

PLATTE RIVER

WATERSHED

INVENTORY AND ASSESSMENT

This information is based on the
Platte River Watershed Inventory and Assessment

prepared by

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EXECUTIVE SUMMARY

The Platte River is a low gradient, eighth order river located in southwest Iowa and northwest Missouri. The Platte River originates in Union County, Iowa and flows southward for about 200 miles where it empties into the Missouri River near the town of Farley, Missouri. The watershed contains 2,419 square miles with 786 square miles (32.5%) in Iowa and 1,633 square miles (67.5%) in Missouri and lies within the Dissected Till Plains physiographic region. The average annual discharge for the Platte River at Sharps Station (98% of the drainage basin) is 1,925 cubic feet per second. There are 435 third order and larger streams within the basin, and major tributaries include the 102 River, Third Fork, Honey Creek, Castile Creek, and the Little Platte River. Streams within the basin are typical of prairie type, with turbid water and generally homogeneous substrate consisting of silt and sand.

The basin is best characterized as rural with portions of the watershed lying within the cities of St. Joseph and Kansas City. Maryville is the largest urban area totally within the watershed, with a population of 10,663 (1990 census). Land use within the basin is dominated by agriculture and is comprised of about 60% row crop production, 17% pasture, and 11% forest. About 2% of the watershed is in public ownership. Channelization within the basin has resulted in about 250 miles of lost stream length and a 19.4% reduction in total stream miles from fourth order and larger streams.

Major water quality concerns in the basin are soil erosion from surrounding lands and unprotected stream banks and the deposition of sediment into stream channels. The high erosion and deposition rates within the basin have resulted in filling riffle and pool habitats, as well as widening of stream channels. This, along with reduced water absorbing and holding capacity of surrounding lands, and the resulting exaggerated high and low flow conditions, have been the major limiting factors to the diversity and abundance of fish within the basin. Point-source pollution is not considered to be a major threat to basin streams relative to non-point sources. Notable point source concerns in the basin are those associated with municipal waste near the three major urban areas and pollution from Kansas City International Airport.

In the period from 1941 to the present, Missouri Department of Conservation (MDC) personnel, Iowa Department of Natural Resources (IADNR) personnel, and angler creel records have documented 47 species increase recreational use. Species of fish within the basin. Wide ranging, tolerant species were the most common types sampled, with minnows (Cyprinidae) being the dominant family. Eleven rare or endangered species with aquatic associations inhabit, or at one time inhabited, the Platte River basin. Recreational use surveys indicated that fishing accounted for 51% of the total trips and 73% of the total hours of use on the lower Platte River over a one year study period. Channel catfish (*Ictalurus punctatus*) and flathead catfish (*Pylodictis olivaris*) represented 54% of the total harvest from the study.

Other sportfish within the basin include largemouth bass (*Micropterus salmoides*), white bass (*Morone chrysops*), black crappie (*Pomoxis nigromaculatus*), white crappie (*P. annularis*), bluegill (*Lepomis macrochirus*), and green sunfish (*L. cyanellus*). Up to date angler surveys are lacking within the basin, but usage is probably high, especially with the basin's location relative to major urban areas.

Private ownership accounts for 98% of basin lands, making the private landowners the critical link between improving streams within the basin or their further degradation. The main objectives should be to increase public awareness, appreciation, and importance of stream resources within the basin. This would allow all of the goals set forth in this plan to be met. The main goals listed in the Platte River Basin Plan are: **1)** improve water quality and water quantity; **2)** improve riparian and aquatic habitats; **3)** maintain diverse and abundant populations of native aquatic organisms, while supporting the demands for quality fishing; **4)** increase public appreciation and awareness for stream resources; and **5)** increase recreational use.

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