

Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Keifer Creek

Water Body Segment at a Glance:

County: St. Louis
Nearby Cities: Ballwin
12-Digit Watershed: 071401021001
Length of impaired segment: 1.2 miles
Pollutant: Bacteria
Source: Urban nonpoint sources
Water Body ID: 3592



State map showing location of watershed

Scheduled for TMDL development: Bacteria in 2012

Description of the Problem

Designated beneficial uses of Keifer 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

The criteria for bacteria are found at 10 CSR 20-7.031(4)(C), where it states that the *E. coli* bacteria count shall not exceed 126 colonies per 100 milliliters of water (126 col/100 mL) for Category A and 206 col/100 mL for Category B waters. This count is the geometric mean during the recreational season (April 1- October 31) in waters designated for whole body contact recreation.

Background information and water quality data

Keifer Creek is a small stream in St. Louis County that flows in a southeast direction and empties into the Meramec River near St. Louis. It is designated for Category B whole body contact recreation use, which means it has places deep enough for total immersion (i.e., swimming), but these locations may be on private lands or inaccessible to the public. The impairment is based on data gathered by the U.S. Geological Survey and the Metropolitan St. Louis Sewer District.

Excessive amounts of fecal bacteria in surface water used for recreation are an indication of an increased risk of pathogen-induced illness to humans. Infections due to pathogen-contaminated waters include gastrointestinal, respiratory, eye, ear, nose, throat and skin diseases. *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. Most *E. coli* strains are harmless, but some can cause serious illness in humans and are occasionally responsible for product recalls. 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).

A stream is judged as impaired by bacteria if the water quality criterion is exceeded in any of the last three years for which there is adequate data (minimum of five samples taken during the recreational season). Adequate data was collected in 2007, 2008, and 2009. The 2009 data shows an exceedance of the 206 col/100 mL criterion (Figure 1). Therefore, Keifer Creek was judged to be impaired by bacteria and was listed on the 2010 303(d) list of impaired waters.

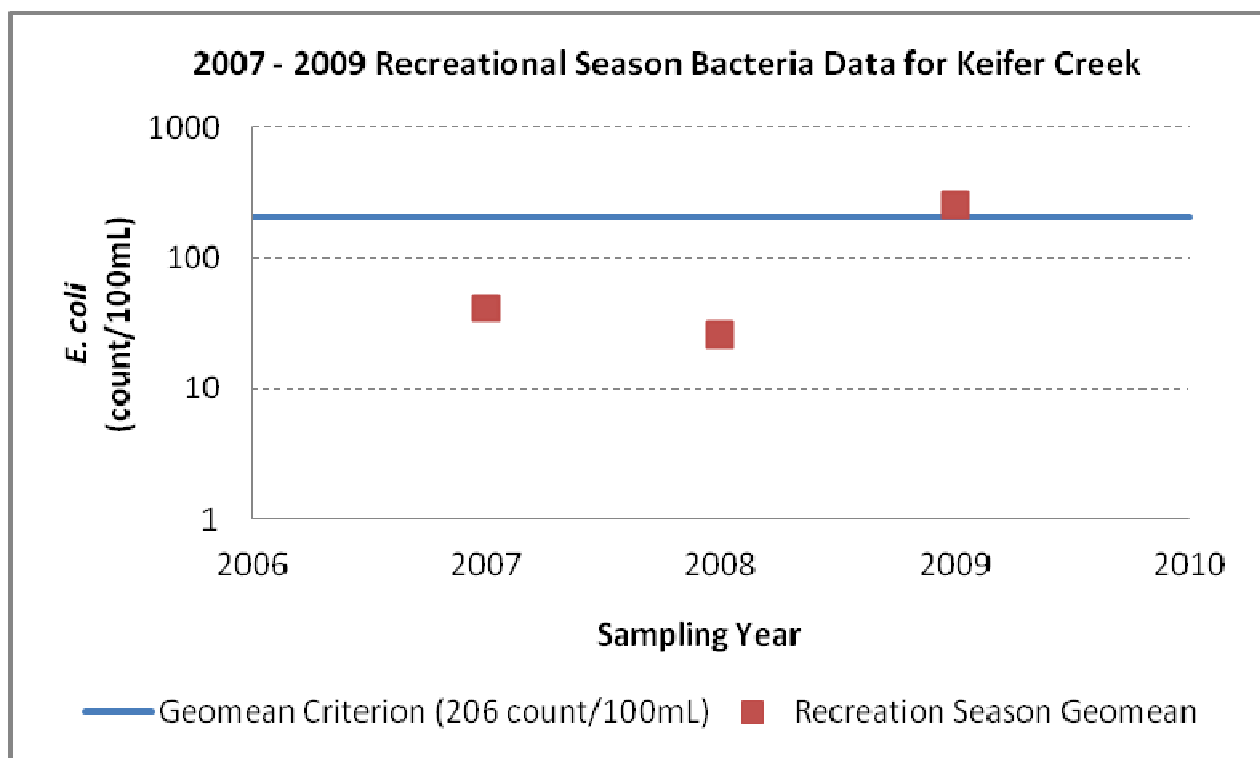
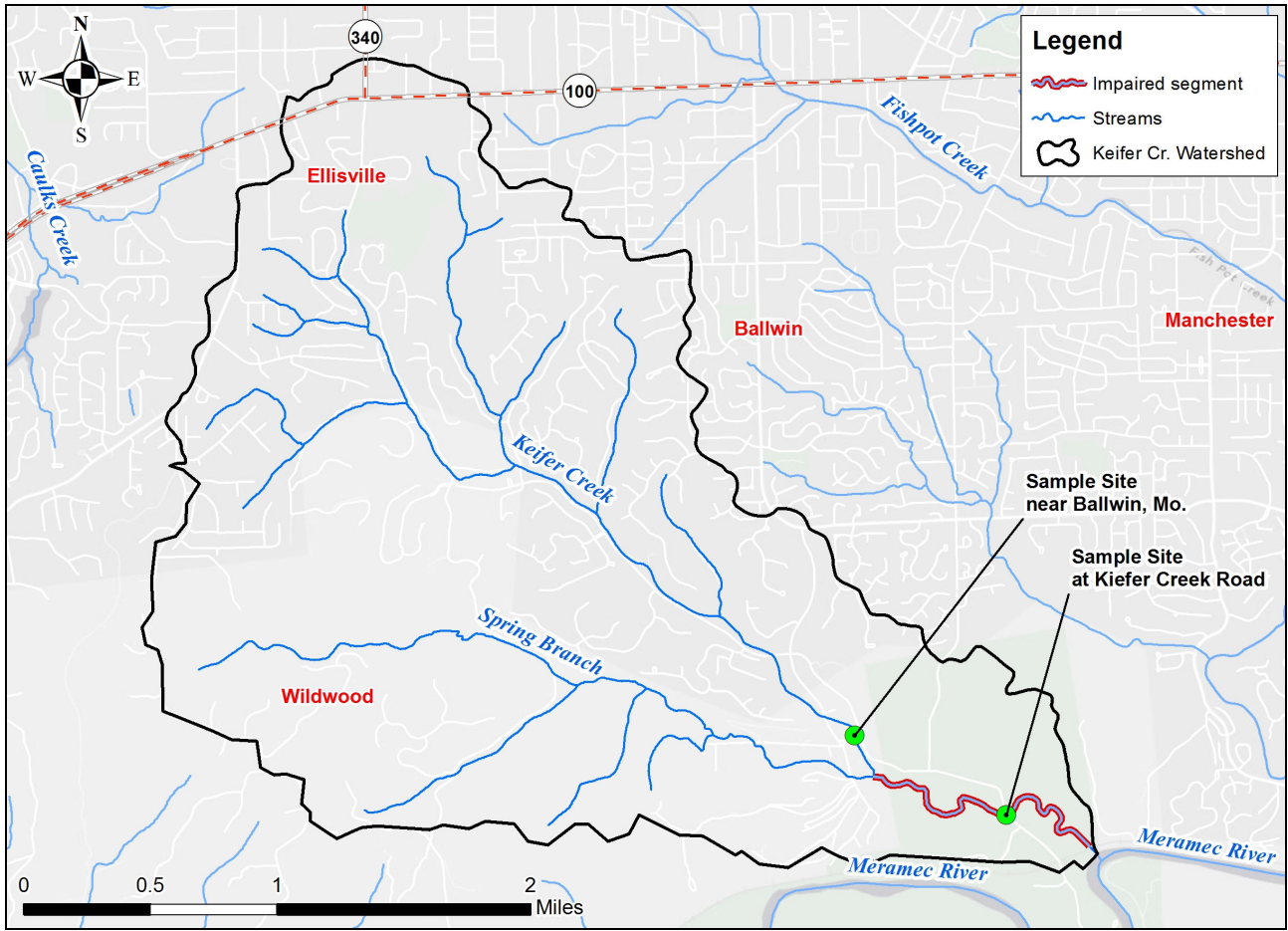


Figure 1.

Map Showing the Keifer Creek Watershed in St. Louis County and Sample Sites



NOTE: The final Keifer Creek TMDL will be developed using the most current, available data.

For more information call or write:

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Water Protection Program

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