

## Citizen Science, Surveyors and Geodesy

By Frank Lenik, PLS

Citizen science is a term which has recently come into vogue, but which has been practiced for many years. It is the term which is used to describe the activities of ordinary people, participating in scientific work to augment research or to contribute data for analysis by professional scientists or scientific institutions.

I first participated in a citizen science project in 1971 when I took part in my first National Audubon Society Christmas Bird Census. At the age of twelve it was an adventure for me to try to identify and count all of the birds in fifteen mile diameter circle. Today, ornithologists and ecologists can look back over 114 years of continuous bird count data to see real trends in populations. Measurable scientific data, available to everyone because of one person's vision and the work of many dedicated volunteers.

The experience of land surveyors in the United States over the last few years collecting GNSS data during National Surveyor's Week has been an outstanding example of citizen science. The work of many dedicated individuals was gathered and shared for the good of the community. Under the auspices of the National Society of Professional Surveyors hundreds of OPUS Shared Solution points were collected by the land surveying community and put into the hands of scientists at the National Geodetic Survey (NGS). Today, those scientists are incorporating those data, along with data from many other sources to create a new geodetic reference frame for the country. That model will serve not only the land surveying community, but all of the citizens of these United States.

Next year National Surveyors Week will be celebrated from March 21 – 26, and we will have another opportunity to contribute data for incorporation into the new reference frame. The more data we contribute the better the model will be. So let's prepare ourselves for another GNSS field campaign to collect more OPUS Shared Solutions than ever before (<http://www.geodesy.noaa.gov/OPUS/view.jsp>). Theodore Roosevelt said "Every man owes a sacred obligation to the profession which gives him his livelihood." Stand up and be counted. When NGS introduces the new datum in 2023, I want to say that we were a part of that process.

Oxford English Dictionary

citizen science n. scientific work undertaken by members of the general public, often in collaboration with or under the direction of professional scientists and scientific institutions.

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