Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Cave Spring Branch

Waterbody Segment at a Glance:

County: McDonald
Nearby Cities: Noel, South West City
Length of impairment: 0.2 miles
Pollutant: Nutrients
Source: Nonpoint Sources and Simmons Foods, Inc.

Note: This stream will be part of in the Elk River TMDL

TMDL Priority Ranking: Medium

State map showing location of watershed

Description of the Problem

Beneficial uses of Cave Spring Branch

- This stream is not classified so no beneficial uses are assigned to it; however, all waterbodies in Missouri are protected by the general criteria (standards) contained in Missouri's Water Quality Standards (WQS), 10 CSR 20-7.031.

Use that is impaired

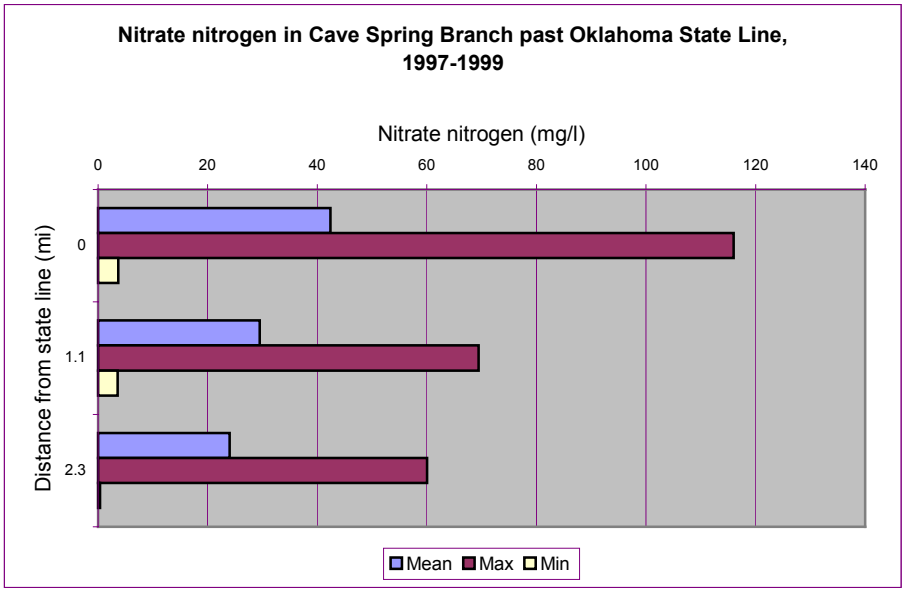
- None, since no beneficial uses can be assigned.

Standards that apply

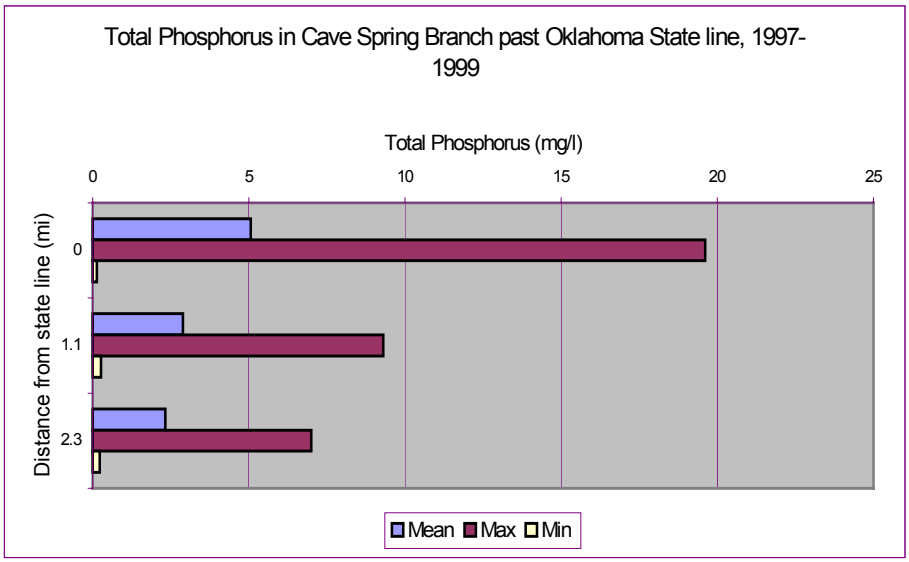
- The general criteria that apply in this case WQS 10 CSR 20-7.031 (3)(A), (C) and (G), which state:
  - Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses.
  - Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses.
  - Waters shall be free from conditions harmful to aquatic life (paraphrased).

Throughout much of the 1990s, Cave Spring Branch suffered several episodes of very poor water quality due to malfunctions of the wastewater treatment plant at the poultry plant, including discharges of acutely toxic levels of ammonia. By 1999, improvements to the wastewater treatment facilities had improved water quality in Cave Spring Branch. However the combination of nutrient discharges from this facility and nutrients reaching the creek due to the application of poultry litter in the watershed is still responsible for abnormally high levels of nutrients in Cave Spring Branch. Elevated levels of nutrients can stimulate excess production of benthic (bottom growing) algae, which in turn can adversely affect fish and other aquatic animals in the stream by clogging better habitat and causing low

levels of dissolved oxygen. More data is being collected before the TMDL will be written. A summary of the data may be found below.



Source: Oklahoma Department of Environmental Quality



Source: Oklahoma Department of Environmental Quality

For more information call or write:
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