



## Fish Communities at Pipestone National Monument

### Importance: *Fish indicate stream health*

Fish community composition offers a good indication of long-term environmental conditions within a stream. Many native fish populations have decreased in abundance throughout their ranges, largely because of land use changes that lead to habitat degradation. Pipestone NM streams provide habitat for native fishes, including a federally listed endangered species, Topeka shiner (*Notropis topeka*). Abundance and diversity of native species suggest that streams support good biotic integrity and offer high quality fish habitat. Interpretation of data collected through long-term monitoring equips park managers with science-based understanding needed to make informed decisions on aquatic resource management that protects the Topeka shiner and the entire aquatic community.



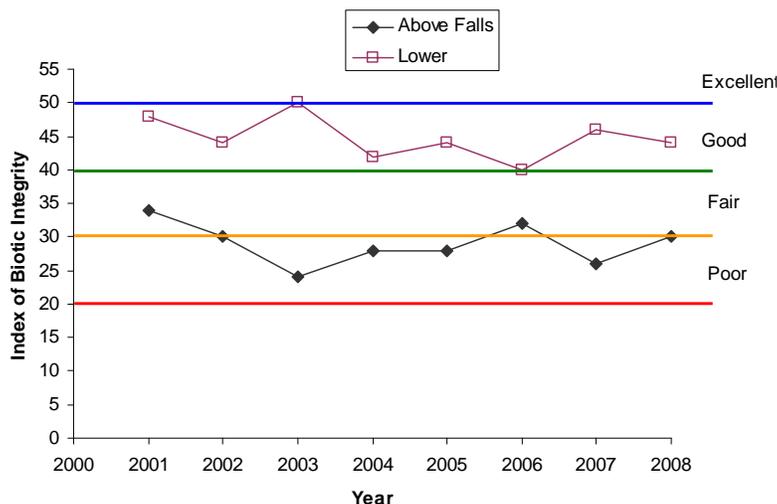
Fish collection with a minnow seine

### Long-Term Monitoring:<sup>1</sup> *Findings inform decision-making*

The Heartland Inventory and Monitoring Network sampled fish communities in two reaches of Pipestone Creek in the monument from 2001 through 2008. Staff collected physical habitat and water quality information in conjunction with fish sampling. The network used these data to determine status and long-term trend in fish community composition and to correlate community composition to water quality and habitat conditions. Pipestone NM may offer important habitat for conserving native species, particularly Topeka shiner.

### Status and Trends: *Diverse and stable fish communities*

Scientists found that species composition differed between the reach above the waterfall (above falls) and the reach below the waterfall (lower). They found stream integrity poor to fair above the falls. The lower reach rated as having good stream integrity for most years. Scientists also found:



1. The downstream reach contained 85% of the Topeka Shiner abundance in Pipestone Creek.
2. Although a small portion (1 km) of the creek flows through the park, it appears to provide habitat for native prairie fishes as evidenced by the native fish community and the presence of Topeka Shiners at the lower reach, downstream within the park.

Index of Biotic Integrity scores can be categorized as excellent, good, fair or poor values. Scores allow managers to decide the management actions needed to attain or maintain desired stream and fish community conditions.

Heartland Inventory and Monitoring Network of the National Park Service. Visit [www.nps.gov/im/units/htln/index.htm](http://www.nps.gov/im/units/htln/index.htm) ... protecting the habitat of our heritage



<sup>1</sup> Dodd, H. R., L. W. Morrison, and D. G. Peitz. 2010. Fish community monitoring at Pipestone National Monument: 2001-2008 summary report. Natural Resource Technical Report NPS/HTLN/NRTR—2010/366. National Park Service, Fort Collins, Colorado.