



**U.S. Fish & Wildlife Service**

**Region 6 Environmental Contaminants**



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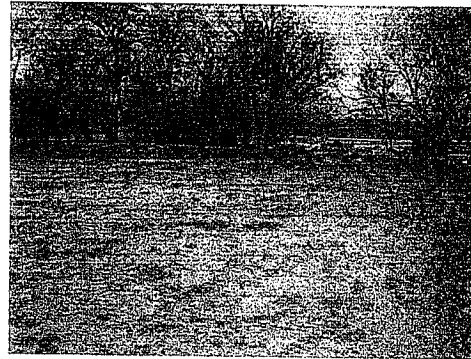
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**Cherokee County - Kansas**

**Background**

Cherokee County is located in the southeastern corner of Kansas (Figure 1). Portions of this county and neighboring counties in Missouri (Jasper County and Newton County) and Oklahoma (Ottawa County) collectively known as the Tri-State Mining District (Figure 2) were mined extensively for lead and zinc for more than a century. Lead and zinc mining began in Missouri in the mid-19th century and peaked in 1916, then shifted to Kansas and Oklahoma. Diminishing production led to the closure of the mines in Missouri by 1957. Output from the Cherokee County and Ottawa County, Oklahoma mines peaked in the 1920s and 1930s and diminished thereafter. The last active mine in the Tri-State Mining District, located just west of Baxter Springs, Kansas closed in 1970. The number of operating mines in the early 1900s was estimated to be in the hundreds.



Tailings impoundment, Crestline Subsite, Cherokee County, KS. Jan. 30, 2004. Photo taken by John Miesner/USFWS

Altogether, the Tri-State Mining District is approximately 2,500 square-miles in area, encompassing the northwest edge of the Ozark Uplift in Missouri, extending west and south through Kansas and Oklahoma to the eastern fringe of the Great Plains. The Cherokee County, Kansas portion of the Tri-State Mining District covers about 115-square miles.

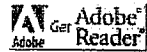
Mining operations were principally underground and involved sinking shafts to subsurface ore bodies. At the surface, the raw ore was crushed in stages and the metals were separated by gravity separation or, later flotation. Waste rock, development rock, chat, and tailings materials were dumped at the surface in waste piles. Many wastes were re-milled as more efficient separation techniques became available. Several small smelters were operated throughout Cherokee County, later being consolidated into a single site at Galena, Kansas in about 1920. This smelter remained in operation until 1970.

After 150 years of mining and smelting, chat piles, tailings sites, development and waste rock piles, and subsidence ponds (collapses of underground mined areas) are prominent features of the landscape in the four counties of the district. Much of the total volume of surface mine wastes has been removed over the last few decades to provide materials for building and roads. Approximately 94% of Kansas wastes have been removed; however, thousands of acres of wastes still remain on the ground surface. Much of this waste is highly contaminated with hazardous substances, including cadmium (Cd), lead (Pb), zinc (Zn), copper (Cu), and selenium (Se). Of these, cadmium, lead, and zinc are the main contaminants at the site because of their relative volume, concentration, or toxicity.

Because of threats posed to human health and the environment by mining-related releases of hazardous substances, the U.S. Environmental Protection Agency's (EPA) Superfund Program included mining-impacted areas in all three states on its National Priorities List (NPL) in 1983. The Cherokee County Superfund site has been divided into seven mining areas: Baxter Springs, Treece, Galena, Badger, Lawton, Waco, and Crestline. EPA has pursued and implemented remedies for some of the identified operable units while others are still in process.

Public Documents

NOTE: These documents require Adobe 6.0 or greater



"CLICK Adobe Reader Icon to get latest version"

Assessment Documents

Memorandum of Agreement between the Kansas Department of Health & Environment and the U.S. Department of the Interior (pdf, 494 KB)

Preassessment Screen and Determination, Cherokee County, KS

Preliminary Evaluation of Mining-Related Injuries in the Cherokee County Superfund Site, Cherokee, KS (pdf, 7 MB)