Efficacy of Water Quality Communication

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Harmful algal blooms in the United States have been increasing in number and economic cost since industrialization and introduction of chemical fertilizers. Lakes in Ohio are struggling to combat the anthropogenic causes of the growth in cyanobacteria populations. Often these efforts lack participation of scientists communicating with the public, despite increased recognition of the importance of effective and strategic scientific communication and its potential to improve the environmental literacy of those outside the academic science field. Choctaw Lake near London, Ohio, is a lake community of approximately 800 households currently dealing with an increase in the frequency of harmful algal blooms and presence of toxins in the lake. A Lake Water Quality Committee was formed in 2012 and tasked with formulating a plan to deal with this problem, which included use of silt basins, regulations, and outreach with the public. In this project, I sought to gain an understanding of how the information on Choctaw Lake's water quality is processed and distributed within the community. Focus groups were conducted to better inform the creation of survey questions. Sources of information, trust of these sources, concern levels, and lake usage were variables measured in the survey. With this data I plan to ultimately construct a framework for future water quality communication. Preliminary data analysis shows that although a majority of residents have moderate concern over the harmful algal blooms and lake quality, misconceptions regarding its causes and effects are still present in the community. The lack of frequent digital information releases, including communication with farmers in the watershed, and small amount of regulatory oversight by the committee are issues seen by the residents, which I plan to address in constructing a communication plan for the committee.