

Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Jacobs Branch

Water Body Segment at a Glance:

County: Newton
Nearby City: Joplin
Water Body ID: 3223
Segment Length: 1.6 miles
Watershed Size: 2.6
Pollutants: dissolved zinc
Source: Tri-state mining district



Statewide Map Showing Location of Watershed

Scheduled for TMDL development: 2025

Description of the Problem

Designated beneficial uses of Jacobs Branch:

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life
- Protection of Human Health (Fish Consumption)
- Whole Body Contact – Category B

Uses that are impaired:

- Protection of Warm Water Aquatic Life

Standards that apply

Acute and chronic dissolved zinc criteria can be found in Table A of Missouri's Water Quality Standards at 10 CSR 20.7.031. The criteria are hardness dependent and are calculated using the following equation:

- Acute and chronic zinc criterion = $e^{(0.8473 \cdot \ln(\text{Hardness}) + 0.884)} \cdot 0.98$

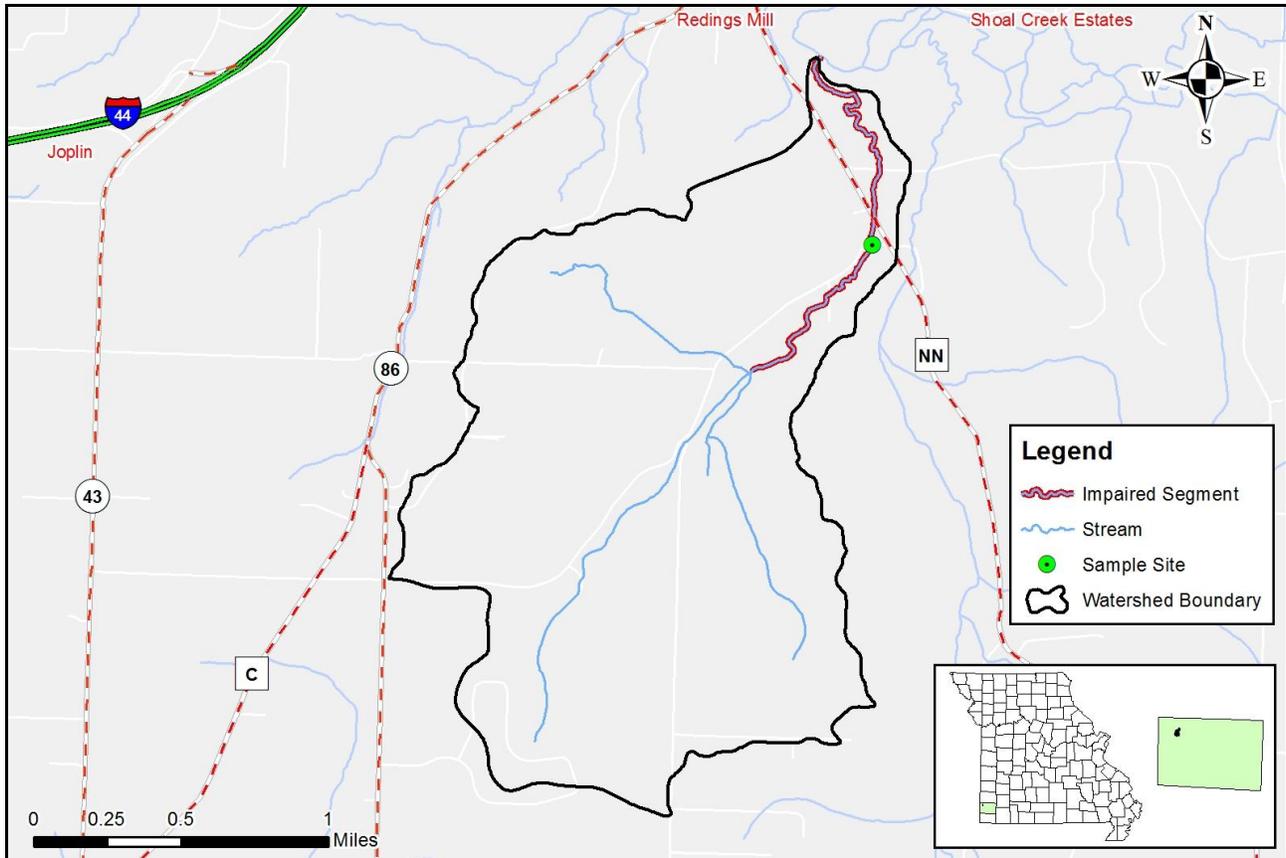
Background information and water quality data

Jacobs Branch is located in southwestern Missouri and is a tributary to Shoal Creek. This portion of Missouri is within the tri-state mining district and has been heavily impacted by historical mining operations. Water are judged to be impaired by toxics such as zinc if the water quality criterion is exceeded more than once in the last three years of available data. The zinc criterion was exceeded both years for which there was data collected from Jacobs Branch.

Dissolved Zinc Data (µg/L)

<i>Sampling Organization</i>	<i>Sampling Location</i>	<i>Month</i>	<i>Day</i>	<i>Year</i>	<i>Flow</i>	<i>Dissolved Zinc</i>
MoDNR	At Coffee Dr.	March	23	2001	0.8	450
MoDNR	At Coffee Dr.	November	20	2008	1.5	444
Applicable Zinc Water Quality Criterion = 176 µg/L						

Map Showing the Jacobs Branch Watershed



Note: Final TMDLs developed for Jacobs Branch will be based on the most current and available data and information.

For more information call or write:

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