



Fish Communities at Herbert Hoover National Historical Site

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 contribute to habitat degradation. Hoover Creek is a relatively young stream, having cut its channel from a wetland, but it may offer habitat for native fishes. Information on abundance and diversity of native species can indicate a stream's overall health. This stream has received a great amount of attention because of its Clean Water Act, 303d Impaired Waters status and because of its tendency to flood.

Interpretation of data from long-term monitoring equips park managers with the science-based understanding that contributes to informed decisions that consider aquatic resources.

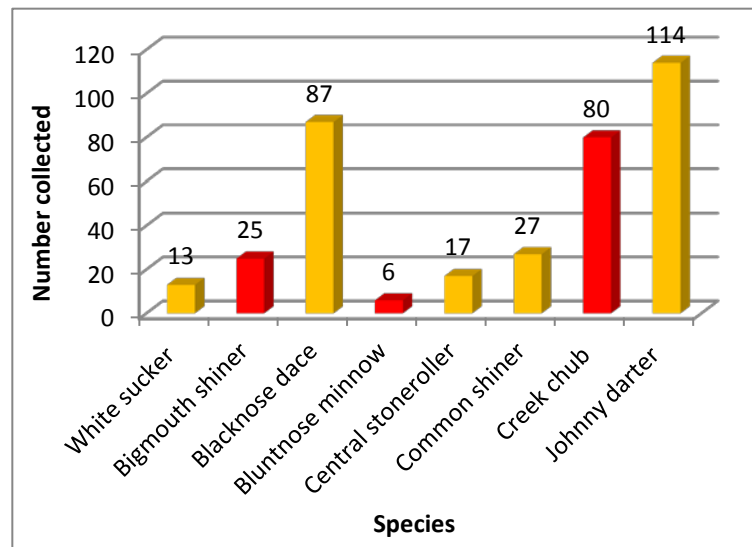


Long-Term Monitoring:¹ Findings inform decision-making

In 2008 and 2011, the Heartland Inventory and Monitoring Network of the National Park Service monitored fish communities, physical habitat, and water quality at Hoover Creek in Herbert Hoover National Historic Site. These data contributed to determining the status of fish communities and establishment of a baseline for long-term trends in fish community composition. The data also contributed to correlating fish community composition to water quality and habitat conditions. Investigators used the Index of Biotic Integrity to make this correlation and assess stream health.

Status and Trends: Diverse and stable fish communities

Although Hoover Creek is listed as impaired for fecal coliform contamination, scientists found that the fish community in Hoover Creek is diverse, relative to similar small headwater streams. However, unstable banks and fine streambed sediments contribute to the creek's high turbidity.



The chart shows the number of fish of each species collected in 2011. Amber bars represent moderately tolerant species and red bars represent tolerant species.

The assortment of species found in a stream serves as a good indicator of stream conditions. Some species are classified as tolerant of disturbance or pollution, while others may be moderately tolerant or pollution intolerant. Pollution-intolerant species were not collected in Hoover Creek and the overall stream biological health was rated as *fair* (Index of Biotic Integrity score = 31) based on fish community composition. These results indicate degraded habitat conditions and an impaired fish community.

Heartland Inventory and Monitoring Network of the National Park Service. Visit

www.nps.gov/im/units/htln/index.htm

... protecting the habitat of our heritage



¹ Dodd, H. R., and A. S. Keefe. 2013. Fish community monitoring at Herbert Hoover National Historic Site: 2008 & 2011 status report. Natural Resource Data Series NPS/HTLN/NRDS—2013/440. National Park Service, Fort Collins, Colorado.