

A Nation of Volunteered Data: Analysis of the NGS's GPS on Bench Marks Project

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SUMMARY

The National Oceanic and Atmospheric Administration's (NOAA) National Geodetic Survey (NGS) has a crowd-sourced data collection effort called GPS on Bench Marks. This project is a collaborative effort with thousands of volunteer surveyors across the United States at the local, regional, state and federal level. Volunteer surveyors provide their static survey data along with a few photographs to NGS. In turn, NGS processes the data, provides survey coordinates in the National Spatial Reference System (NSRS), and stores the data for future NSRS modernization and development. The vast majority of this data is open access and can be easily retrieved online. The GPS on Bench Marks project has been ongoing since 2014 with slightly different goals from year to year. Recently, the project has primarily focused on collecting data for hybrid geoid modeling and building a transformation between the current vertical datums and a future geoid based vertical datum. User participation has exploded in the last 36 months as NGS gets closer to a modernized NSRS. This paper will highlight the overall project; workflows and webmaps that NGS has established that make it easy for volunteer surveyors to find, collect, and submit their surveys; and how NGS uses this data for NSRS modernization.

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