

Discolored and/or Foul-Smelling Water



Photo #: 14
By: Mike Smith
Facility: Fisher Hog Farms
Permit: MOGS10044
Location: Pike County

Description: View of location where the tributary observed in Photo #10 flows into Shady Creek. Reddish brown water from the tributary observed flowing into Shady Creek. A slight odor associated with hog waste was observed.

Date Taken: July 1, 2015
Program: WPC Unit

Discolored and foul-smelling water documented in DNR Enforcement Action Request obtained via Sunshine request

What is discolored and/or foul-smelling water?

Water may be discolored for a variety of reasons, including [Algal Blooms](#). However, brown or reddish water indicates waste pollution – especially when accompanied by a foul, manure odor. When liquid animal waste is discharged to a water body, it is called effluent. Animal effluent may be reddish or pinkish in color because of the bacterial decomposition of the waste. Above you see a stream of brownish-red hog effluent entering Shady Creek.

What causes discolored and/or foul-smelling water?

However, brown or reddish coloration may indicate waste pollution – especially when it is accompanied by a foul manure odor. If animal waste is not applied properly, it may run off into nearby waterways. There are multiple causes of manure runoff from CAFOs, including: 1) if animal waste is overapplied to land such that it can not be absorbed (especially to [Group D soils](#)), 2) if animal waste is applied to land while it is raining or shortly thereafter, 3) if waste storage and transport structures like lagoons, pipes, and trucks break or leak. All of these indicate improper manure management, and may be enforceable violations if DNR finds sufficient evidence of pollution to waters of the state. Facilities are expected to report manure spills and other incidents to the DNR whether or not they result in unplanned discharges.

Why should you be worried?

Human health. Not only does animal waste contain high levels of nitrates and phosphorus, it may also contain bacteria like *E. coli*, which can cause fever, diarrhea, vomiting and potentially fatal complications. Learn more about the symptoms [here](#). Even the smallest backyard creeks

feed into our recreational waterways and drinking water sources, therefore animal effluent compromises our ability to safely consume and enjoy Missouri water.

Environmental impacts. Animal effluent (liquid waste discharged to a waterway) can ultimately lead to [Algal Blooms](#) and [Fish Kills](#) by introducing surplus nutrients and bacteria.

What can you do?

1. **Submit an Environmental Concern Report to the Department of Natural Resources** by filling out this online form or calling your regional office. See [Reporting Concerns](#) for details. Note:
2. **Take pictures.** Photos provide clear evidence of the environmental concern as you witnessed it and can help confirm its location. In the case of discolored and/or foul-smelling water, a well-taken photo will show discoloration in comparison with surrounding water, the possible source of the discoloration (e.g. if there is an outfall or stream of runoff), and perhaps capture some of the surrounding area to identify the location. Note that if foul-smelling water is not accompanied by any visual indicators of pollution then taking pictures will not be an effective way to document evidence of your concern.

Unfortunately, the DNR Environmental Concern Report form does not provide a section to upload images. However, you may email photos to the DNR along with your concern report to provide supporting evidence. Photos are also a way to demonstrate evidence of harm, which helps establish legal standing for an individual or organization to pursue environmental litigation.

3. **Test the water.** You can collect your own water samples and [purchase test strips](#) to perform low-cost water analysis for nitrates, phosphorus and a variety of other water quality criteria. You may compare your results against [Missouri's Water Quality Standards](#), however note that human and environmental health concerns may still exist at levels below the standard. To perform higher-accuracy tests, you may consider sending water samples to a [DNR-certified lab](#) for [chemical](#) or [microbiological analysis](#). Some labs are only approved to perform certain water tests, so make sure to choose a lab that can test for the criteria you are interested in (nitrate, phosphorus, *E. coli*) and use the contact information provided to get a time frame and cost estimate for testing.

The Missouri Stream Team Volunteer Water Quality Monitoring Program ([VWQPM](#)) is a partnership of the Department of Natural Resources, Department of Conservation, Conservation Federation of Missouri and citizens of Missouri. VWQPM conducts advanced monitoring projects, which have included [nitrate measurements for streams](#), however VWQPM is not set up to receive and test samples from the public.

The Missouri Department of Health & Senior Services (MDHSS) tests public drinking water supplies for *E. coli* and coliform bacteria every month. You may also submit your own water samples to the Missouri State Public Health Laboratory (MSPHL) at any time. Use [this form](#) to request a water sampling kit or call the MSPHL at 573-751-4830 and contact your [local public health agency](#) to find the appropriate sample drop-off location. Note that the MSPHL only performs tests for total coliforms and *E. coli* in *drinking* water sources; not all water bodies are public drinking water sources and you may want to test your samples for other criteria like nitrates and phosphorus.