

Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Big Creek

Water Body Segment at a Glance:

Downstream County: Henry
Upstream County: Jackson
Nearby City: Kansas City
Water Body ID: 1250
Segment Length: 70.5 miles
Watershed Size: 537 square miles
Pollutant: Bacteria
Source: Rural nonpoint sources



Statewide Map Showing Location of Watershed

Scheduled for TMDL development: 2016

Description of the Problem

Designated beneficial uses of Big Creek

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

Uses that are impaired

- Whole Body Contact Recreation – Category B

Standards that apply

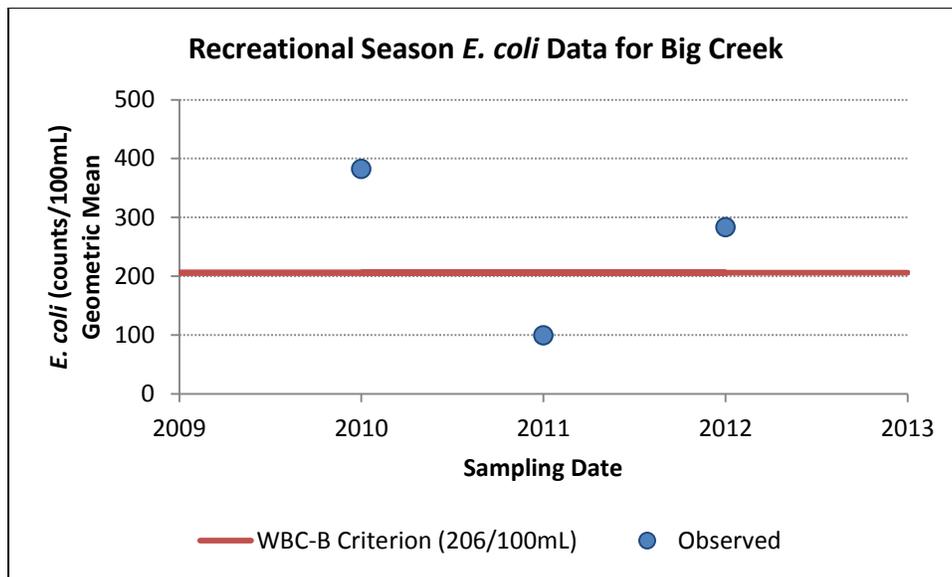
- Missouri's Water Quality Standards at 10 CSR 20-7.031(4)(C) states that for waters designated for whole body contact recreation category B, the *E. coli* bacteria count, measured as a geometric mean, shall not exceed 206 colonies per 100 milliliters of water during the recreational season. The recreational season is defined as being from April 1 to October 31.

Background information and water quality data

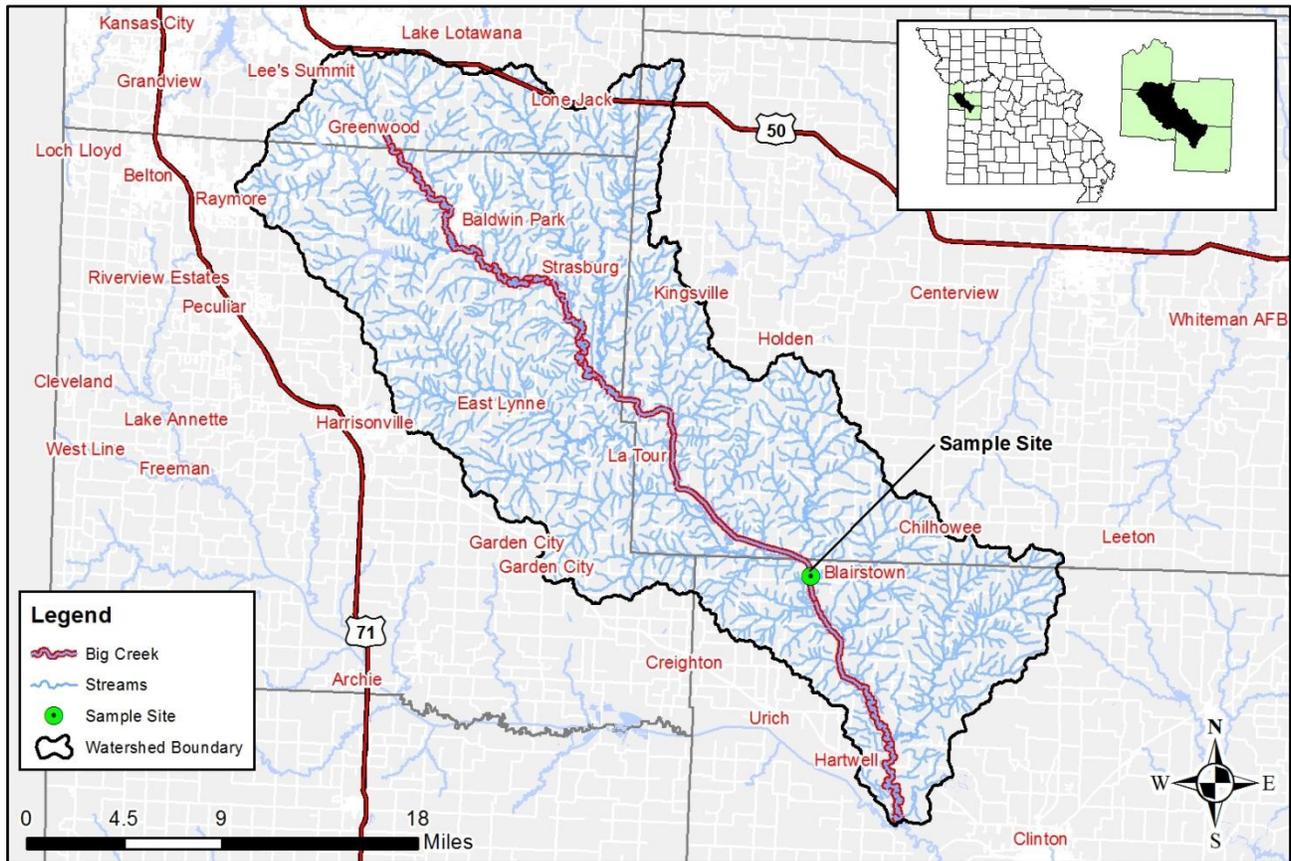
Big Creek is a tributary of the South Grand River and flows through Jackson, Cass, Johnson, and Henry counties. The stream is designated as category B for the whole body contact recreation use. Big Creek was first listed as impaired by bacteria on the state's 2012 303(d) List of impaired waters, which was approved in whole by the U.S. Environmental Protection Agency on Nov. 13, 2012.

The department judges a stream to be impaired by bacteria if the water quality criterion for *E. coli* is exceeded in any of the last three years for which there is adequate data (minimum of five samples taken during the recreational season). High counts of *E. coli* are an indication of fecal contamination and an increased risk of pathogen-induced illness to humans. *E. coli* are bacteria found in the intestines of warm-blooded animals and are used as indicators of the risk of waterborne disease from pathogenic (disease causing) bacteria or viruses. Missouri's whole body contact bacteria criteria are based on specific levels of risk of acute gastrointestinal illness. The level of risk correlating to the category B criterion is no more than 10 illnesses per 1,000 swimmers in fresh water (1 percent).

E. coli bacteria data for Big Creek were collected in 2010, 2011 and 2012. The recreational season geometric mean of these data exceeded the whole body contact category B criterion in 2010. For this reason, Big Creek has been assessed as impaired by *E. coli*.



Map Showing the Big Creek Watershed and Sample Site



For more information call or write:

Missouri Department of Natural Resources

Water Protection Program

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573-526-6802 fax

Program Home Page: dnr.mo.gov/env/wpp/index.html

NOTE: The final Big Creek TMDL will use the most recent, available data and information.