

Compromised Water Quality at Milford Lake and Potential Remediation Strategies

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Milford Lake, located in Wakefield and Milford, Kansas, provides visitors with a wide range of recreational opportunities both directly on and next to the lake. Visitors come to fish, boat, water ski, tube, swim, kayak, and canoe directly on the water. Visitors also can camp at several sites surrounding the lake including Milford State Park, Acorn Resort, T

exposure depending on the amount of time one is exposed and the recreational activities being done.

The level of exposure will determine the impact on one's health. People who come in contact with blue-green algae yearly, like the local communities near Milford Lake, experience chronic exposure. While there is very little data re_Wh, exper

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A total of eight sites, found on Figure 1 below, were tested and analyzed. Each site was

To test for nitrate, phosphate, and ammonium, we used a water quality chemical testing kit with a color disc. Each test requires

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While testing was done by both the research group and the Soils Testing Lab, the data

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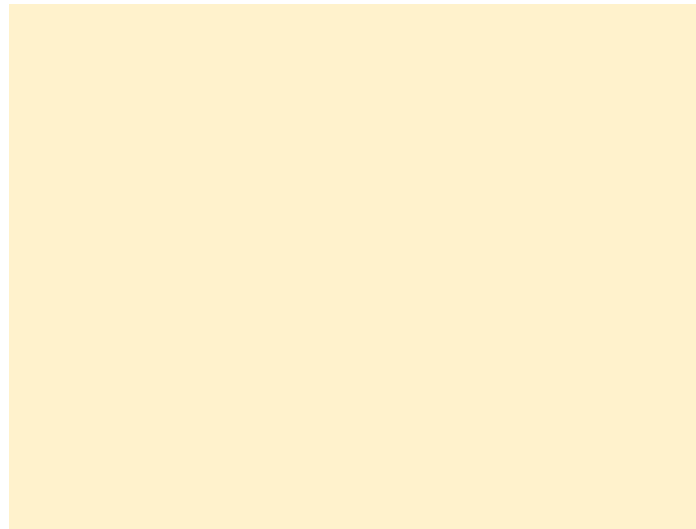
nitrogen are influenced by organic decomposition, agricultural runoff

Total suspended solids readings are very closely related to turbidity, both of these readings refer to how cloudy bodies of water

While this is only a small portion in time, we compared our data to USGS data and found that it correlates with annual variation found on the USGS database (See in Appendix A). Based on our results, the high levels of nutrients, especially phosphorus, will continue to be cycled

Surface runoff

and fungi present in the root system (Kasprzyk, 2022). The bacteria and fungi present in the root



If the introduction of a species has a negative effect on an ecosystem it may cause more harm than good. Picking species that are unable to take over ecosystems and do not cause harm to native species is the best option. T

gardens can be designed and installed along the sewage systems of Wakefield and Milford. Not only will these rain gardens absorb pollutants in water runoff from storms, but it will also bring more jobs to these small communities through rain garden construction and ongoing maintenance. Installing floating wetlands to Milford Lake can bring about more jobs as well as another source of profits through tourism. Many lakes do not have floating wetlands, so this tactic will bring tourists of all types while it also cleans and filters the lake water. Finally, annual or semi-annual se-MMMMMMMtm

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