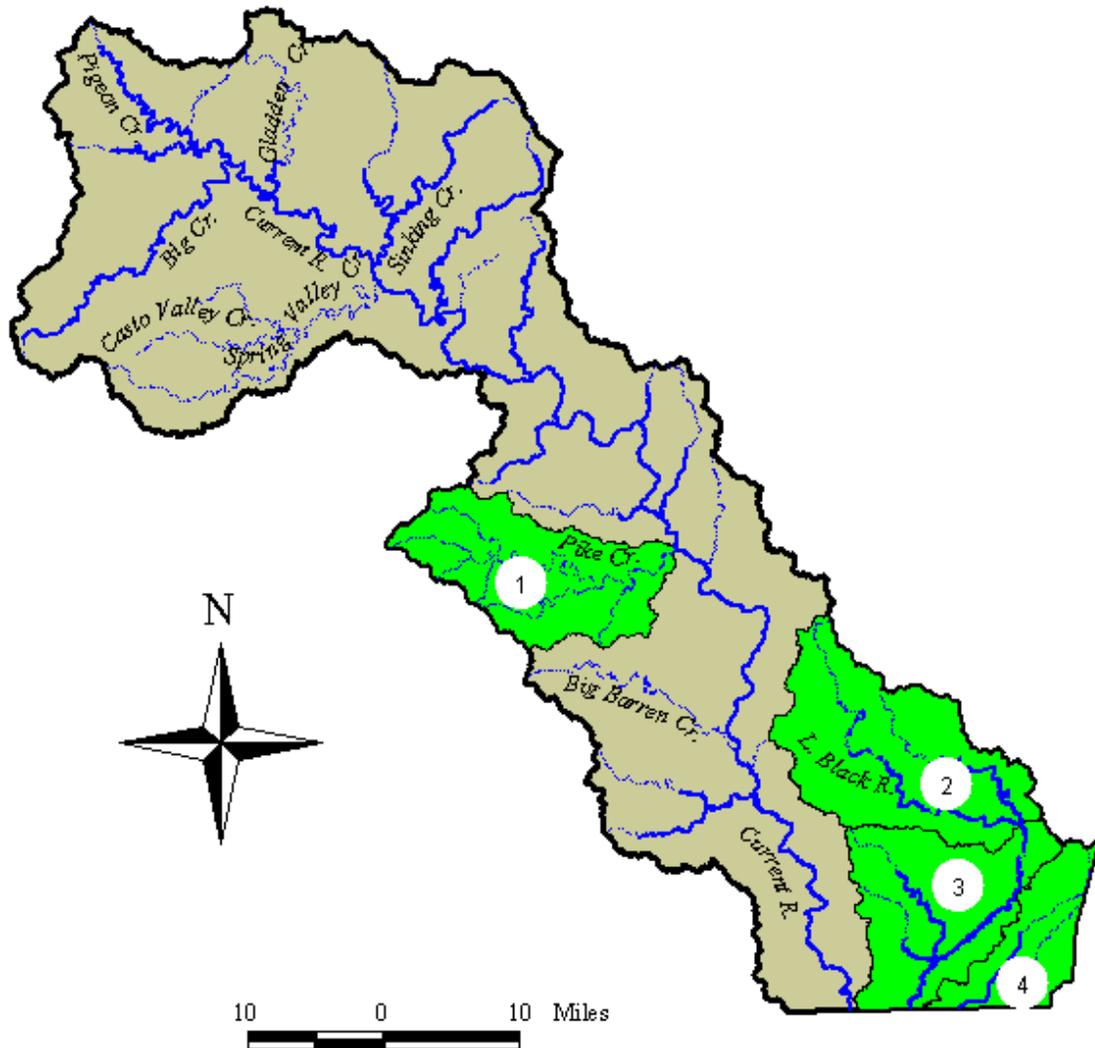
Legend

- Eleven Digit Hydrologic Unit Boundary
- Land Cover***
 - Forest
 - Wetland
 - Grassland
 - Cropland
 - Urban
 - Water

*Based on MoRAP (1999) as analyzed by Caldwell (2001).

Figure Lu08.

Current River Watershed Soil and Water Conservation Projects



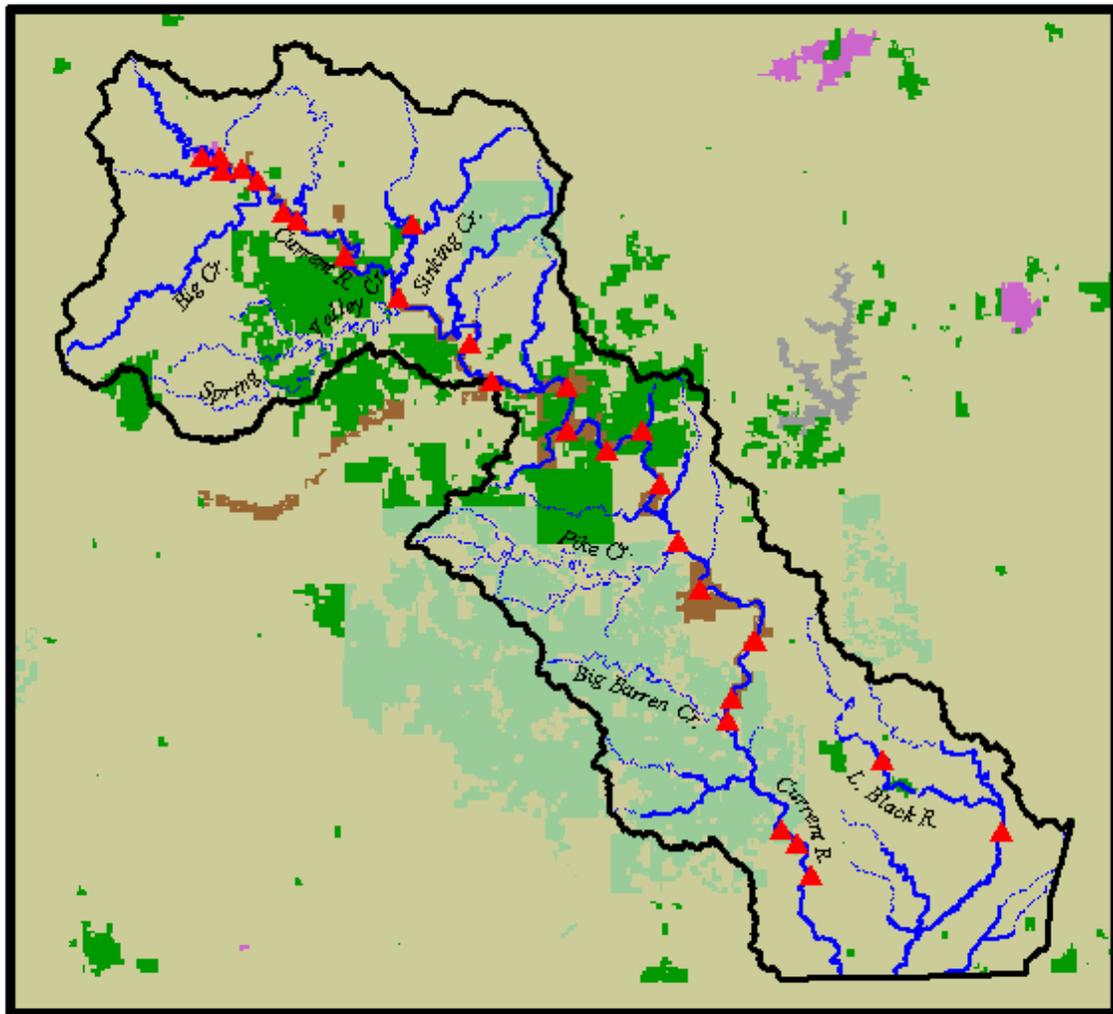
Legend

 PL-566 Project Watershed

1. Pike Creek-Acres: 93,032 Structures Completed: 0
2. Upper Little Black-Acres: 124,749 Structures Completed: 12
3. Lower Little Black-Acres: 87,417 (Missouri) Structures Completed: 1
4. Black Creek-Acres: 42,605 (Missouri) Structures Completed: 0

Figure Lu09.

Current River Watershed Public Land



20 0 20 Miles

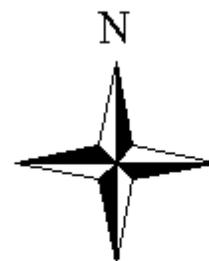
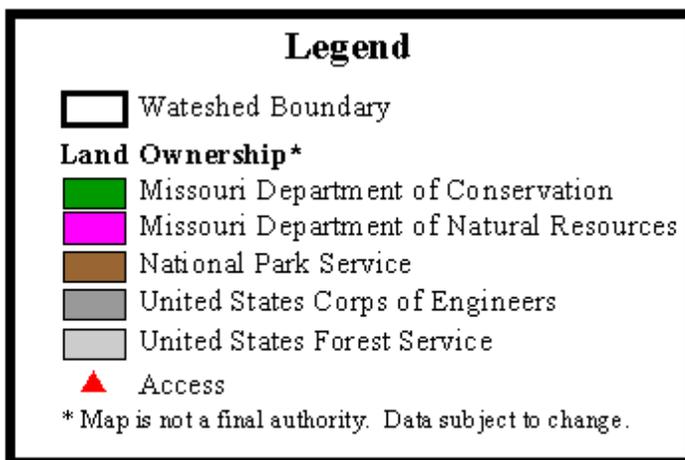


Figure Lu10. **Current River Watershed**
Eleven Digit Hydrologic Unit Land Ownership

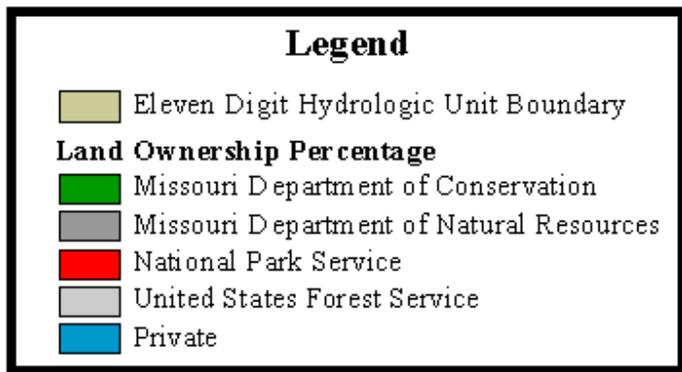
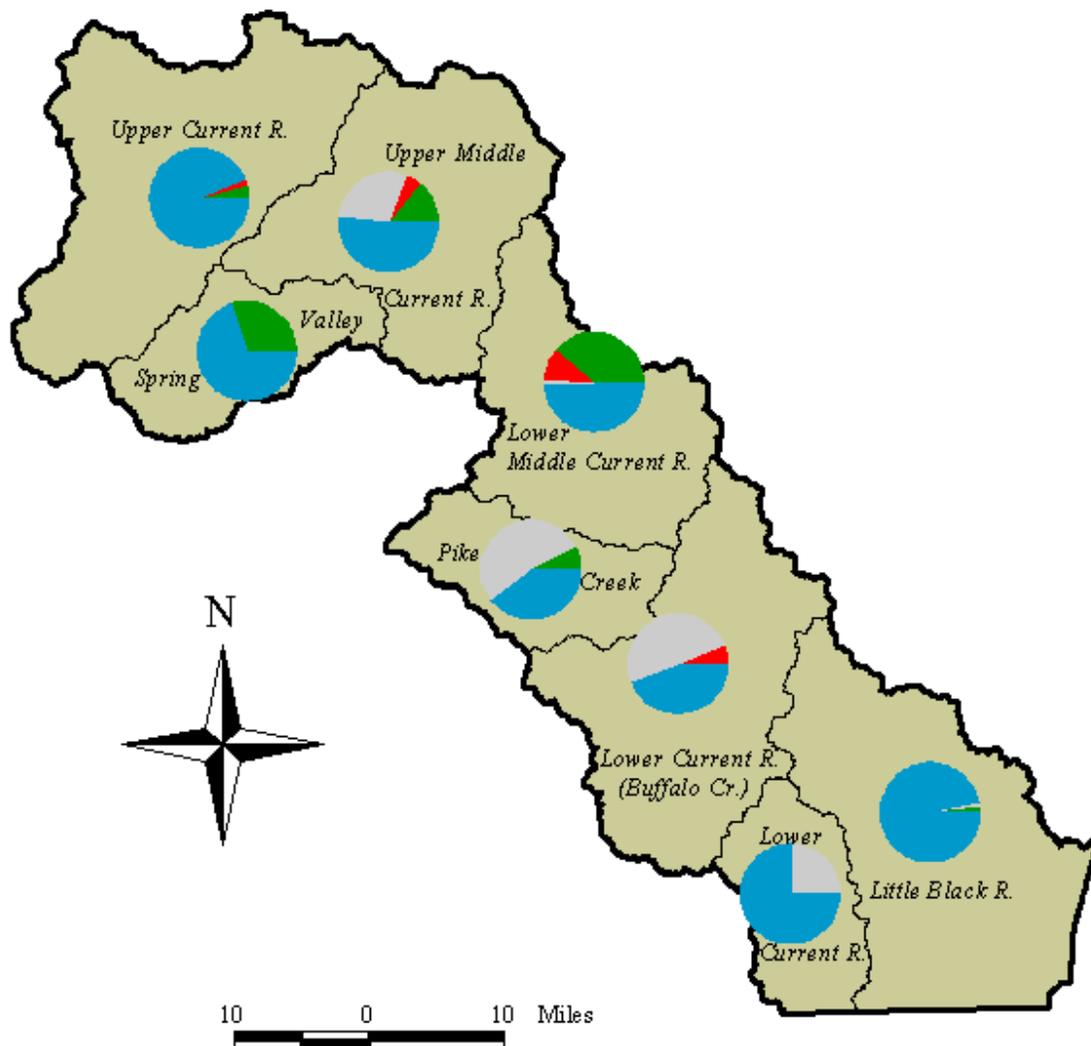


Table Lu01. Land cover/ land use change from pre-settlement period conditions (1820's) to the 1970's in the Jack's Fork Watershed, Missouri (Jacobson and Primm 1994).

1820's		1970's		%
Category	Area sq. miles	Category	Area sq. miles	
Shrub and brush rangeland	55.4	Urban/developed	1.6	3
		Pasture/cropland	26.5	48
		Deciduous forest	27.3	49
Deciduous forest	242.0	Pasture/cropland	59.9	25
		Deciduous forest	178.6	75
Evergreen forest	3.5	Deciduous forest	3.5	100
Mixed forest	323.1	Pasture/cropland	34.5	11
		Deciduous forest	281.6	87
		Mixed forest	7.0	2
Barrens	29.2	Pasture/cropland	15.5	53
		Deciduous forest	13.7	47

Table Lu02. Summary of probable qualitative changes to runoff, soil erosion, and riparian erosional resistance on parts of the Ozarks landscape relative to pre-settlement period conditions. Reproduced in whole from Jacobson and Primm (1994).

Period	Uplands	Valley Slopes	Valley Bottoms
Pre-settlement	Baseline	Baseline	Baseline
Early Settlement			
Annual Runoff	Decrease	Slight Increase	N/A
Storm Runoff	Decrease	Slight Increase	N/A
Upland Sediment Yield	Decrease	Slight Increase	N/A
Riparian Erosional Resistance	N/A	N/A	Moderate Decrease
Timber-Boom			
Annual Runoff	Slight Increase	Slight Increase	N/A
Storm Runoff	Slight Increase	Moderate Increase	N/A
Upland Sediment Yield	Slight Increase	Moderate Increase	N/A
Riparian Erosional Resistance	N/A	N/A	Decrease
Post-Timber-Boom			
Annual Runoff	Moderate Increase	Increase	N/A
Storm Runoff	Moderate Increase	Increase	N/A
Upland Sediment Yield	Moderate Increase	Increase	N/A
Riparian Erosional Resistance	N/A	N/A	Substantial Decrease
Recent			
Annual Runoff	Slight Increase	Slight Increase	N/A
Storm Runoff	Slight Increase	Moderate Increase	N/A
Upland Sediment Yield	Slight Increase	Slight Increase	N/A
Riparian Erosional Resistance	N/A	N/A	Decrease

Table Lu03 (1 of 8). Descriptions of land type association (LTAs) groups as well as a condensed description of the 15 LTAs (underlined in bold) within the Current River Watershed. Descriptions are quoted in part or whole from MDC (1997a), Nigh (1998), and Nigh (1999).

Oak Woodland Dissected Plains and Hills Group

Landform: Distinguished by rolling to moderately dissected topography. Local relief is 75-150 feet. Very broad, flat ridges give way to gentle side slopes and broad stream valleys. Karst plains with frequent shallow sinkhole depressions are common. Broad stream valleys most often occupied by losing streams, however occasional seeps do occur and can spread across substantial portions of a valley.

Geology: Commonly underlain by Jefferson City-Cotter dolomites with a common loess cap. Some minor areas underlain by Roubidoux sandstones.

Soils: Soils are variable, ranging from shallow to bedrock and fragipan soils, to deep, cherty and well-drained loams. Tree root growth is often restricted by bedrock, pans or clay mineralogy, especially high in the landscape.

Historic Vegetation: Open woodlands with occasional prairie and savanna openings was the principal vegetation type. Post oak and black oak were the principal woodland tree species. Historic fire likely played an important role in maintaining an open canopy, sparse understory and a dense herbaceous ground flora. More dissected lands likely contained mixed oak woodland and forest. Unique sinkhole ponds, wet prairies and seeps were scattered in the broad valleys and depressions.

Current Conditions: Currently a mosaic of fescue pasture (35-65% cover) and dense, often grazed oak forest. The transition from open grassland to closed forest is abrupt and the patch work blocky. Very few native grasslands or savannas are known, and the dense second growth woodlands have very little ground flora. Most sinkholes, wet prairies and seeps have been drained and heavily grazed. Many roads, towns, cities and businesses are located in these LTAs.

Little Piney Oak Woodland Dissected Plain: Dissected plains associated with the headwaters of the Little Piney River and Spring Creek; Roubidoux sandstone locally common.

Ripley County Oak Woodland Dissected Plain: Very dissected plain between lower Eleven Point and Current Rivers. Contains an unusual cluster of dolomite knobs on the east side of Eleven Point.

Upper Gasconade Oak Woodland Dissected Plain: Broad divide encompassing the headwaters of the Big Piney and Gasconade River Watersheds.

Table Lu03 (2 of 8). Descriptions of land type association (LTAs) groups as well as a condensed description of the 15 LTAs (underlined in bold) within the Current River Watershed. Descriptions are quoted in part or whole from MDC (1997a), Nigh (1998), and Nigh (1999).

Oak Savanna/Woodland Plains Group

Landform: Very broad flat uplands slope gently to very broad flat drains or solution (karst) depressions. Local relief is less than 75 feet.

Geology: Underlain mainly by Jefferson City-Cotter dolomites with a common loess cap. Minor areas of the Roubidoux formation occur. Headwater streams are nearly all losing.

Soils: Fragipan soils or soils with shallow restrictive clays or bedrock are common, inhibiting tree root growth.

HistoricVegetation: Oak savannas and woodlands with common prairie openings were the predominant historic vegetation. While few prairies were named by original land surveyors, early descriptions portray an open, “oak prairie” landscape. Fire likely played a principal role in maintaining a grassland-open woodland structure. Some sinkhole depressions would have had unique ponds and seeps.

Current Conditions: The largest blocks and greatest acres of grassland (45-65% cover) are currently associated with these LTAs; grasslands are mainly fescue pasture. Less than 40% of these LTAs are timbered, mainly in dense, second growth oak forest (post and black oaks) with common grazing pressure. Very few quality native prairies, savannas, woodlands, sinkhole ponds or seeps are known. Many of the regions roads, towns, and businesses are associated with these LTAs.

Flatwoods Oak Savanna/Woodland Plain: Flat plain on east of lower Current River.

Licking Oak Savanna/Woodland Plain: Long, linear flat divide between the Big Piney on the west and the Current/Meramec Drainages on the east.

Salem Oak Savanna/Woodland Plain: Broad, flat upland between the upper Current River and Meramec drainage. Mainly Roubidoux geologies and shallo fragipan soils.

Southeastern Oak Savanna/Woodland Plain: Flat, loess cover plain bordering the Mississippi Lowlands.

Summersville Oak Savanna/Woodland Plain: Broad, flat divide between upper Current and Jacks Fork Rivers.

Table Lu03 (3 of 8). Descriptions of land type association (LTAs) groups as well as a condensed description of the 15 LTAs (underlined in bold) within the Current River Watershed. Descriptions are quoted in part or whole from MDC (1997a), Nigh (1998), and Nigh (1999).

Oak-Pine Woodland Forest Hills Group

Landform: Mainly broad ridges, moderately sloping (<25%) side slopes, and relatively broad entrenched valleys with local relief between 150-250 feet. Steeper, more dissected areas occur locally near larger stream valleys. Sinkhole depressions are common on broader ridges. Stream valleys vary somewhat from broad and rather shallow, to more deeply entrenched, narrow, and meandering. Many losing streams occur in valleys distant from the main rivers. Cliffs, caves and springs are commonly associated with larger, perennial stream valleys.

Geology: Roubidoux cherty sandstones and dolomites occupy most ridges and upper side slopes, while lower side slopes, especially near major streams are in cherty upper Gasconade dolomite materials.

Soils: Soils are mainly deep, highly weathered and very cherty silt loams with clays at varying depth. Broad ridges may have a loess cap with occasional fragipans, and shallow soils with dolomite bedrock near the surface occur frequently on steeper, exposed slopes.

Historic Vegetation: Pine and mixed oak-pine woodland originally dominated the more gently sloping upland surface associated with the Roubidoux Formation. Early descriptions portray an open, grassy and shrubby understory in these woodlands, a condition related to the prevalence of fire in the historic landscape. Oak and oak-pine forest occupied lower slopes and more dissected, hilly parts of these landscapes, as well as the wider and more well-drained bottom. Bottoms with richer alluvial soils and more abundant water likely were forested in mixed hardwood timber. Dolomite glade and open savanna/woodland complexes were common on exposed slopes with shallow soils. Sinkhole ponds and fens were dotted occasionally throughout.

Current Conditions: Mainly forested in second growth oak and oak-pine forests; forest cover ranges from sixty to over 80%. Most forests are rather dense, near even-age second growth, with very little woodland ground flora. The occurrence of shortleaf pine in these forests has diminished from its original extent, today having only 20-30% of the forest cover containing a substantial component (>25%) of pine. Even age stands dominated by scarlet, black, and white oak are common, oak die back is a common problem. Much of the existing timber land is associated with public land ownership. Cleared pasture lands occupy many of the broad stream valleys and highest, flattest ridges. Many glades and woodlands suffer from woody encroachment, and sinkhole ponds and fens have been drained or severely overgrazed. An exceptional proportion of state-listed species sites are associated with the streams, springs, caves, cliffs, fens, and sinkhole ponds in this group.

Black River Oak-Pine Woodland/Forest Hills: Less Roubidoux and associated oak-pine timber.

Current River Oak-Pine Woodland/Forest Hills: Hills associated with the Current and Jacks Fork Rivers, excluding steep breaks.

Eleven Point River Oak-Pine Woodland/Forest Hills: Hills associated with the Eleven Point, mainly north of the river; excludes breaks.

Table Lu03 (4 of 8). Descriptions of land type association (LTAs) groups as well as a condensed description of the 15 LTAs (underlined in bold) within the Current River Watershed. Descriptions are quoted in part or whole from MDC (1997a), Nigh (1998), and Nigh (1999).

Pine-Oak Woodland Dissected Plains

Landform: Broad, flat to gently rolling plains which give way to moderately dissected and sloping lands associated with the headwaters of major drainages. Valleys are broad and local relief 100-150 feet. Clusters of karst sinkholes are common. Streams are mainly headwater streams with flashy, intermittent flow.

Geology: Underlain by cherty sandstone and dolomite of the Roubidoux Formation with frequent loess deposits on the flatter uplands.

Soils: Soils are formed principally in cherty sandstone and dolomite residuum from the Roubidoux Formation. Soils are mainly deep, cherty, and highly weathered, low base soils. However occasional fragipans and shallow to bedrock soils do occur. Most soils are extremely well drained and droughty.

Historic Vegetation: Originally covered in woodlands of shortleaf pine and mixed pine oak with an open understory of dense grass and shrub ground cover. Post oak woodlands occupied occasional loess covered flats. Unique sinkhole ponds dotted the landscape.

Current Conditions: Over 75% of this group are currently forested in dense, even-age oak and oak-pine forest. Only 20% of these forests have a strong pine component. However, the proportion of forests containing shortleaf pine is the highest in this group. Dense stands of near even age scarlet, black, and post oak occur in the place of pine. Understories are dense, woodland ground flora sparse, and oak die-back common. A substantial component of these forested lands are publicly owned. Approximately 20% of this group is currently pasture, which often occupies the broad valley bottoms or karst plains. Most sinkhole ponds have been drained, dozed or severely overgrazed. Headwater streams are subject to grazing and bank erosion.

Current-Eleven Point Pine-Oak Woodland Dissected Plain: High, flat to rolling divide between Current and Eleven Point Rivers .

Grandin Pine-Oak Woodland Dissected Plain: The large pine plain that originally attracted attention to the pine resource of the region; still contains some of the largest current tracts of pine-oak forest.

Table Lu03 (5 of 8). Descriptions of land type association (LTAs) groups as well as a condensed description of the 15 LTAs (underlined in bold) within the Current River Watershed. Descriptions are quoted in part or whole from MDC (1997a), Nigh (1998), and Nigh (1999).

Igneous Knobs

Landform: Characterized by prominent, broadly rounded knobs which rise 500 to 600 feet above the middle Current River Valley. The knobs range from less than half to over 5 miles across and contain 58 distinct summits. Mainly broad, gently sloping knob tops give way to gentle to very steep sideslopes (10 to more than 35%). Narrow igneous shut-ins are common. Moderately broad, inter-knob basins with low gradient streams are often abruptly restricted by these shut-ins.

Geology: The knobs are composed of Precambrian age rhyolite interconnected with Cambrian-age Eminence dolomite.

Soils: Soils mainly consist of shallow to moderately deep and cobbly loams on the upper slopes and tops of the rhyolite knobs. Very deep, cherty silt loams predominate on the sedimentary areas between the knobs.

Historic Vegetation: Extensive igneous glades and open oak woodlands encircled the tops of most knobs, while oak and oak-pine forests covered the side slopes. Scattered dolomite glades, woodlands and fens were associated with shallow soils on the Eminence dolomite, sometimes filling low slopes and valley bottoms.

Current Conditions: Igneous glades and open woodlands are largely overgrown with eastern red cedar, winged elm and other woody invaders. Over 90% of this LTA is forested in second growth oak and oak-pine timber. Much of the forest land is publicly owned. Clearing for pasture has occurred in the broader valleys (15% of LTA). Few high quality dolomite glades or fens are known.

Eminence Igneous Glade/Oak Forest Knobs: The only LTA in this group.

Table Lu03 (6 of 8). Descriptions of land type association (LTAs) groups as well as a condensed description of the 15 LTAs (underlined in bold) within the Current River Watershed. Descriptions are quoted in part or whole from MDC (1997a), Nigh (1998), and Nigh (1999).

Oak and Oak-Pine Forest Breaks

Landform: Distinguished by local relief over 300 feet, narrow ridges, steep side slopes and mainly narrow sinuous valleys. Cliffs, caves, and springs are common.

Geology: Thick caps of Roubidoux Sandstone on ridges and upper slopes streams cut into the Lower Gasconade Dolomite.

Soils: Soils formed from Roubidoux and Upper Gasconade materials.

Historic Vegetation: Originally forested in oak pine, oak and mixed hardwood forest types. Scattered glades and open woodlands would have occurred on exposed slopes and ridges, especially in areas of shallow soil. Relatively small fen openings occasionally filled narrow tributary valleys.

Current Conditions: A high percentage of public land (45%) is associated with this group. Because of the large amount of public land, as well as the steep topography, this group is still mostly forested (88%) in second growth oak, oak-pine and mixed hardwood timber. Open areas are confined to valleys, so bottomland forest is less than originally. Dolomite glades are largely overgrown with eastern red cedar, and many fens have been drained or heavily grazed. Numerous rare or endangered species, some restricted to this group, are associated with the streams, springs, caves, cliffs, and fens in these landscapes. The rivers have been recognized as national treasures and are an important recreational resource in the region.

Current River Oak Forest Breaks: Cuts into Eminence dolomite. Consequently, unique benches occur on the Gunter sandstone, and extensive areas of more productive, higher base soils with oak and mixed hardwood communities occur here.

Bootheel Sand Ridges, Hills, and Plains

Landform: Slightly elevated old terraces and levees.

Geology: See soils.

Soils: Course, well drained, sandy and loamy soils.

Historic Vegetation: Originally covered in prairie and open oak savannas and woodlands. In the Ash Hills, unusual dunes and wet swales supported unique wetland communities. Many unique species were associated with these sand communities.

Current Conditions: While most of these LTAs have been converted to cropland (65-85%), there is substantial grassland on the most excessively drained areas, especially within the East Prairie, Blodgett, and Sikeston Ridge LTAs. Several sand prairie/savanna remnants occur in northern Scott County.

Ash Hill Low Sand Hills and Terraces: Alluvial and aeolian sands, with some dune and swale topography. Sand Ponds NA and other unique species sites occur.

Table Lu03 (7 of 8). Descriptions of land type association (LTAs) groups as well as a condensed description of the 15 LTAs (underlined in bold) within the Current River Watershed. Descriptions are quoted in part or whole from MDC (1997a), Nigh (1998), and Nigh (1999).

Mississippi River and Bootheel Alluvial Plains and Lowlands

Landform: Large and flat floodplains and lowlands.

Geology: See soils.

Soils: Dominated by mainly clayey and poorly drained alluvial soils with occasional loamy or sandy materials on natural levees.

Historic Vegetation: These landscapes historically supported extensive marshes and swamps, as well as wet bottomland forests. Occasional prairies occurred on levees of courser soil materials. Widespread flooding at least once per year was important in creating and maintaining these outstanding wetland complexes.

Current Conditions: While most of these LTAs have been drained and converted to cropland, there is more remnant natural vegetation in these than in the other two lowland LTAs in the Bootheel. It appears that some of the lowest, wettest portions of these landscapes have escaped draining, and while hydrologically altered, offer some opportunity for maintenance and restoration of native ecosystems. Many of the best remaining lands are associated with existing conservation ownership, but significant opportunity to expand conservation influence still exists.

Black River Silty Lowland: Drained alluvial plain associated with Lower Black River .

Table Lu03 (8 of 8). Descriptions of land type association (LTAs) groups as well as a condensed description of the 15 LTAs (underlined in bold) within the Current River Watershed. Descriptions are quoted in part or whole from MDC (1997a), Nigh (1998), and Nigh (1999).

Upper Meramec Oak Woodland Dissected Plain

Landform: Rolling moderately dissected topography. Local relief is 75-150 feet. Very broad, flat ridges give way to gentle sideslopes and broad stream valleys. Some more dissected areas occur near major stream valleys. Karst plains with frequent shallow sinkhole depressions are common.

Geology: Jefferson City-Cotter dolomite, and to a lesser extent Roubidoux and occasional Pennsylvanian sandstones.

Soils: Soils are variable, ranging from shallow to bedrock and fragipan soils, to deep, cherty and well drained cherty loams. Tree root growth is often restricted by bedrock, pans, or clay mineralogy, especially high in the landscape. Broad stream valleys are most often occupied by losing streams, however occasional seeps do occur and can spread across substantial portions of a valley.

Historic Vegetation: Open oak woodlands with occasional prairie and savanna openings was historically the principal vegetation type. Post oak and black oak were the principal woodland tree species. Historic Fire likely played an important role in maintaining an open canopy, sparse understory and a dense herbaceous ground flora. More dissected lands likely contained mixed oak woodland and forest. Unique sinkhole ponds and seeps were scattered in the broad valleys and depressions.

Current Conditions: These LTAs are currently a mosaic of fescue pasture and dense, often grazed oak forest. The transition from open grassland to closed forest is abrupt and the patchwork blocky. Very few native grasslands or savannas are known, and the dense second growth woodlands have very little ground flora. Most sinkholes and seeps have been drained and heavily grazed. Headwater streams and creeks suffer from grazing or gravel removal. Many roads, towns, cities, and businesses are located in these LTAs

Upper Meramec Oak Woodland Dissected Plain: Broad divide at the very headwaters of the Meramec, within the Central Plateau Subsection.

Table Lu04. Percent land cover for eleven digit hydrologic units within the Current River Watershed. Data is based on MoRAP Missouri Land Cover Data (1999) as analyzed by Caldwell (2001).

Unit Name	FOR	WET	GRS	CRP	URB	WAT
Upper Current R.	74.2	0.0	25.6	0.1	<0.1	<0.1
Spring Valley	68.3	0.0	31.5	<0.1	0.2	<0.1
Current R.-Sinking Cr.	95.9	0.0	3.8	0.1	0.1	0.1
Middle Current R.	95.5	0.0	4.1	0.1	<0.1	0.1
Pike Cr.	87.4	0.0	11.7	0.2	0.7	<0.1
Current R.-Buffalo Cr.	94.1	0.0	5.4	0.1	0.1	0.2
Lower Current R.	73.2	0.0	25.9	<0.1	0.3	0.6
Little Black R.	54.9	0.8	26.1	17.7	0.1	0.4
<i>Current R. Watershed</i>	<i>80.1</i>	<i>0.2</i>	<i>16.0</i>	<i>0.1</i>	<i>0.1</i>	<i>0.2</i>

FOR = Forest , **WET**=Wetland, **GRS**=Grassland, **CRP**=Cropland, **URB**=Urban, **WAT**=Water

Table Lu05. Public lands within the Current River Watershed. Acreage and permanent stream mile estimates are approximate.

Area Name	Owner¹	Acres	Permanent Stream Miles
Angeline CA	MDC	20,434	1.6
Ashley Creek CA	MDC	316	0.4
Carter Creek CA	MDC	444	0.0
Cedar Grove CA	MDC	1168	0.0
Clearwater CA	MDC	442	0.0
Current River CA	MDC	26,619	9.7
Doniphan Towersite	MDC	10	0.0
Fourche Creek CA	MDC	162	0.0
Gist Ranch CA	MDC	3,984	0.0
Grandin Towersite	MDC	158	0.0
Greenville Ford Access	MDC	7	0.1
Hemenway CA	MDC	173	0.0
Hunter Towersite	MDC	79	0.0
Little Black CA	MDC	2,313	1.8
Logan Creek CA	MDC	967	0.0
Midvale CA	MDC	85	0.0
Montauk Towersite	MDC	40	0.0
Mudpuppy CA	MDC	1,354	5.0
Peck Ranch CA	MDC	22,909	5.7
Rocky Creek CA	MDC	21,346	8.3
Sand Pond CA	MDC	298	0.0
Sunklands CA	MDC	37,843	7.2
<i>Missouri Dept. of Conservation</i>	<i>Total</i>	<i>141,270</i>	<i>39.8</i>
Doniphan-Eleven Point District	USFS	176,885	30.3
Poplar Bluff District	USFS	319	0.0
Salem-Potosi District	USFS	58,075	10.2
United State Forest Service	Total	235,279	40.5
Montauk State Park	MDNR	1,332	5.0
<i>Missouri Dept. of Natural Resources</i>	<i>Total</i>	<i>1,332</i>	<i>5.0</i>
Big Spring Pines NA	NPS	492	0.0
Big Spring NA	NPS	17	0.2
Cardareva Bluff	NPS	106	1.3
Lower Current R. District	NPS	134	1.1
Mill Mountain NA	NPS	194	0.3
Ozark National Scenic Riverways	NPS	40,693	133.5
Prairie Hollow Gorge NA	NPS	185	0.9

Stegall Mountain NA	NPS	613	1.8
Tunnel Bluff Woods DNA	NPS	261	1.3
<i>National Park Service</i>	<i>Total</i>	<i>42,605</i>	<i>140.4</i>
<i>Watershed Total</i>		<i>420,576</i>	<i>225.7</i>

Note: This table is not a final authority. Data subject to change.

¹Owner: MDC=Missouri Department of Conservation

MDNR=Missouri Department of Natural Resources

NPS=National Park Service

USFS=United States Forest Service

Table Lu06. Percentages of public land ownership within eleven digit hydrologic units of the Current River Watershed.

Unit	MDC	MDNR	NPS	USFS	Total
Upper Current R.	3.8	0.4	1.6	0.1	5.9
Spring Valley	30.4	0.0	0.2	0.0	30.6
Upper Middle Current R.	14.0	0.0	5.0	28.7	47.6
Lower Middle Current R.	38.9	0.0	10.2	1.6	50.7
Pike Cr.	8.4	0.0	0.0	51.7	60.1
Lower Current R. (Buffalo Cr.)	0.3	0.0	5.7	50.0	56.0
Lower Current R.	0.2	0.0	0.0	23.9	24.1
Little Black R.	2.0	0.0	0.0	1.4	3.4
<i>Watershed</i>	<i>10.7</i>	<i><0.1</i>	<i>3.2</i>	<i>17.7</i>	<i>31.6</i>

MDC=Missouri Department of Conservation

MDNR=Missouri Department of Natural Resources

NPS=National Park Service

USFS= United States Forest Service