Title: *The National Map* Corps: Using Crowdsourcing to Improve *The National Map*

Abstract:

The mapping crowd-sourcing program, known as *The National Map* Corps, encourages citizens to collect structures data for *The National Map*.

Over the past two decades the U.S. Geological Survey (USGS) National Geospatial Program (NGP) has promoted several citizen mapping projects, including *The National Map* Corps, with some success. The citizen mapping program was suspended in 2008. Improvements in technology, the popularity of social media, and the explosion of crowdsourcing projects like OpenStreetMap (OSM) and Wikipedia, combined with the need for an improved structures dataset, led the USGS to conduct several pilot projects to explore the feasibility of reviving *The National Map* Corps (*TNM*Corps) volunteer program.

Pilot projects included partnering with the State of Kansas to collect transportation data, working with university students to collect structures in the Denver metro area, and finally engaging volunteers to update structures for the entire state of Colorado. The volunteer-contributed data were accurate and exceeded USGS quality standards.

The significant results of the Colorado pilot led to a phased, nation-wide expansion of the crowd sourcing/volunteer project. As of August 2013, all 50 states were available for volunteers to collect and update 10 structure feature types including schools, fire stations, cemeteries, and others. Volunteers can add, modify, delete, and verify structures data through a customized OSM-based online map editor. As of March 2014 more than 570 users have made 37,000 contributions to *TNM*Corps.

The USGS has also worked to incorporate gamification, volunteer recognition, and social media into the current *TNM*Corps. Volunteers can earn virtual badges based on antique surveying instruments which increase in complexity/sophistication as the volunteer collects more points. In addition volunteers are recognized via Twitter with their permission. Mapping Challenges have also been used to encourage volunteers to edit specific areas and structure types.

Keywords: Volunteered Geographic Information (VGI), Crowd Sourcing, The National Map (TNM), USGS, Data Collection