

Big Hydrographic Data Sets: Their Successes, Usefulness and Applications

A CPC-FGIO Workshop at GeoHab 2025 Conference
(An Industry-Government-Academia Exercise)

May 12 – Key West, The Florida Keys, USA

In an era of large data collection, accelerated technological advancements, and an AI hunger for all data, new insights and supervised interpretations are now required to handle these data sets. One such data set is being collected today under the [Florida Seafloor Mapping Initiative](#) for the entire State of Florida, USA, overseen by the [Florida Geographic Information Office](#) (FGIO). It will be highlighted at the workshop. Comparisons of similar US State's big data collection efforts (e.g., California, Alaska, Washington) will be briefly presented to stimulate discussions on the usefulness of such large data sets. Future plans and applications of this data set will be discussed as well as ideas for other States and Countries.

In 2022, \$100 million in general revenue funds were provided to the FGIO to capture statewide bathymetric data. Two types of data have been collected to date: topo-bathymetric lidar for the seafloor to ~20 m water depth and multibeam echosounder (MBES) data for the seafloor from 20-200 m water depth. The Florida Department of Environmental Protection Office of Resilience and Coastal Protection coordinated with federal partners to maximize funds and guide data acquisition. Multiple contractors were selected to coordinate, collect, and complete the fieldwork, which is still ongoing. Review and present status of these data will be presented along with input from the contractors who participated in the exercise. In addition, presentations and open discussions are planned for insights into the next steps and directions that can provide significant follow-on benefits. This will include direct relevance to GeoHab themes and challenges, including identifying the next layer of data required to maximize the value of the program (e.g., habitat assessments, value added by direct environmental measurements such as chemical, geological, and photo sampling).

The Goals of the Workshop:

- Provide large data set case studies (evolution/progression)
- Address multi-purpose uses (problem-solving)
- Define next steps (usefulness of data to specific concerns)
- Develop a constructive interactive dialog (new insights)
- Segway into partner collaboration (partnering & funding)

A Challenge will also be presented:

- Think outside the box (new methods & applications)
- Non-orthodox data presentation (e.g., StoryMaps or others)
- Social applications (for the betterment of society)
- Educational applications (for public outreach/interest)

A reward for the most unique and potential applicable uses (e.g., new methodology, application, or filling of gaps) will be awarded.

Come and find out what others think, recommend, or do with large data sets. An opportunity will exist for collaboration and scientific advancement.