



Total Maximum Daily Load Information Sheet

Whetstone Creek and East Whetstone Creek Water Body ID: 1504 and 3964¹

Water Body Segment at a Glance:

County:	Wright
Nearby City:	Hartville
Length:	12.2 miles
Pollutant 1:	Low dissolved oxygen
Source:	Rural Nonpoint Sources
Pollutant 2:	Ammonia
Source:	Mountain Grove lagoon



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. Whetstone Creek and East Whetstone Creek are impaired due to exceedances of water quality criteria for the protection of aquatic life.

Designated uses of Whetstone Creek and East Whetstone Creek*

- Warm Water Habitat (WWH)
- Cool Water Habitat (CLH) ← Whetstone Creek only
- 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).

¹ In Missouri water quality standards and the Missouri Use Designation Dataset, East Whetstone Creek is identified as water body ID number 3960. The EPA included East Whetstone Creek on the approved 2014 303(d) List as Whetstone Creek.

Uses that are impaired

- Warm Water Habitat (WWH)

Criteria that apply

- In Table A of the Water Quality Standards at 10 CSR 20-7.031, the criteria for dissolved oxygen in streams designated as warm water or cool water habitat is a minimum of 5 mg/L.
- Criteria for ammonia vary with water temperature and pH and are provided in Table B3 of the Water Quality Standards at 10 CSR 20-7.031. At typical temperatures and pH values, a summer ammonia criterion would be 1.5 mg/L with a winter criterion of 3.1 mg/L. Acute criteria are presented in Table B1. At typical summer temperatures and pH, acute criteria range between 4 and 12 mg/L.

Assessment and water quality data

Dissolved oxygen is important as many aquatic organisms require high levels of oxygen to survive. The department judges a stream to be impaired due to low dissolved oxygen if more than 10 percent of measurements in a water body fail to meet the water quality criterion. In the case of Whetstone Creek, 14 of 34 measurements, or 41 percent, did not meet the water quality criterion.

Ammonia is a common by-product of wastewater treatment and, under certain conditions, can be toxic to aquatic life. A water body is judged to be impaired if the chronic or acute numeric criteria are exceeded on more than one occasion during the last three years for which data is available. In East Whetstone Creek, there were two exceedances of the acute (one hour exposure) criterion on two out of four days in 2006.

TMDLs for Whetstone Creek and East Whetstone Creek

The TMDLs for Whetstone Creek and East Whetstone Creek 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, these TMDLs will use the most current and available data. For this reason, the final TMDLs may present information that differs from that contained in this information sheet.

For more information call or write:

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Map of the Whetstone Creek watershed

