

Salt River

WATERSHED INVENTORY AND ASSESSMENT DOCUMENT

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EXECUTIVE SUMMARY

The Salt River basin drains 2,914 square miles of northeastern Missouri and lies in the Dissected Till Plains physiographic region. The North Fork, South Fork, and lower Salt River sub-basins compose 32%, 42%, and 27% of the basin, respectively. Clarence Cannon Dam, located on the Salt River approximately 63 miles upstream from its confluence with the Mississippi River, forms the 18,600 acre Mark Twain Lake. There are 165 third-order and larger streams in the basin. The North Fork Salt River is the longest stream flowing about 119 miles.

In the upper portion of the basin, where local relief is low, glacial till is overlain by loess deposits in most areas. In the valleys of the Middle and South fork sub-basins, streams have eroded to expose limestone bedrock and shales. In the central part of the basin around Mark Twain Lake, relief increases and exposed limestone and shales in the valley walls and streambeds are more prevalent. Till quickly shallows in the lower Salt River sub-basin as valleys become more abrupt with high relief. A relief of 440 feet is attained the lower end of the Salt River basin. Soils throughout most of the basin are typical of the Central Claypan Region, except in the extreme lower portion that is located in the Central Mississippi Valley Wooded Slopes region.

Much of the presettlement landscape of the basin was prairie, however western settlers quickly converted most of the land to agriculture. Currently, nearly 70% of the basin is used in some form of agriculture and nearly half of the land is cultivated for crops. Mineral resources contributed significantly to the economic development of the basin, but agriculture formed and continues to be the economic base of the basin.

The major water quality concern in the basin is severe soil erosion from cultivated lands and the deposition of sediment into stream channels. Excessive turbidity and siltation have both decreased the abundance and diversity of aquatic life and habitat and made boating more difficult due to locally heavy sedimentation. Overall, point source pollution has a minor impact on basin streams relative to non-point sources. Only five municipal waste water treatment facilities in the basin discharge more than 0.5 million gallons per day. Livestock lagoon failures and poor land application practices have caused water quality problems and local fish kills in basin streams and continues to threaten aquatic communities.

A total of 80 fish species have been collected from the Salt River basin. Only 64 species were found in surveys conducted since 1995. Dominant families collected since 1995 were minnows (17 species), perches (10 species), suckers (9 species), sunfishes (9 species), and catfishes (8 species). Bluntnose minnows were the most abundant species collected and were found at 85% of all sample sites. Red Shiners were collected at 70% of all sample sites. Sixteen species were found in the basin prior to 1995, but not collected in recent surveys. Five of these are believed to be extirpated from the basin. No threatened or endangered species have been collected in recent surveys.

Management Opportunities address the following issues: acquiring new and develop existing stream access areas to increase public use, passively restoring riparian areas on MDC areas, assisting landowners with corridor restoration, long-term aquatic community monitoring, fishery research needs, assisting citizen-led watershed conservation efforts, and educating youth.

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