

MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Total Maximum Daily Load Information Sheet

Turkey Creek

Water Body ID: 3282

Water Body Segment at a Glance:

County: St. Francois
Nearby Cities: Bonne Terre
Length: 2.4 miles
Pollutant: Dissolved cadmium, lead and zinc
Source: Mill Tailings, Abandoned



Scheduled for TMDL development:

TMDL development schedules are subject to change.

The most current schedule for TMDL development is available on the department's website at dnr.mo.gov/env/wpp/tmdl/wpc-tmdl-progress.htm

Description of the Problem

A water body is considered impaired when it fails to meet applicable water quality standards. Water quality standards consist of designated uses, water quality criteria, an antidegradation policy and implementation procedures. Turkey Creek is impaired due to exceedances of water quality criteria for the protection of aquatic life.

Designated uses of Turkey Creek*

- Warm Water Habitat (WWH)
- Whole Body Contact Recreation Category B (WBC-B)
- Secondary Contact Recreation (SCR)
- Human Health Protection (HHP)
- Irrigation (IRR)
- Livestock and Wildlife Protection (LWP)

*In addition to these specific uses, all waters of the state are protected by the general water quality criteria that are specified in the state's Water Quality Standards at 10 CSR 20-7.031(4).

Designated uses that are impaired

- Warm Water Habitat (WWH)

Criteria that apply

- Acute and chronic dissolved metals criteria are provided in Table A of Missouri's Water Quality Standards at 10 CSR 20-7.031(5)(B)1. These criteria are hardness dependent and are calculated using the formulas in Table A.

Background information and Water Quality Data

Turkey Creek in St. Francois County is a small Ozark creek with its headwaters in the city of Bonne Terre and its mouth at Big River. The headwaters originate near large piles of tailings, or waste rock, left over from the extensive underground lead mining that occurred in the area for many years. Remedial action construction to stabilize the tailings against wind and water erosion and mass movement was completed in late 2003 for the western portion of the site. The eastern portion of the site was completed by 2007.

A water body is judged to be impaired by metals if chronic or acute numeric criteria are exceeded on more than one occasion during the last three years for which data is available. The department conducted water quality monitoring on Turkey Creek from 2001 to 2007 (Figures 1-3 below). There were six exceedances of chronic criteria for cadmium and lead and two for zinc in the last three years of data.

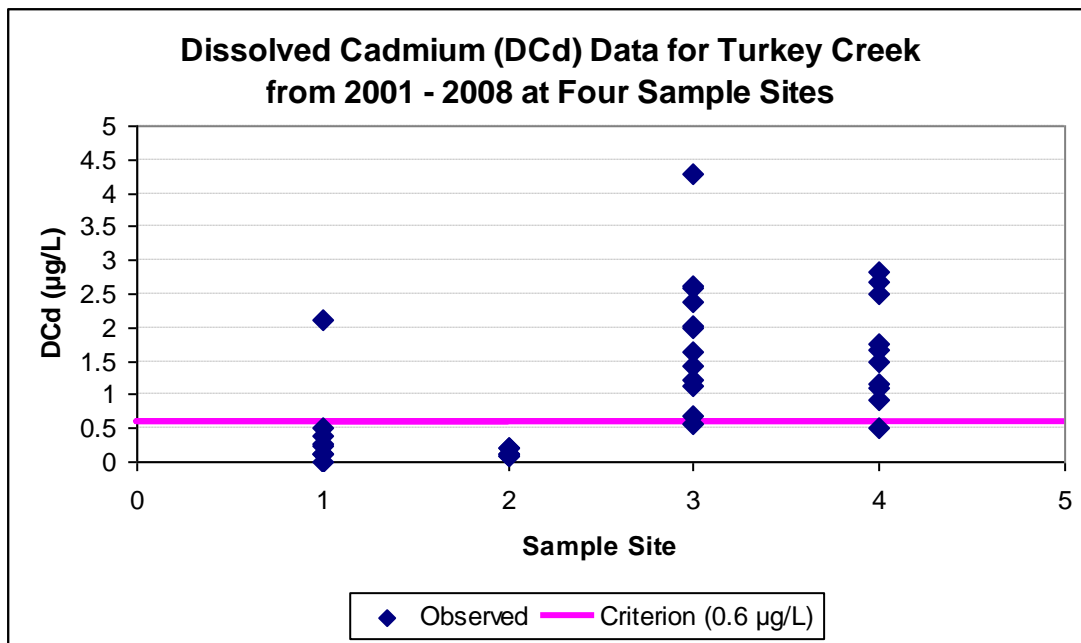


Figure 1

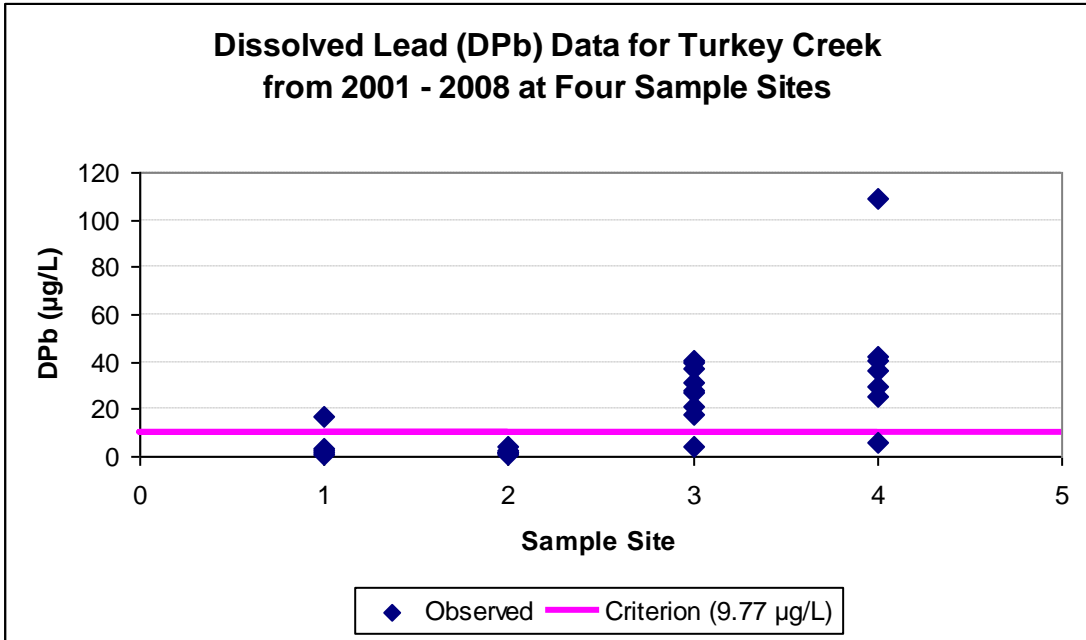


Figure 2

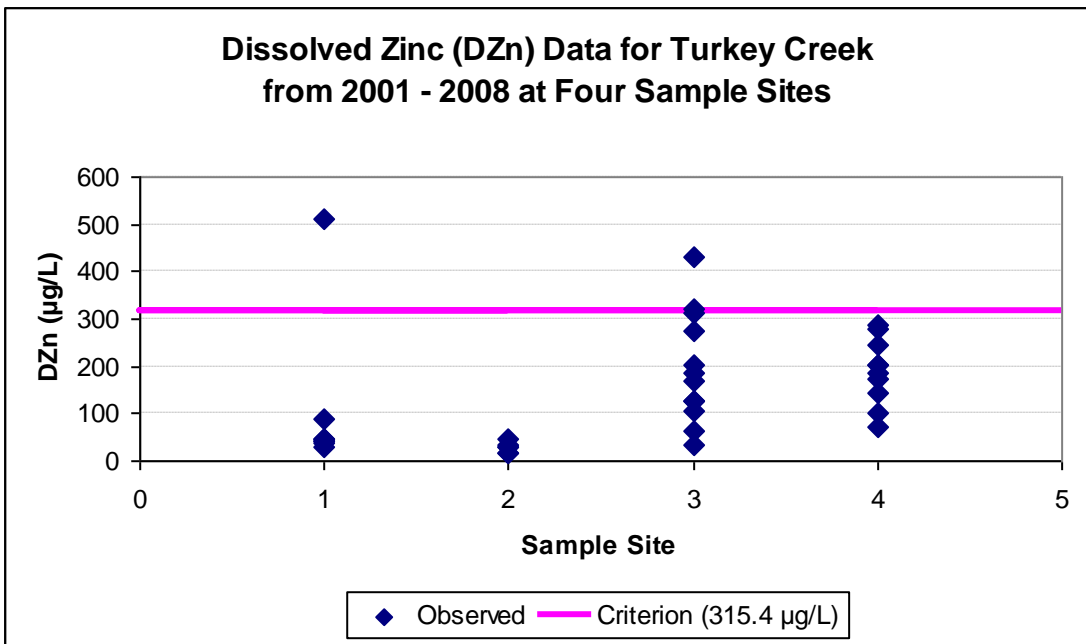
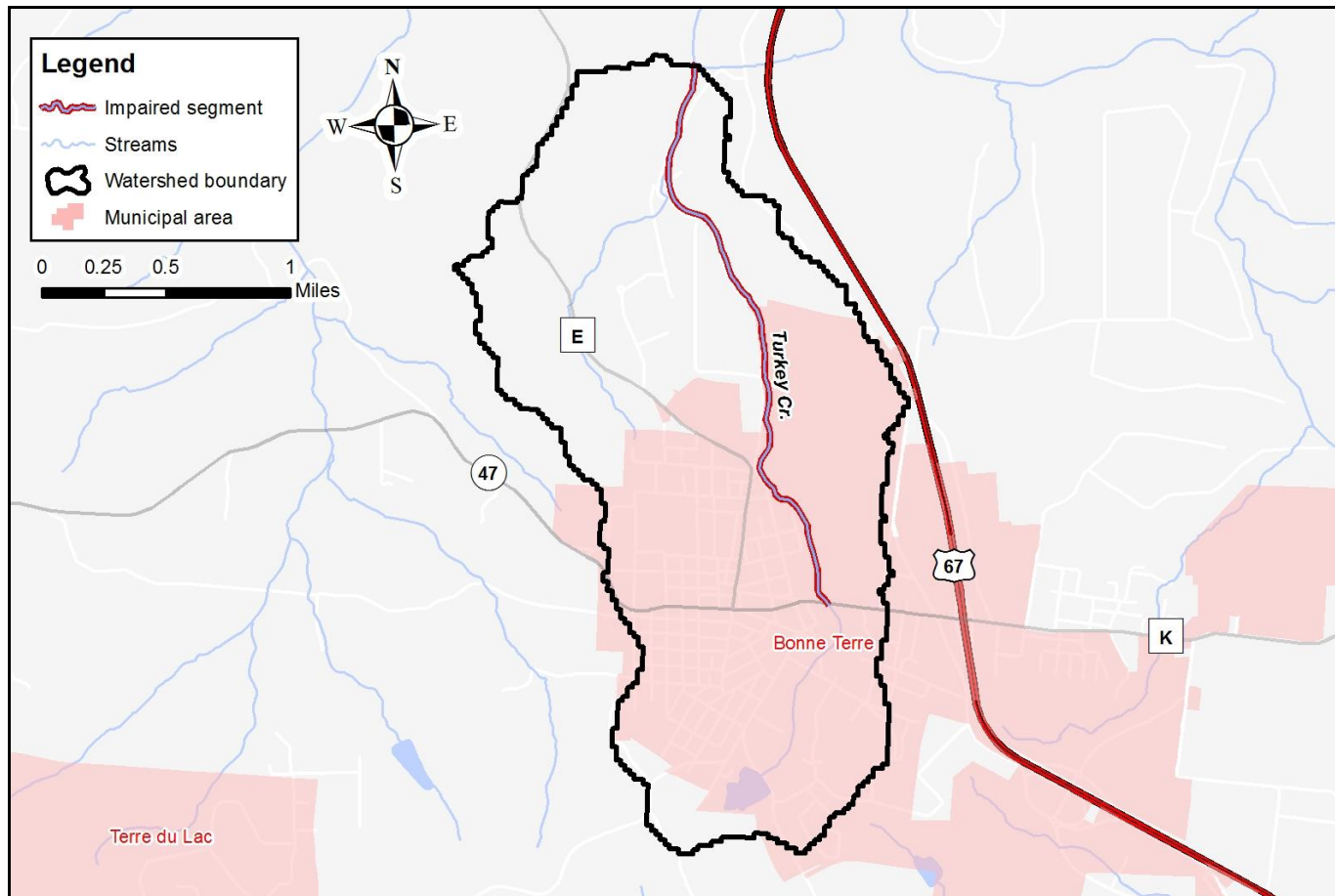


Figure 3

Map of the Turkey Creek watershed



TMDL for Turkey Creek

The Turkey Creek TMDL will calculate the maximum amount of each listed pollutant that the stream can receive and still meet water quality standards. The TMDL will also identify all potential or suspected pollutant sources in the watershed and distribute the allowable pollutant loads among those various sources. When developed, the Turkey Creek TMDL will use the most current and available data. For this reason, the final TMDL may present information that differs from that contained in this information sheet.

For more information call or write:

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