

Fishery Resources of South Dakota

Summary of fish assemblages in western tributaries to the Missouri River in South Dakota

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ABSTRACT: The western tributaries to the Missouri River in South Dakota include the Grand, Moreau, Cheyenne, Bad, and White Rivers. The Keya Paha River is a tributary to the Niobrara River in Nebraska. In general, these rivers have few impacts from urbanization, agriculture or impoundment. The Nature Conservancy lists the upper White River as critical for protecting freshwater biodiversity. Parts of the Cheyenne River have been recommended for wild and scenic status. The goal of this study was to update information on the status of fishes. A historical perspective on species richness was developed through analysis of native fish distribution and source (Pleistocene refugia) of fishes. About 200 sites on the main rivers and tributaries have been sampled as the first effort in 50 years to improve information on the fishes of these rivers (excluding the stream of the Black Hills). Some 50 species have been found. No new species have been documented, but several range extensions have been noted (e.g., yellow bullhead, northern redbelly dace, silver chub, river carp sucker, northern pike, yellow perch). One exotic species (common carp) and several introduced species (sunfishes) have been found. The river fish assemblage is dominated by minnows (64 - 83% of catch). The catfish family, mainly represented by the channel catfish, makes up 8 - 17% of the catch. Channel catfish growth and distribution has been linked to river habitat conditions; best growth is in the Belle Fourche River. Suckers are the third most abundant family in the northern rivers but sunfishes tend to be the third most numerous group in the southern rivers. Detailed studies on the Cheyenne River indicate a longitudinal change in fish species diversity that is related to changes in hydro-geological conditions. Several Federal, State, and Tribal agencies that manage much of the land in western South Dakota are using these data.