Crowdsourcing The National Map

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The National Map
Your Source for Topographic Information
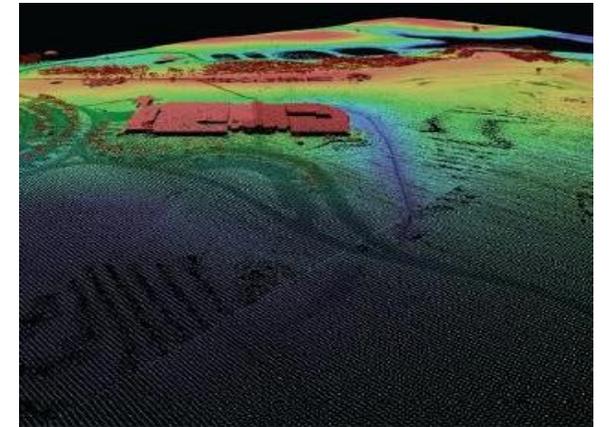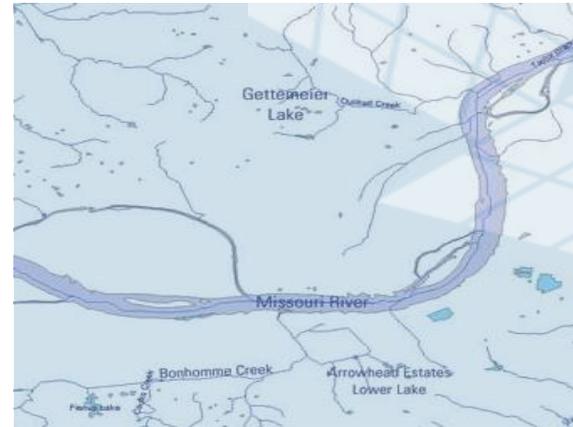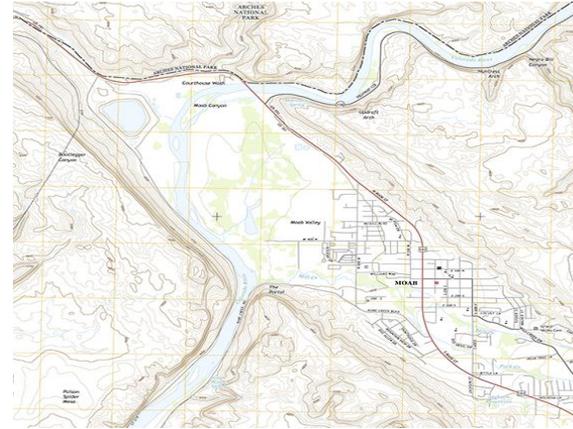
Second United Nations World Geospatial Information Congress
October 2022
Erin Korris

The National Map Corps

Using an online web mapping application, volunteers update structures in support of The National Map & US Topo Maps

- Participants - General Public

- Easy registration - username and email address (OAuth)

- All materials online (i.e. user guide, Q&A)

- Process - Verify, update, add or delete points

  - Required: Check location and Name

  - Optional: Address, City, Zip

Data collected: downloadable, freely available, and in the **public domain**.
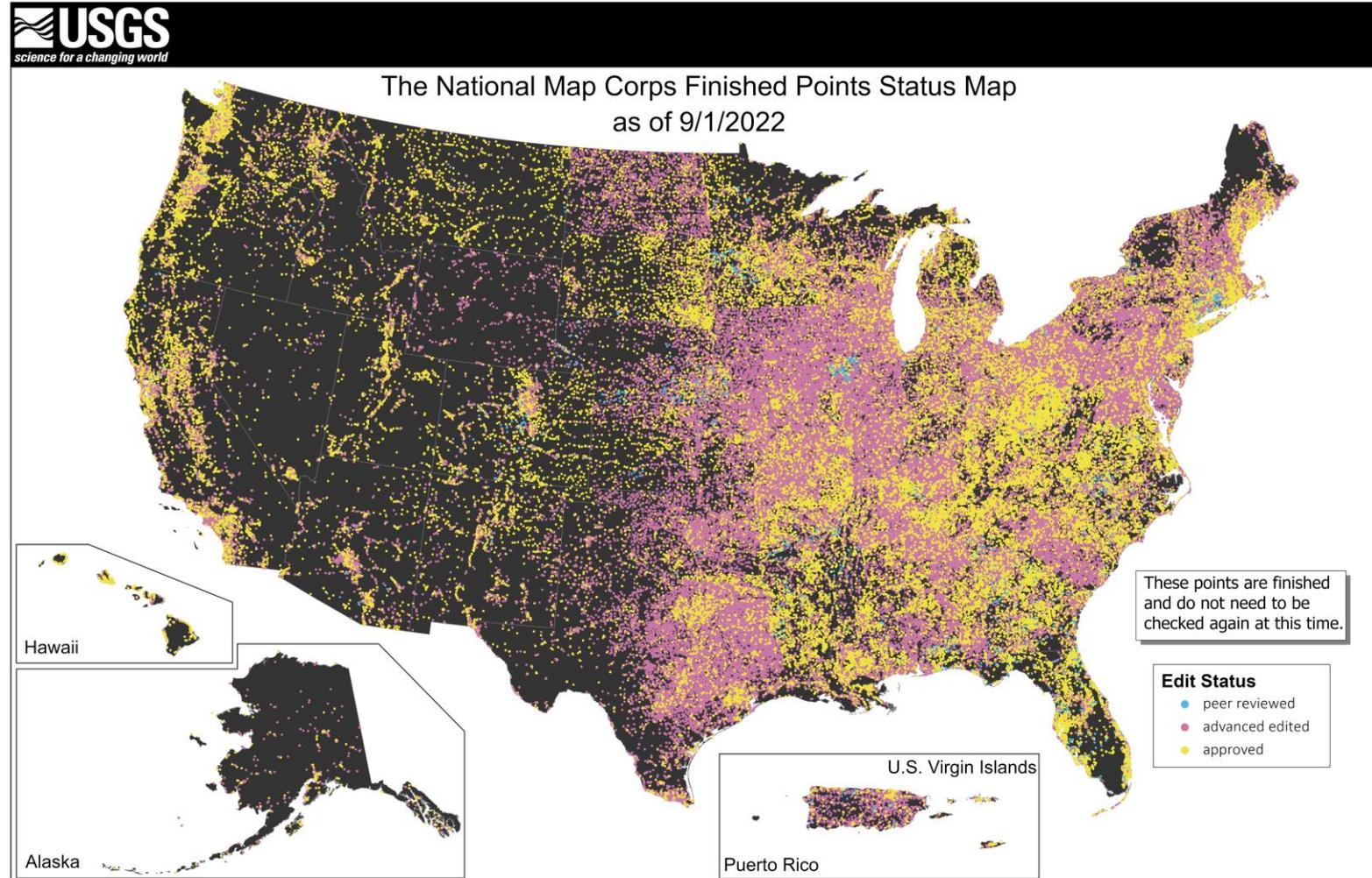
+ Current Scope

All 50 states, PR, USVI, and Pacific Territories

- **Structure types**
  - Schools
  - College/University
  - Fire Station/EMS
  - Law Enforcement
  - Prison/Correctional Facility
  - State Capitol
  - Hospital/Medical Center
  - Ambulance Service
  - Cemetery
  - Post Office
  - Courthouses
  - City/Town Hall

The National Map Corps Finished Points Status Map as of 9/1/2022

Hawaii

Alaska

U.S. Virgin Islands

Puerto Rico

These points are finished and do not need to be checked again at this time.

Edit Status
- peer reviewed
- advanced edited
- approved

Ensuring Quality (QA)

- **Tiered-editing approach**
  - Standard Editors
  - Peer Reviewers (+25 & quick QA review)
  - Advanced Editors (+200 & QA review)

- **User guides and online materials**
  - Describes editing process, what to collect/not to collect, attribute formatting
  - Q&A and FAQs

Ensuring Quality (QC)

- **"Magic Filter"- Automated Checks**
  - Formatting errors
  - Spelling
  - Vandalism
  - Instant Feedback on errors
- **Review Queue**
  - Any points that fail Magic Filter
  - All deletions
- **Daily quality monitoring**
  - New editors
  - Large # of edits
  - Deletions
  - Role promotion QCs
  - Volunteer emails

Quality Studies

Colorado Quality Study (FY2012)
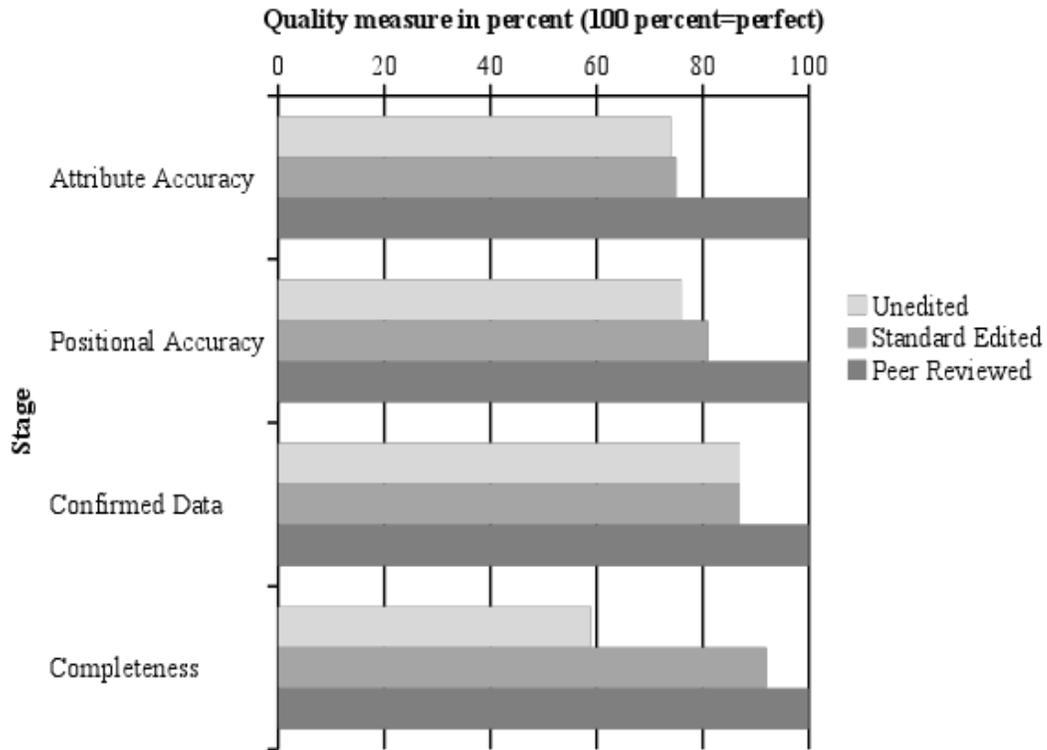
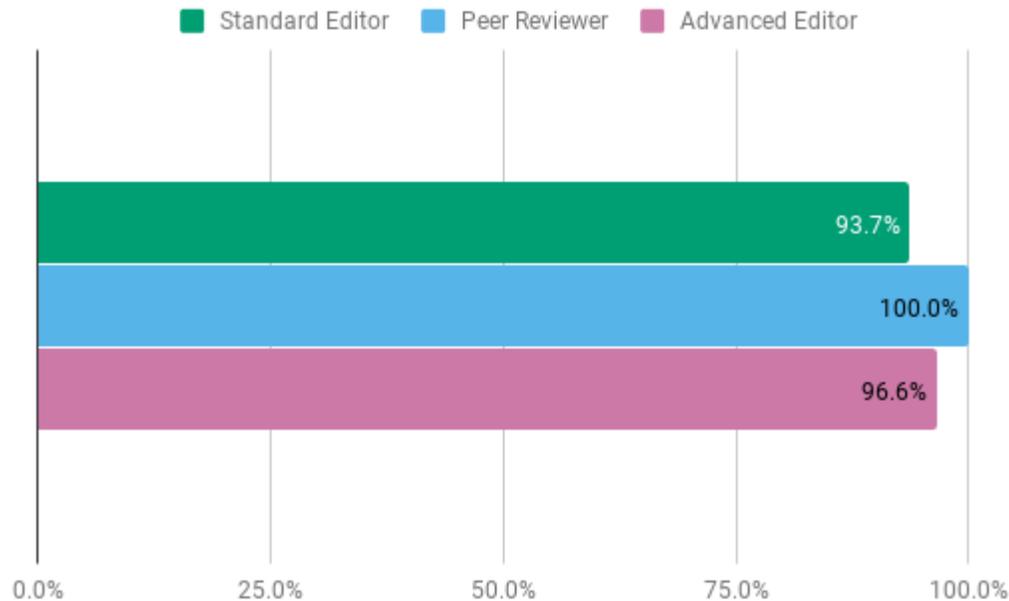## National Quality Study (FY2014)
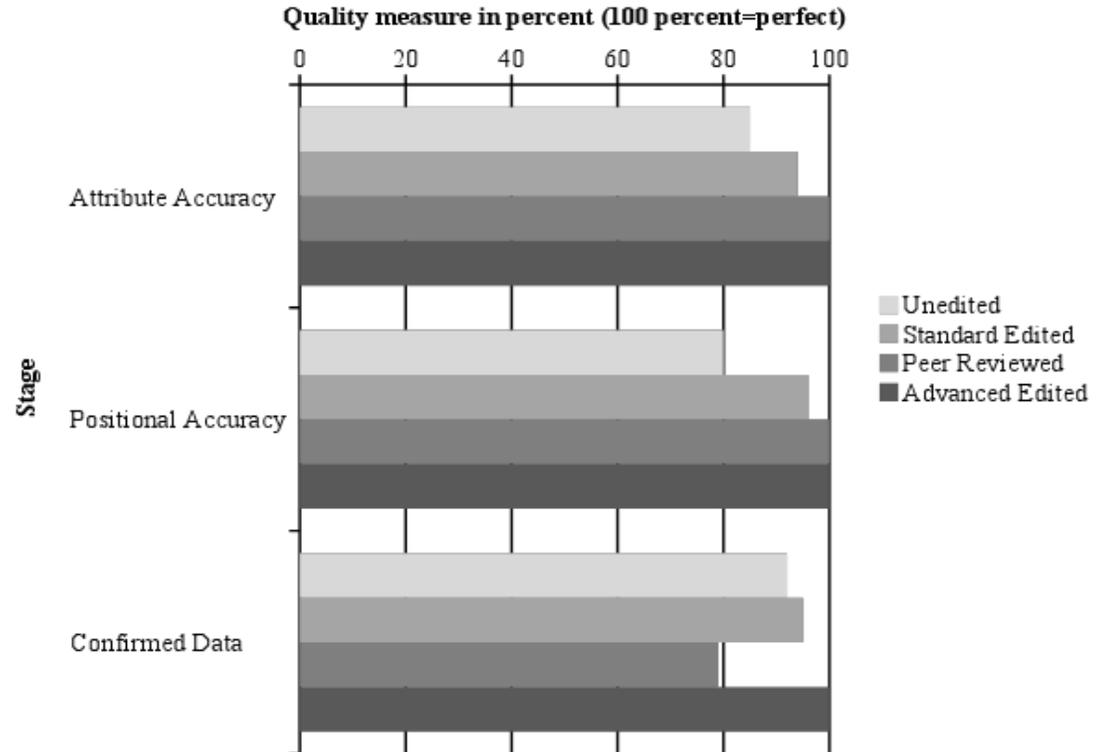
2018 Data Review

- 10% margin of error, 95% confidence level with a population of 138,318

- Sample size: 96
  - Standard Editor (n=63)
  - Peer Reviewer (n=4)
  - Advanced Editor (n=29)

Overall Accuracy (Position and Name)
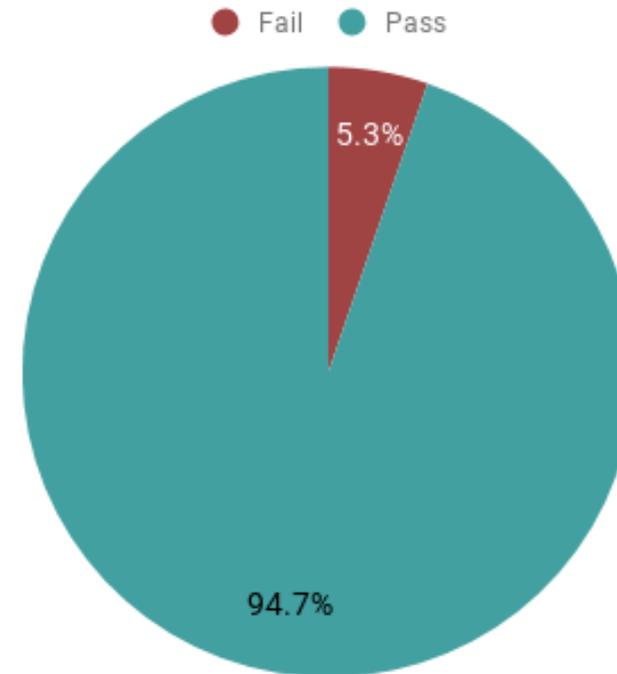
Accuracy by Editor Role

Keeping the Crowd Happy

- Special concerns for crowdsourcing projects:
  - Volunteer Recruitment
  - Volunteer Engagement
  - Participant Motivation

+ Recruitment and Engagement

- Volunteer opportunity websites (volunteer.gov, VolunteerMatch, SciStarter, etc.)

- Social media

- USGS news releases

- Conferences, publications, presentations

- Newsletters

- Communication
  - Email
  - Q&A

Engagement

- Welcome emails

- Structure Finder

- New content (e.g. courthouses and city/town halls, Pacific Territories)

- Volunteer stories/articles

Participant Motivation

Recognition Program

- Earn virtual badges

- Recognition via social media, newsletters, websites

+ Participant Motivation / Engagement

Map Challenges & Focused Data Editing
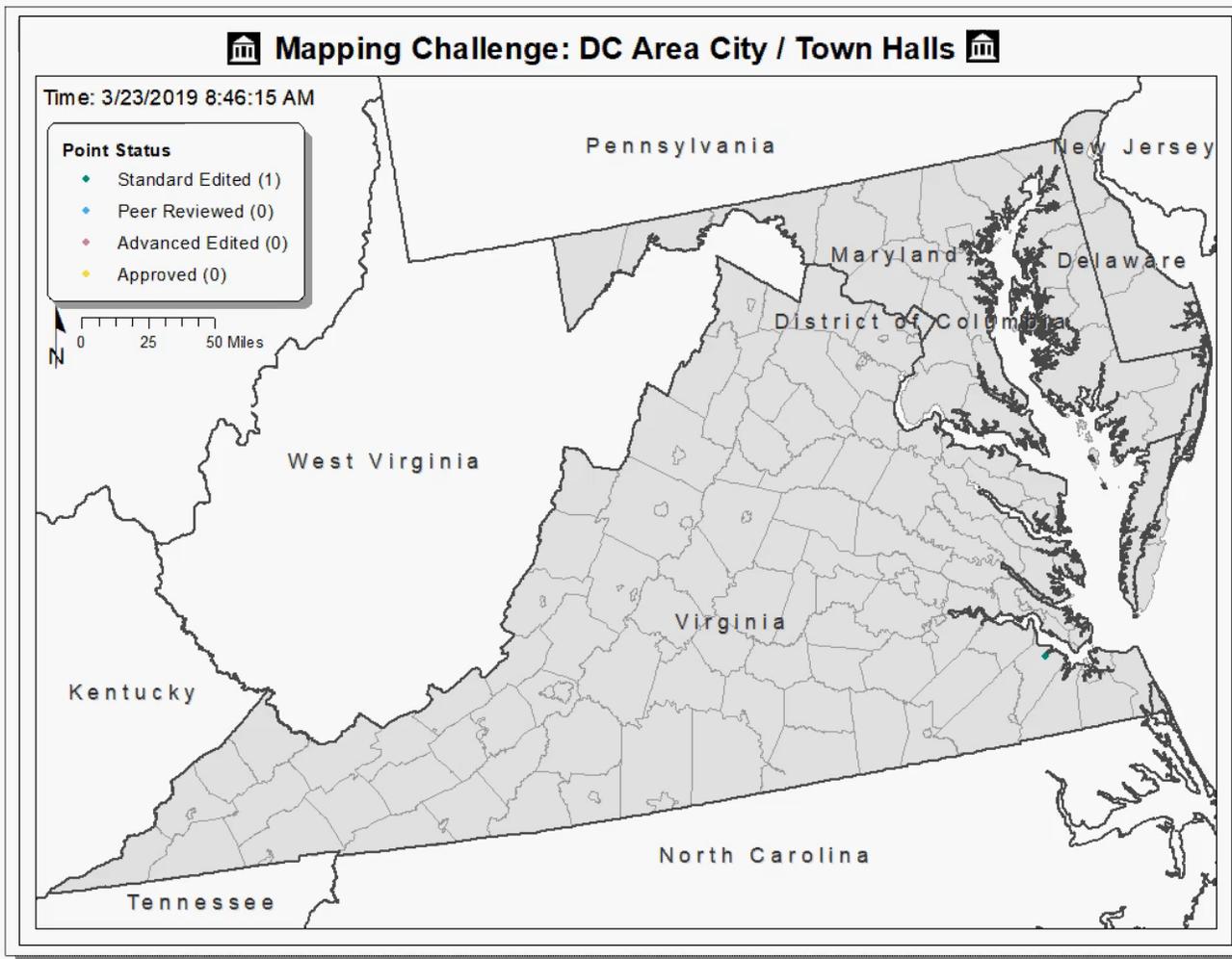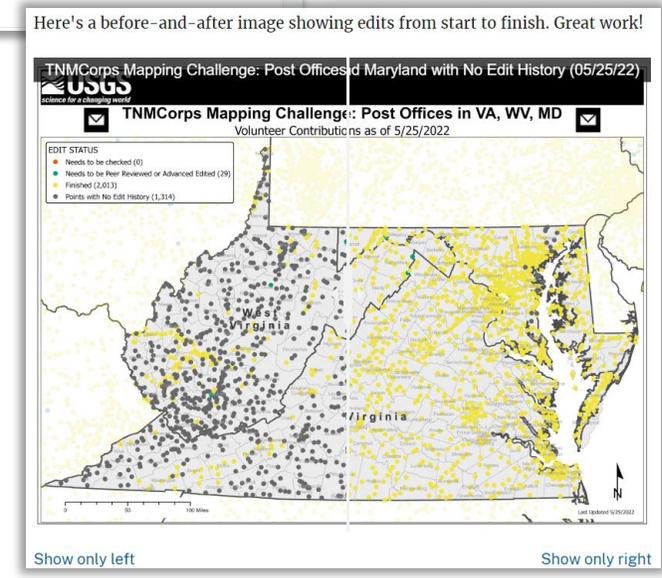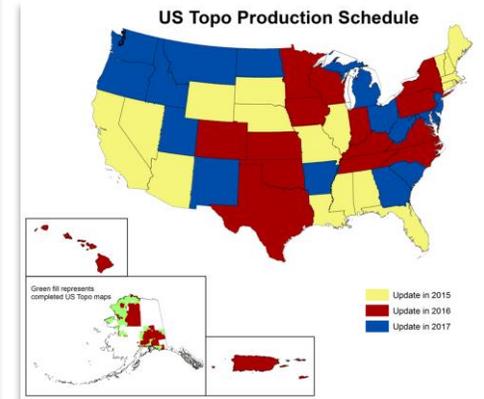
+ Results

- 700,000+ volunteer contributed points

- Over 3,300 volunteer contributors

- Daily editing average: 200+ edits

- 8.4 FTE (full-time equivalents) annually

- Proven data quality

- Supports the mission: The National Map and US Topo maps

- Exposure for USGS mapping products and services

- Community engagement

The National Map Corps Volunteer Contributions
March 29th 2012 to August 31st 2022
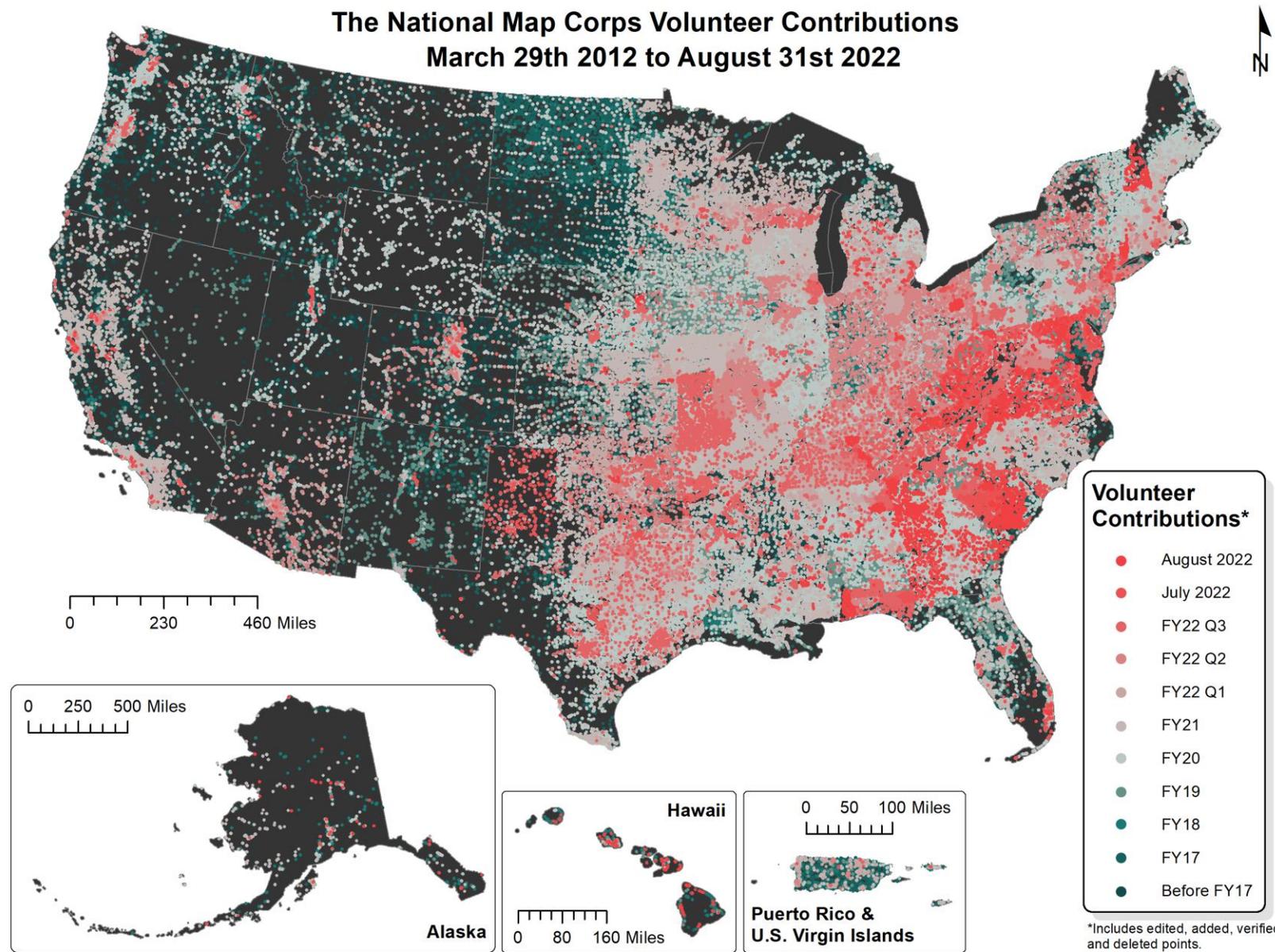
Volunteer Contributions*

- August 2022
- July 2022
- FY22 Q3
- FY22 Q2
- FY22 Q1
- FY21
- FY20
- FY19
- FY18
- FY17
- Before FY17

*Includes edited, added, verified, and deleted points.

13

+

Priority Improvements for FY23

- Release mobile-friendly editor

- Release previously approved content
  - Rec features (campgrounds, trailheads, visitor centers)

- Get approval for additional content

- Implement restricted editing (e.g. no volunteer editing over NPS lands)

- Collaborations with other government agencies:
  - FEMA/ORNL on buildings
  - OSM/DOT/FRA on RR tunnels

- Explore staging an application for quick emergency response

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New Editing Application

Coming Soon

- Improved and modernized

- Integrated mapping challenges, recognition, volunteer communication and Q&A

- Leaderboards

- User added services

- Partner data capabilities
  - Batch uploads
  - Restricted editing
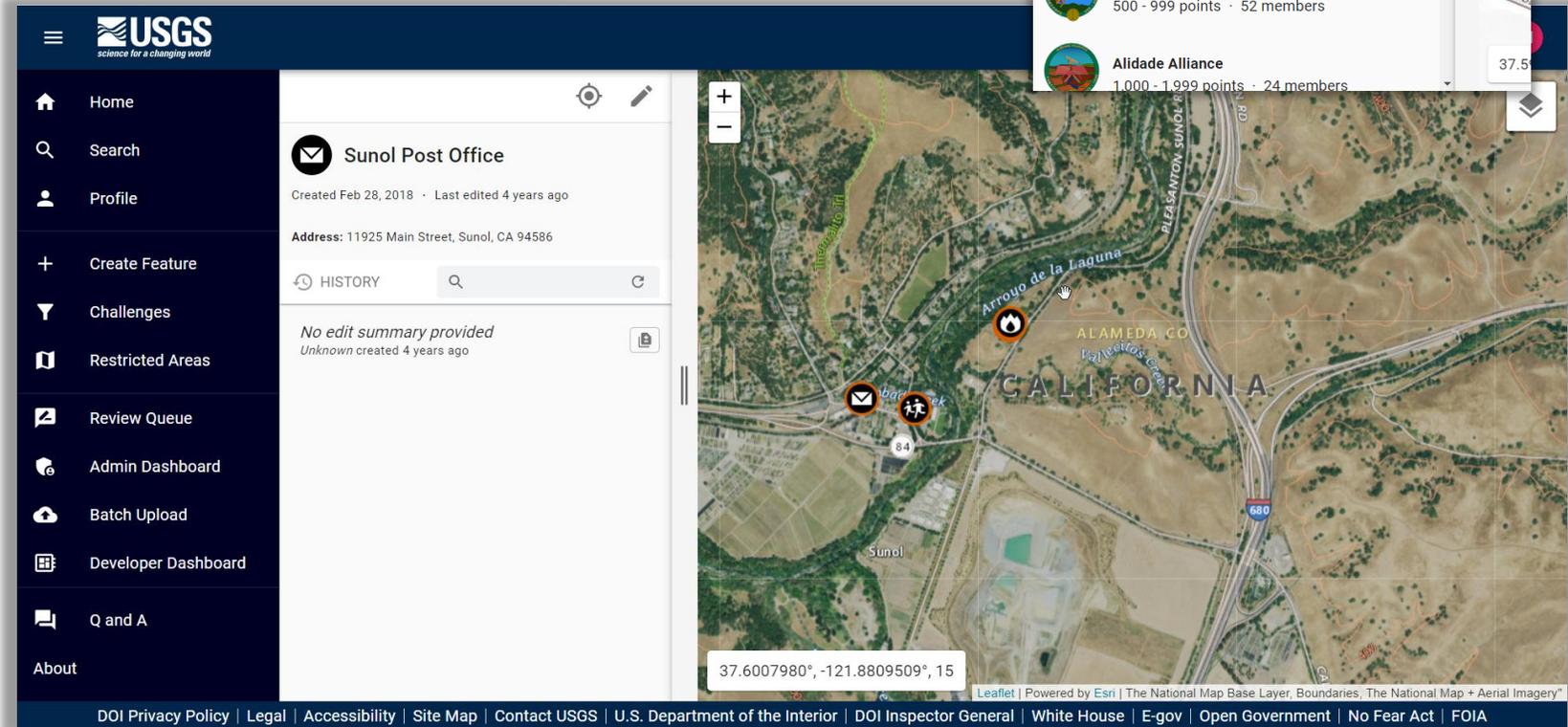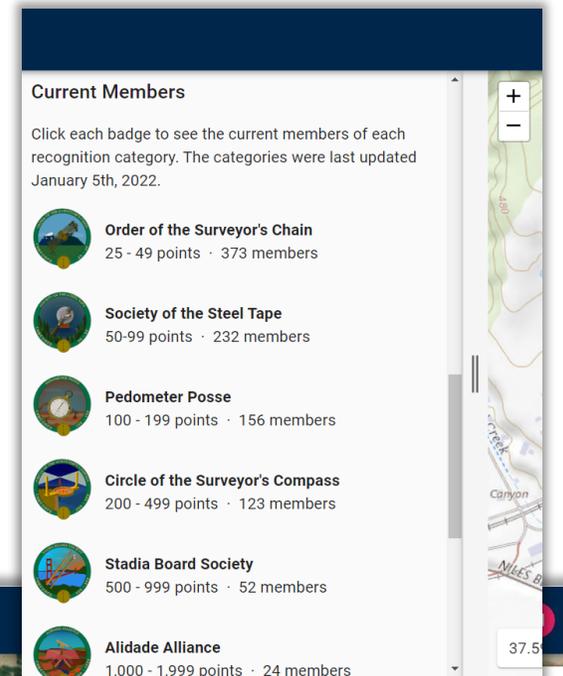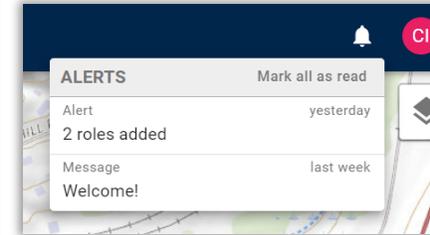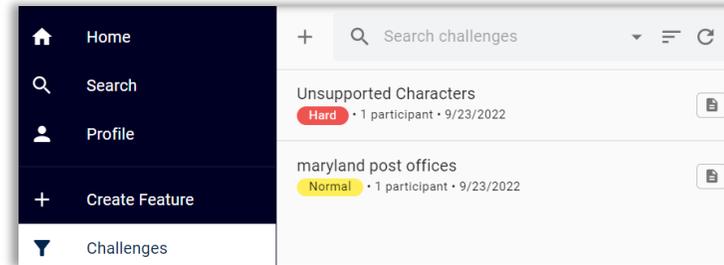
+ Do some editing!

edits.nationalmap.gov/tnmcorps

- Easy to sign up and get started

- All materials (e.g. user guide) online
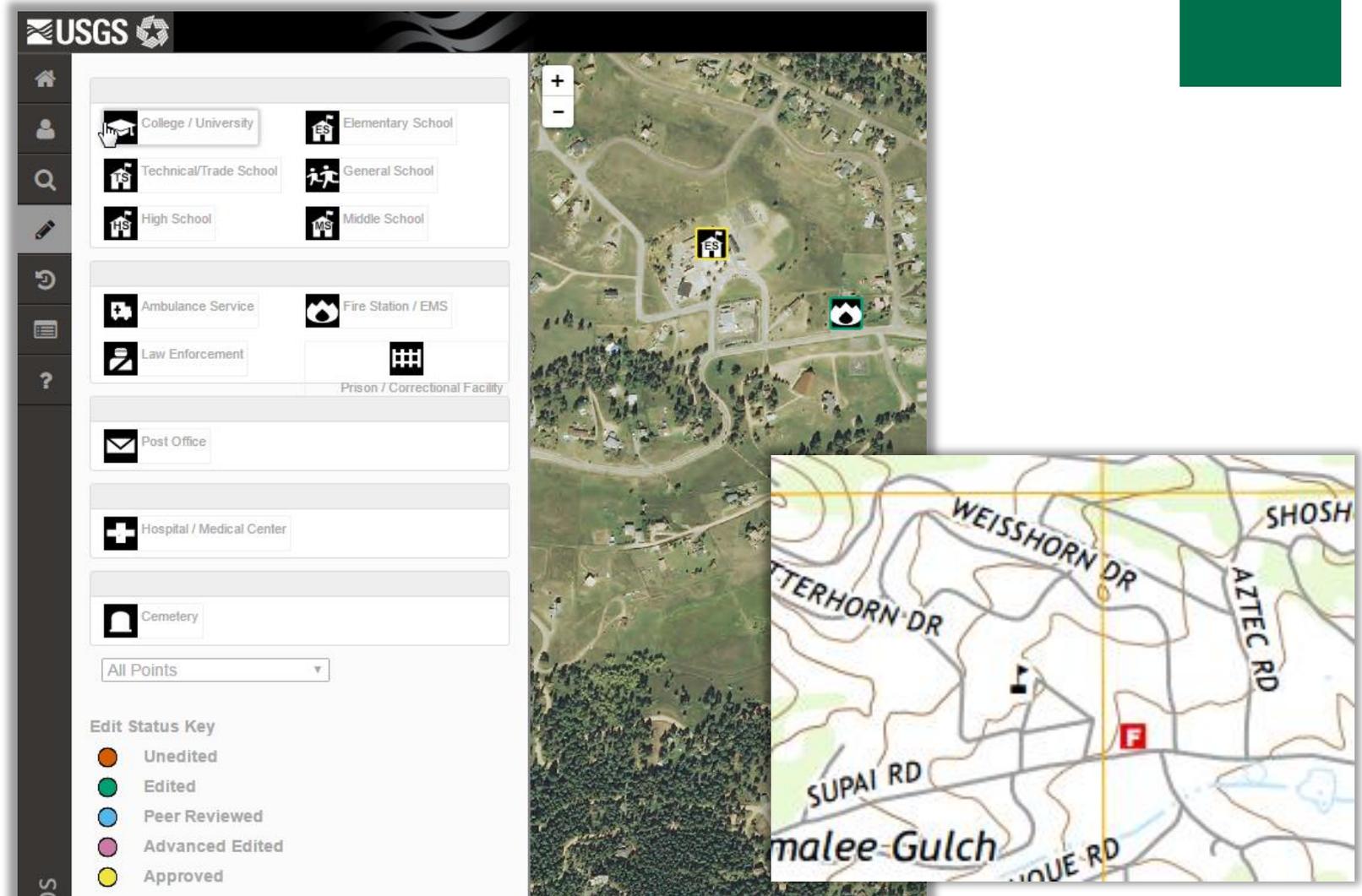
- No commitment

- It's fun! ☺

Questions?

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