Mapping our Nation: How volunteers are modernizing the U.S. Geological Survey’s National Map

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History and Introduction

- Created in 1879 with the mission of providing reliable topographic mapping, the U.S. Geological Survey (USGS) is the primary civilian mapping agency for the United States.
- The National Map (TNM) is a collaboration between the USGS and its partners at the Federal, state, and local level to provide accurate and up-to-date topographic data of the United States. Its primary uses include: recreation, scientific analysis, and emergency response.
- The National Map Corps (TNMCorps) is a crowdsourced, mapping project implemented to collect structures data for TNM.
- As interns from UNAVCO we participated in a summer program to help review and update structures data on The National Map. This included both editing points and peer reviewing the edits of volunteers.

Editing Process

- 17 types of structures are collected, each with their own specific icon (Fig. 2).
- Volunteers edit by adding, deleting, or updating existing points.
- Points are placed on their respective structure in the center of the building.

Quality Assurance

- Volunteers must follow specific guidance for points using TNMCorps User Guides, the structure features list, and FAQ articles.
- Quality checks are performed by USGS staff on random samples of a volunteer’s points when they meet specific editing milestones.
- As interns, we reached the level of Peer Reviewers.
- We Peer Reviewed 90+ points as a team.

Our Results

- Our main assignment was to assist in seeking out, researching, and digitizing points on TNMCorps’ digital map.
- We updated/deleted these man-made structures, paying special attention to city halls, schools, and fire stations.
- Using TNMCorps’ online editor, we looked for unedited points on the map, then input the correct/address and physical locations for those points.

Volunteers and Impact

- Volunteers contribute significantly by updating and verifying data on man-made structures.
- Users get constructive feedback on their edits to help them improve.
- Crowdsourcing adds a level of authenticity to the program.
- Approved points are input onto US Topo maps with specific icons (Fig 8).
- Mapping challenges focus volunteers’ efforts on specific structure types in specific areas, ex: mapping all fire stations in a state (Fig 9).
- Volunteers get virtual badges based on unique points edited, and some are featured on TNMCorps website (Fig 10).

Acknowledgments

We would like to thank our USGS project mentors Erin Korris, Emily Anderson, and Chuck Matthis for their guidance and assistance on this project. In addition, we would like to extend our thanks to Dr. Andria Ellis and Kelsey Russo-Nixon for their professional development expertise. UNAVCO for this opportunity, as well as our faculty mentors Rosann Poltrone and Angela Green-García for their continued support.

This material is based upon work supported by the National Science Foundation under Grant No. 1540824 and Grant No. 1724794. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.