

# Tar Creek and Spring River Expanded Reconnaissance Study Watershed Management Plan

**Identified Problems and Opportunities.** Several problems with the potential for both Federal and local sponsor interest were identified. Primary concerns identified during the problem identification activities center around flood control and ecosystem restoration in the Tar Creek watershed.

**Problems and Opportunities.** The 1989 Reconnaissance Report identified that flood damages occur with relative frequency along Tar Creek and less frequently along the Grand (Neosho) River. Flooding along Tar Creek causes frequent flood damages to the communities of Miami, Commerce, and Picher, Oklahoma. Recent major flooding occurred in October 1986, March 1990, June 1990, July 1992, December 1992, May 1993, September 1993, April and May 1994, and June 1995. Additionally, the Tar Creek watershed ecosystem is severely impaired due to more than 80 years of mining activities.

The concerns of the State of Oklahoma include both the flooding issues identified in the 1989 report, and ecosystem restoration issues particularly as they pertain to the Tar Creek watershed. The mining activities resulted in a poorly drained watershed, and Tar Creek is commonly bank-full of water, even during non-flood periods. Water resource planning related concerns include chronic flooding, ecosystem impairment, poor water quality, subsidence, chat piles, mine shafts, health effects, and Native American issues.

The water resource problems are interrelated. The Environmental Protection Agency has been addressing the contamination from mining waste in Ottawa County since the early 1980's. The "Miami, Oklahoma, and Vicinity Reconnaissance Study" was conducted in the late 1980's to address any water resources problems that might be within the purview of the U.S. Army Corps of Engineers. At that time, the primary interest was specific to the flooding situation along Tar Creek at Miami, Oklahoma.

Specifically, the problems in the Tar Creek and Spring River Watersheds are:

- Public health problems due to lead contamination in the region.
- Decreased public safety due to the risk of subsidence, abandoned mine shafts, and a degraded environment.
- Extensive mining under the towns of Picher and Cardin and to the west of Commerce causing subsidence throughout the region, including at:
  - Highway 69 east of Picher
  - The McNeeley Ranch
- Abandoned mine shafts that are open or improperly sealed, including:
  - South and West of Commerce through Picher and Cardin to the Kansas boarder
  - Scattered between Picher, Cardin and Quapaw, north to the Kansas boarder
  - Along Alternate Highway 69 North, northeast of Quapaw to the Kansas boarder
  - Between Alternate Highway 69 and Spring River
  - 25 shafts open in the Picher city limits, including:
    - Cherokee Street

- East 2nd Street
  - Central and Frisco Contaminated groundwater throughout the region.
- Flood damages in the Miami, Commerce, Picher, and Cardin areas along Tar Creek.
- Impaired ecosystem due to mine seeps in the region, including:
  - East of North Miami, along the east Highway 69
  - South of Commerce, west of Highway 69
  - Southeast of Quapaw
  - West of Highway 69 between Commerce and Cardin
  - McNeeley Ranch
- Severely impaired ecosystem, including the loss of plants and animals, in Tar Creek and Spring River.
- Degraded stream corridor along Tar Creek from the headwaters to the creek's confluence with the Neosho River, as well as its tributaries.
- Degraded stream corridor along Spring River and its tributaries from the headwaters to the confluence with Grand Lake.
- Degraded riparian corridor along Tar Creek, Spring River, and their tributaries.
- Contaminated ecosystem downstream of the Tar Creek Superfund site to Grand Lake.
- Contaminated culturally significant Native American lands.
- Large piles of chat remain in the watersheds, including:
  - Fisher Pile
  - Eagle-Picher Central Mill
- Abandoned mill ponds in former milling areas may contain chemicals and concentrated metals that contaminate the environment.

There are opportunities in the Tar Creek and Spring River Watersheds to:

- Improve public health and safety in the watersheds.
- Improve water quality throughout the region.
- Decrease flood damages in the Miami, Commerce, Picher, and Cardin areas along Tar Creek.
- Increase wildlife and plant habitat throughout the region.
- Improve the overall ecosystem of the watersheds.
- Improve the stream and riparian corridors to a more natural state.
- Increase public safety by properly sealing mineshafts in the region.
- Decrease subsidence risk by stabilizing the abandoned mines.
- Decrease the amount of chat contaminating the area.
- Decrease contamination from abandoned millponds.