

## **Fishery Resources of South Dakota**

### *Aquatic gap analysis use in conserving rare and endangered fishes in South Dakota*

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ABSTRACT: South Dakota has twelve fish species of concern. Listed as endangered is the pallid sturgeon, central mud minnow, blacknose shiner, finescale dace, banded killifish, and Topeka shiner. Listed as threatened are the northern redbelly dace, sturgeon chub, sicklefin chub, pearl dace, longnose sucker, and trout-perch. The potential distribution of these species was predicted by the first report from South Dakota's Aquatic Gap analysis Project. Aquatic gap analysis is an innovative decision support tool that uses biological data, remote sensing, and geographic information systems technology to predict species distributions, habitat, and where conservation programs can best protect threatened species and biodiversity. The purpose of our study is to survey predicted sites to determine species occurrence, and make model accuracy assessments. The study is in its second year. Maps showing potential fish distributions are being used to determine wadeable streams for sampling. Fish are being collected at each site by seining and electrofishing, identified, counted, and released. The species presence data are being compared to predictions to evaluate model accuracy. The results of this study will provide needed information on distribution and habitat requirements of threatened and endangered fishes across South Dakota, and provide managers with a tool to conserve aquatic biodiversity.