

## **LAKE-IN-A-BOX: HOW CITIZENS ARE TAKING RESPONSIBILITY FOR DOMESTIC WATER QUALITY**

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Increased citizen interest in protecting domestic water quality and an ongoing need for high-quality water chemistry testing with short turn-around periods thrive in a symbiotic relationship. Lake-in-a-Box provides a fellowship of people willing to take responsibility and create a case for water quality improvements in their community. This paper describes the application of the Lake-in-a-Box process to Lake Hiawassee, one of many successful cases where this repeatable system has built strong relationships between stakeholders, the natural environment in which they live and the scientific community that is available to them.

Start a team – Once one member of the community spoke up about the declining water quality of Lake Hiawassee, there were many others responding with similar observations while using the lake recreationally. This elicited a sense of community responsibility for the health of the lake, and a team was formed.

Gather meaningful data – Data collection on microbial performance using a bio-electrode sensor that corresponds to available nutrients in the lake, as well as meteorological data were implemented. These data were made available to the team in real-time on a user-friendly interface that allowed the team to discern how various factors affect the quality of their lake.

Create an action plan – With data gathered and processed, the team at Lake Hiawassee determined the golf course near the lake contributed significantly to the excess nutrients in the lake and has led to excessive vegetative growth. Using this information, the team has initiated discussions with other stakeholders to create a plan of action.

Partner smart – Armed with continuous, real-time data, the team can make partnerships with surrounding entities to create solutions to the issues now identified. In the future, this is to include providing the gathered data to larger data repositories such as Water Atlas to increase the recognition of their efforts.

**PRESENTER BIO:** Shannon Monahan is the Director of Engineering Services for the Lake Cane Restoration Society. Through her work at the University of Central Florida, she possesses extensive experience in water chemistry testing and involving community members in the effort to protect Florida's natural environment.