LAND USE

HISTORIC LAND USE

Schroeder (1982) described the area along the western border of the Ozarks west of Springfield as follows:

> "... prairies were different than elsewhere in the state. Here more than anywhere else prairies were discrete landscape units on a rolling-to-level upland, bounded by wide belts of timbered hill country along the stream valleys entrenched in the Ozark limestones. The undissected uplands were like the more extensive prairies to the west, and the stream valleys were like the Ozarks to the east (Schrader et al. 1954). Here the boundary between prairie and timber was sharpest.The floodplains of the larger streams were primarily wooded, but Schoolcraft noted prairies interspersed in the timber and cane (Schoolcraft 1821)."

The Ozark portions of the basin were also described by Schroeder (1982) as follows:

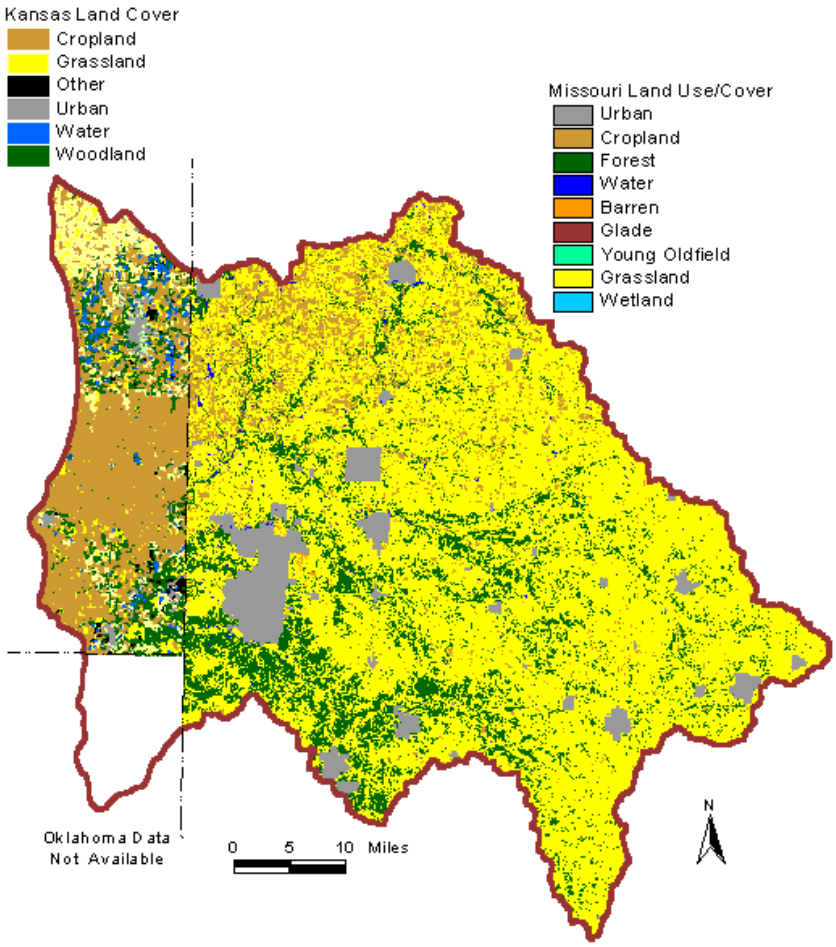
> "It was not as dense as the Appalachian wilderness, and this visual contrast did not go unnoticed in early accounts. Most familiar are Henry Rowe Schoolcraft's accounts of the open Ozark woods, replete with phrases such as "hills are stony and barren, covered with timber and high grass" Schoolcraft (1821).
>
> Curtis Marbut, relying on his own experience and that of the first settlers, wrote that "the greater part of the Ozark Dome...was up to the middle of the 19th century a region of open woods, large areas being almost treeless." (Marbut 1911)."

Schroeder (1982) also described the area of west central Missouri that includes the region drained by the North Fork of the Spring River.

> "It is sometimes called the Osage prairie or Osage plains of Missouri. Here prairies extended over all the rolling uplands. Timber was restricted to the valleys and, at that, often to riverbank fringes. Narrow strips of timber, called points, extended along drainageways into the upland prairies. From one point to another the prairie averaged four to five miles across...Barton County had the largest percentage of prairies (86 percent) of any Missouri county."

Immigration into the Spring River, and across Missouri, accelerated during the first few decades of the nineteenth century. Legal land settlement (settlement on lands purchased from public domain) extended to Missouri's western border by 1821 (Schroeder 1982). Initially, most homesteads were located along streams and adjacent to bottomlands, and the prairies were used primarily for open range grazing. Some plowing and rowcrop farming began prior to the Civil War. Osage orange fence rows were established in Greene County as early as 1840 (Schroeder 1982). Significant efforts to control the fires that helped maintain the original prairie grasses soon followed.

Land use of the Spring River watershed.



RECENT LAND USE

The Spring River Basin is essentially rural, but because of the transitional nature of the basin's topography and relief, land use varies across the basin (Figure 1).

Land use in the North Fork of the Spring River area is approximately 85% rowcrop and pasture and 15% forested (MDNR 1984). No major urban areas are located in this sub-basin. Because of the relatively limited relief, little distinction exists between land use types in the bottomlands and uplands.

Land use in the Spring River portion of the basin is estimated at 70% rowcrop and pasture and 30% forested cover. The Center/Shoal Creek sub-basin has approximately 52% rowcrop and pasture, 45% forest cover, and 3% mined lands (MDNR 1984). Joplin is the major urban area located in this sub-basin. Forest lands are scattered. Many forested tracts are located along stream drainages in all sub-basins.

Mining has been an important industry in the area since the 1850s. Lead and zinc were the primary commodities with many other minerals exploited in smaller quantities (coal, limestone, marble, dolomite, silicon, and iron, to name a few). Lead and zinc mining ceased in the 1960s (Davis and Schumacher 1992).

There have been a total of 3,337 mines recorded in the basin (MDNR 1996a). The number and types of mining operations vary among the counties (Table 4). Lead/zinc mines are more prevalent as a percentage of the total number of mines in Jasper, Lawrence, Barry, and Newton counties. Coal is the most common commodity mined in Barton County. Every county in the basin has limestone and sandstone mines. Cadmium, barium, and copper have been mined in Newton and Lawrence counties only.

SOIL CONSERVATION AND WATERSHED PROJECTS

There is one PL 566 project located in the basin; Hickory Creek near Neosho. This project is in the active planning and early implementation stage for flood prevention. There is one AgNPS/SALT project located on Shoal Creek in Barry County.

PUBLIC AREAS

Public areas in the basin are depicted in Figures 3A-F and listed in Table 5. The Robert E. Talbot Conservation Area (CA) (4,321 acres) and Shawnee Trail CA (3,635 acres) are the largest public use areas in the basin. Lands originally purchased by the U.S. Department of the Army (Defense) near Neosho as part of Fort Crowder are now variously managed as Crowder College, Fort Crowder CA, Bicentennial CA, Fort Crowder Military Compound, and as portions of an industrial park. Other areas managed by the Missouri Department of Conservation include Catlin Prairie, Diamond Grove Prairie, Mon-Shon Prairie, Kickapoo Prairie, Mount Vernon Prairie, Treaty Line Prairie, Dorris Creek Prairie, Wildcat Glade, Pa Sole Prairie, and Wah-sha-she Prairie. Golden Prairie is owned and managed by the Missouri Prairie Foundation. Stream accesses managed by MDC are LaRussell Access on the Spring River; Stones Corner and Carl Junction accesses on Center Creek; Lamar Access on North Fork of the Spring River; and Tipton Ford, Allen Bridge, Lime Kiln, Wildcat, Smack-out, and Cherry Corner accesses on Shoal Creek. Kellogg Lake (25 acres) in Carthage and Williams Creek Park Lake in Mount Vernon are managed by the Department through Community Assistance Program (CAP) agreements. The Missouri Department of Natural Resources (MDNR) owns and manages Battle of Carthage State Historic Site near Carthage. The U.S. Fish and Wildlife Service operates Neosho National Fish Hatchery

Table 4. Mine types described by county in the Spring River Basin.

COMMODITY	BARRY	BARTON	JASPER	LAWRENCE	NEWTON
Lead/zinc	17	0	1,824	462	762
Sand/gravel	0	4	4	0	2
Limestone	5	16	38	17	19
Silicon	0	0	1	0	0
Zinc/clay	0	0	3	0	1
Coal	0	38	12	0	0
Zinc	1	0	18	11	15
Sandstone	2	2	2	7	1
Iron	0	4	4	12	0
Lead	0	0	1	1	6
Coal/bituminous	1	2	0	0	0
Clay	0	2	0	4	0
Sand/gravel	0	4	0	0	2
Cadmium/zinc	0	0	0	0	1
Coal/zinc	0	0	0	0	1
Barium/iron	0	0	0	1	0
Clay-kaolin	0	0	0	1	0
Clay/iron	0	0	0	1	0
Lead/copper	0	0	0	1	0
Total	28	68	1,908	524	809

Source: MDNR (1996a).

Table 5. Missouri Department of Conservation public areas in the Spring River Basin.

AREA NAME	IMPOUNDMENT ACRES	LAND ACRES	MAJOR STREAMS
Allen Bridge Access	0	15	Shoal Creek
Catlin Prairie CA	15	260	
Bicentennial CA	>1	721	
Capps Creek CA	0	120	Capps Creek
Carl Junction Access	0	3	Center Creek
Cherry Corner Access	0	4	Shoal Creek
Diamond Grove Prairie CA	0	611	Turkey Creek
Dorris Creek Prairie CA	10	160	Dorris Creek
Fort Crowder CA	<2	2,362	
Hickory Creek CAP	0	1	Hickory Creek
Kellogg City Lake	25	25	
Kickapoo Prairie CA	0	160	
La Russell Access	0	1	Spring River
Lamar Access	0	30	North Fork of the Spring River
Lime Kiln Access	0	11	Shoal Creek
Mon-Shon Prairie CA	<1	80	
Mount Vernon Prairie	0	41	
Neosho Towersite	0	70	
Pa Sole Prairie CA	0	240	
Shawnee Trail CA	113	3,635	
Smackout Access	0	1	Shoal Creek
Stones Corner Access	0	9	Center Creek
Talbot CA	45	4,321	Spring River
Tipton Ford Access	0	90	Shoal Creek
Treaty Line Prairie CA	0	168	
Wah-Sha-She Prairie	0	160	
Walter Woods CA	1	28	
Wildcat Access	0	1	Shoal Creek
Wildcat Glade NA	0	17	
Williams Creek Park	3	3	Williams Creek

in Neosho. The National Park Service owns and manages G.W. Carver National Monument near Diamond.

CORPS OF ENGINEERS JURISDICTION

The Spring River Basin is under the jurisdiction of the Little Rock District of the U.S. Army Corps of Engineers (COE). Permits issued under Section 404 of the federal Clean Water Act are required to conduct many instream activities. Applications for Section 404 permits should be directed to the Little Rock office. In addition, current listings of Section 404 permits are available from the Little Rock COE District Office:

Little Rock District Phone: (501)324-5295

Corps of Engineers

P.O. Box 867

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