

Project Report, May 1, 2019 – October 1, 2019

Project Name: Grand Lake Bathymetry

Begin Date: February 1st, 2019

End Date: June 30th, 2020

Project Number: SH00MEZ

Project Chief: Jason Lewis, Shelby Hunter, Kevin Smith

Cooperator: Grand River Dam Authority

Principal Cooperator Contact: Darrell Townsend, Grand River Dam Authority, Vinita, OK

Objectives:

Bathymetric survey and area capacity table of Grand Lake O' the Cherokees:

- 1) Conduct a bathymetric survey,
- 2) Construct a detailed bathymetry map of the lake,
- 3) Using the gathered data, develop Elevation-Area-Volume tables for Grand Lake, and
- 4) Compare differences between this study and any previous studies done on the lake,
- 5) Publish a USGS scientific investigations Map report.

Scope: The proposed project area includes all of Grand Lake O' the Cherokees (Grand Lake). Grand Lake covers approximately 41,779 acres with approximately 667 miles of shoreline and has beneficial uses of public and private water supply, hydropower, and recreation. Multibeam bathymetric data will be collected throughout the lake area and include an overlap at both the Twin Bridges area as well as the Elk River area bathymetric studies completed by the USGS in 2017.

Progress:

- As of August 1, 2019, the survey team concluded data collection on Grand Lake.
- Since August 1, 2019 the data has been properly compiled and certain support files such as GPS as well as Sound Velocity have been processed.

Plans for Next Quarter:

- Start the data editing process of the collected point cloud data of the lake.