

Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Little Beaver Creek

Water Body Segment at a Glance:

County: Phelps
Nearby Cities: Rolla
Length of impaired segment: 4 miles
Length of impairment within segment: 3.3 miles
Pollutant: Inorganic Sediment
Source: Smith Sand and Gravel
Water Body ID: 1529



Scheduled for TMDL development: 2015

Description of the Problem

Beneficial uses of Little Beaver Creek

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

Uses that are impaired

- Protection of Warm Water Aquatic Life
- General Criteria

Standards that apply

- Missouri does not have specific standards for inorganic sediment, but the following the general criteria may apply. These are found in the state's Water Quality Standards at 10 CSR 20-7.031(3).
 - (A) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses.
 - (C) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.
 - (G) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community.

Background information and water quality data

Little Beaver Creek lies west of Rolla, Mo., and flows southwest to join Little Piney Creek. The inorganic sediment impairment (sand and gravel) is based on data collected by the department in 2003 and 2006. To determine impairment, the department used a statistical test to compare the median percent fine sediments from the upstream portion of the water body to the median percent fine sediments of the downstream portion. The median is the number in the middle of a set of numbers; that is, half the numbers have values that are greater than the median, and half have values that are less. For Little Beaver Creek, the test indicates that the median percent fine sediment deposition in the downstream sites is greater than the upstream (Figure 1). For this reason, Little Beaver Creek is considered impaired by inorganic sediment.

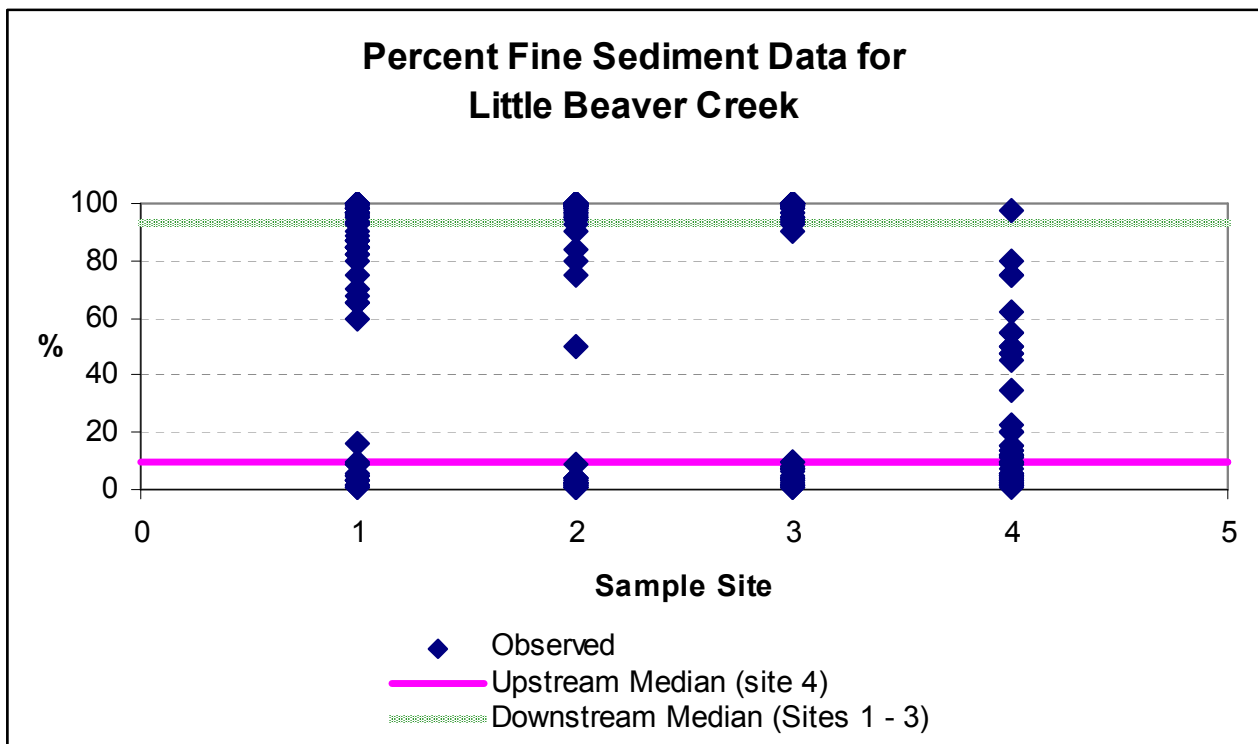
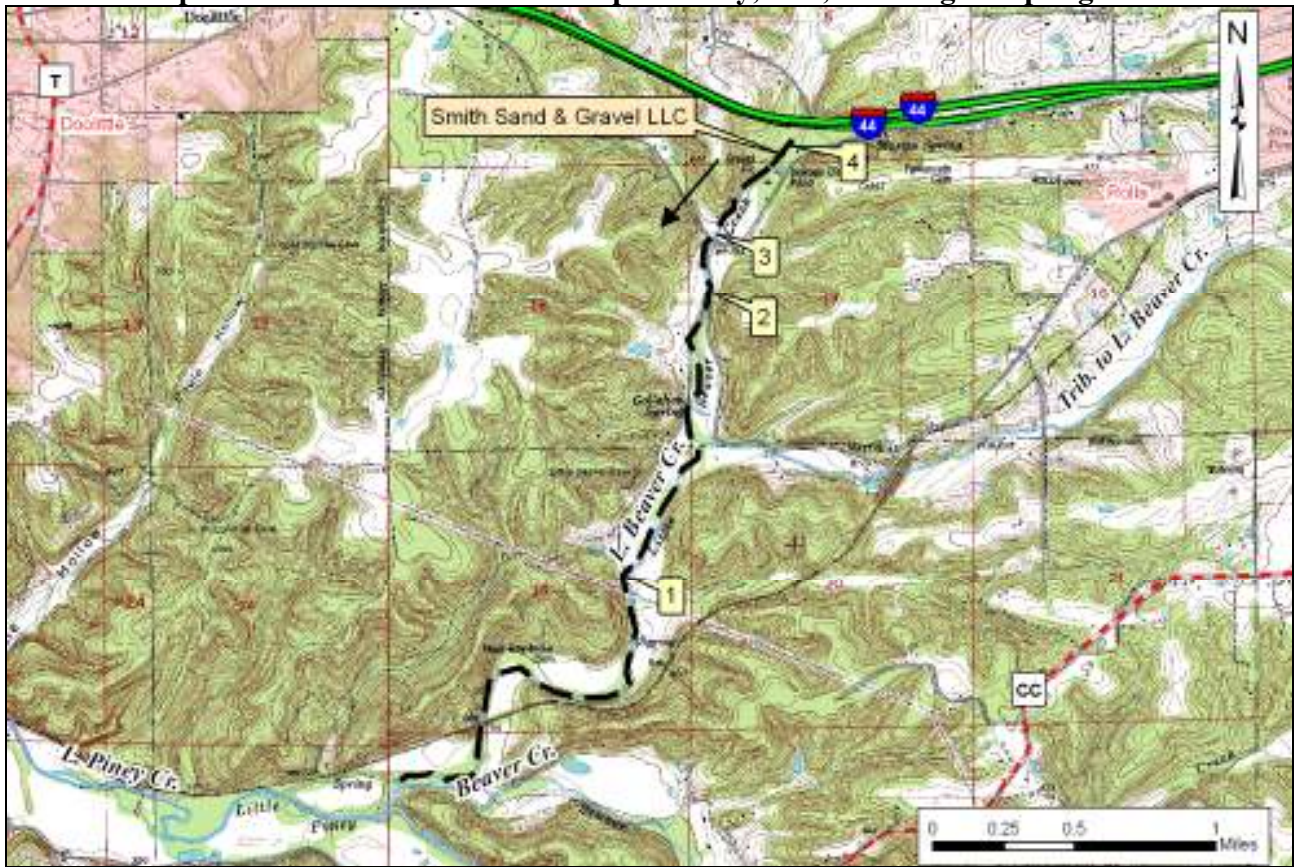


Figure 1

Map of Little Beaver Creek in Phelps County, Mo., Showing Sampling Sites



— — — — — Impaired segment ← Direction of flow

Sample Sites
1 – 1.7 miles downstream of Smith S&G
2 – 0.6 miles downstream of Smith S&G
3 – 0.4 miles downstream of Smith S&G
4 – Upstream of Smith S&G retention basin discharge

The final Little Beaver Creek TMDL will be based on the most current available data and information. For TMDL status or additional information, please contact the Water Protection Program at:

Missouri Department of Natural Resources
Water Protection Program
P.O. Box 176, Jefferson City, MO 65102-0176
1-800-361-4827 or 573-751-1300 office
573-522-9920 fax
Program Home Page: dnr.mo.gov/env/wpp/wp-index.html