



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Total Maximum Daily Load Information Sheet

West Fork Black River

Water Body ID: 2755

Water Body Segment at a Glance:

County: Reynolds
Nearby City: Centerville
Length: 32.3 miles
Pollutants: Lead and nickel in sediment
Source: West Fork Mine/Mill



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

Other TMDLs:

In 2010, the U.S. Environmental Protection Agency established a TMDL for West Fork Black River to address a nutrient impairment. This TMDL and associated documents are available online at dnr.mo.gov/env/wpp/tmdl/2755-w-fk-black-r-record.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. West Fork Black River is impaired due to exceedances of water quality criteria that protect aquatic life.

Designated uses of the West Fork Black River*

- Warm Water Habitat (WWH)
- Cool Water Habitat (CLH)
- Whole Body Contact Recreation Category A (WBC-A)
- 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).

Use that is impaired

- General criteria

Criteria that apply

- Missouri streams are protected by the general criteria found at 10 CSR 20-7.031(4). The particular general criteria that are being violated in West Fork Black River are:
 - (D) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life.
 - (G) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community.
- Missouri's Water Quality Standards contain no specific criteria for metals in sediment. Likewise, the U.S. Environmental Protection Agency has not yet established federal guidelines for toxic chemicals in stream or lake sediments. In lieu of such criteria, Probable Effect Concentrations, or PECs, suggested by McDonald, et al¹, are used for assessment of compliance with water quality standards. PECs are the concentrations above which some toxic effect on aquatic life is likely.

Assessment and water quality

The impairment for lead and nickel in sediment is based on data collected by the department from 1995 – 2007. The mean levels of both lead and nickel in sediment sampled for two miles downstream of the West Fork Mine outfall exceeded 150% of PEC values for each metal. For lead, the PEC value is 128 mg/kg (milligrams per kilogram or parts per million) and for nickel that value is 48.6 mg/kg.

TMDLs for West Fork Black River

The West Fork Black River TMDL will calculate the maximum amount of each listed pollutant that the streams 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 West Fork Black River 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:

Department of Natural Resources
Water Protection Program – Watershed Protection Section
P.O. Box 176
Jefferson City, MO 65102-0176
Ph: 1-800-361-4827 or 573-751-1300
Fax: 573-526-6802
Email: TMDL@dnr.mo.gov
Program Home Page: dnr.mo.gov/env/wpp/index.html

¹ *Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems*, D. MacDonald, et al., 2000

Map of the West Fork Black River watershed

