HABITAT CONDITIONS

Channel Alterations and Habitat Problems

The only large stream in the basin that has been significantly channelized is the North Fork Salt River. About 42% of its 119 miles have been channelized. The Middle Fork Salt River has about 12 channelized miles. Channelization results in a loss of total stream area and usable habitat, increased streambank erosion, and a homogeneous habitat that supports far less aquatic life. Minor stream alterations, usually associated with bridge construction or replacement, have occurred at numerous locations throughout the basin, especially in the lower Salt River sub-basin. There are many relatively short, channelized reaches scattered throughout the basin; however, these are difficult to detect on topographic maps. Field investigations will be needed before planning any management activity at a particular stream location or stream reach.

The most consistent habitat problem in the basin stems from high erosion rates from tilled land and sediment deposition in basin streams. Sediment not only affects fish reproduction, growth, survival, and food supply, but also fill in pools and reduces the amount of available habitat. Duchrow (1974) attributed low diversity and dominance of silt-tolerant invertebrates in streams of the Salt River basin to heavy siltation.

Unique Habitat

Even though nearly all streams in the basin have been degraded by agricultural encroachment, many still provide excellent aquatic habitat. Most streams in the basin have been spared from extensive channelization. An unchannelized portion of the North Fork Salt River, between Highway 15 and Route T in Shelby County, was named as a Significant Aquatic Area in the Missouri Natural Features Inventory (Anderson 1983). Peno Creek, Pike County, is one of the highest quality streams in northeast Missouri. This fourth-order stream is home to 26 fish species. Nearly half are associated with the Ozark faunal region (e.g. southern redbelly dace, smallmouth bass, rock bass, northern hogsucker) and only seven species are considered wide-ranging.

Natural features inventories for counties in the basin (Bogler and Nigh 1986, Reese 1986, Anderson 1982 and 1983) indicate that the basin provides seasonally important habitat for the state and federally endangered gray bats (*Myotis grisescens*) and Indiana bats (*Myotis sodalis*). Wooded waterways along streams provide preferred foraging habitat and caves in the basin, which are numerous along the lower Salt River, provide shelter and maternity sites. These inventories also list an upland shale glade (ranked significant) and pond marsh (ranked exceptional) in Pike County as notable natural features.

Improvement Projects

No major habitat improvement projects have been undertaken in the basin. The Missouri Department of Conservation recently assisted a landowner install a cedar tree revetment along about 390 feet of eroding bank on Brush Creek, a tributary of Spencer Creek in the lower Salt

River watershed. A demonstration project was implemented on a private farm in Monroe County in the Brush Creek watershed. Installed practices include livestock exclusion, alternative watering, and management intensive grazing.