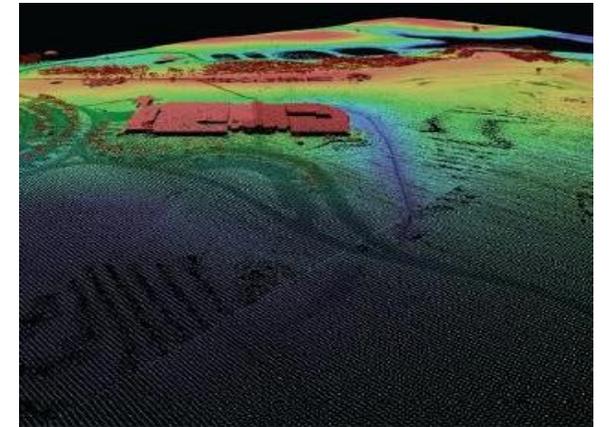
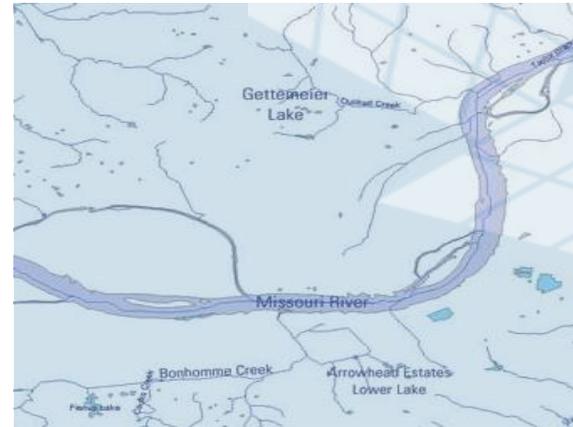
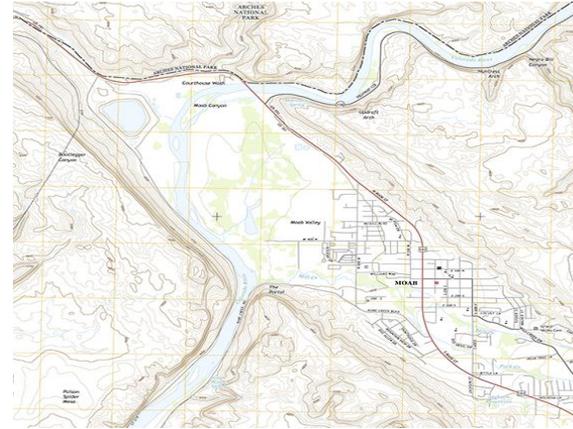




Crowdsourcing The National Map



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



USGS science for a changing world

Welcome! Help the USGS update structure points in support of The National Map and US Topo maps.

Tip: if imagery is slow to load, try switching layers in the top right corner of the map.

The National Map Corps

USGS Volunteer Map Editor update points in support of The National Map and US Topo maps.

TNMCorps Overview
TNMCorps Project Webpage
User Guide
Q&A Community

Getting Started...
Contact The National Map Corps Team

Recognition & Leaderboards

Tweets by @USGSTNM

The National Map @USGSTNM
Keeping Current with Map Services Made Easier: USGS National Map web map services transitioning to Simple Notification Service (SNS) to keep users informed, transition ending June 15. Details: go.usa.gov/xQm7M #USGS #mapping #data #GIS

DOI Privacy Policy | Legal | Accessibility | Site Map | Contact USGS | U.S. Department of the Interior | DOI Inspector General | White House | E-gov | Open Government | No Fear Act | FOIA

Data collected: downloadable, freely available, and in the public domain.

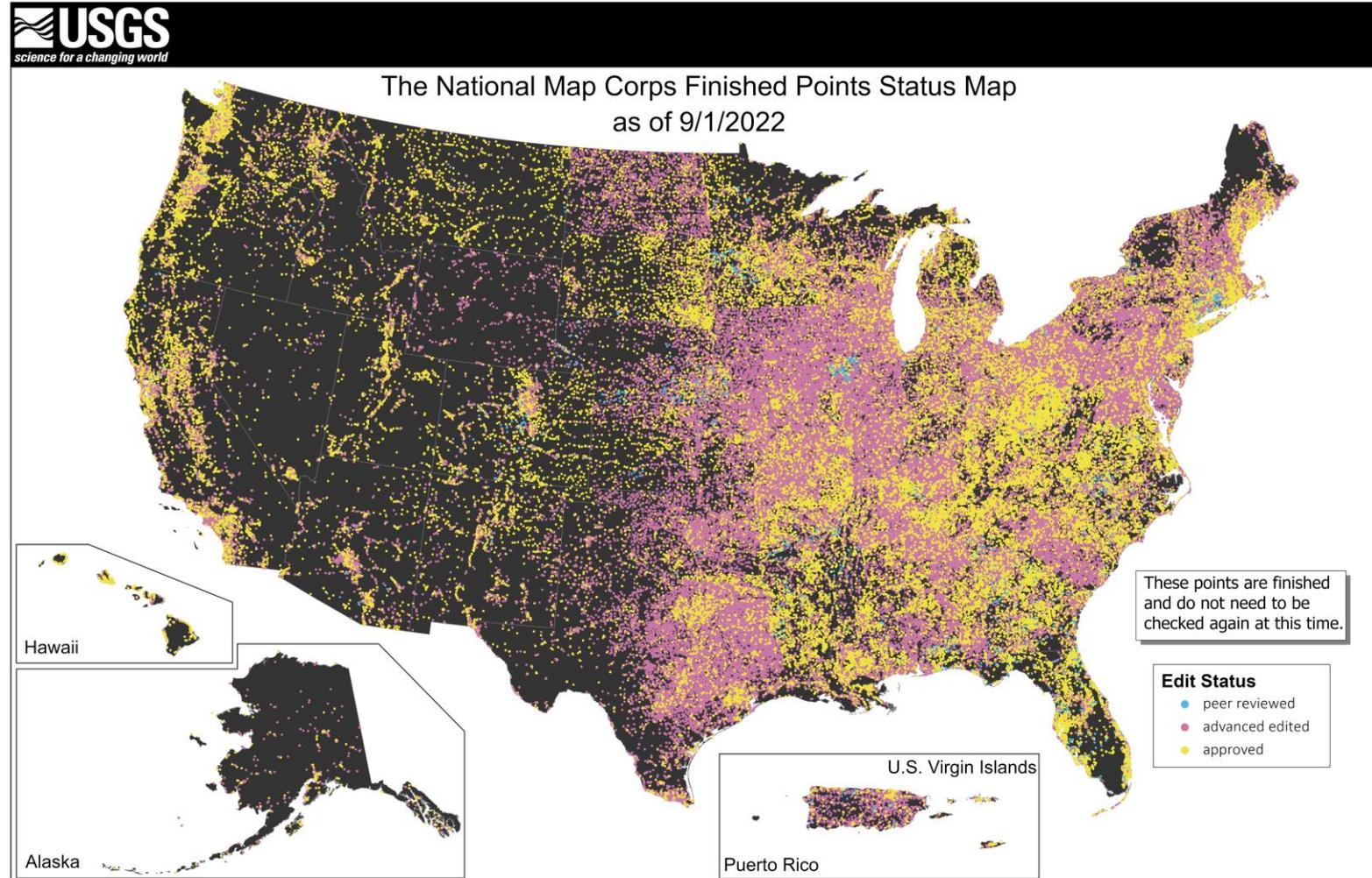
+ Current Scope

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



+ Ensuring Quality (QA)

■ Tiered-editing approach

- Standard Editors
- Peer Reviewers (+25 & quick QA review)
- Advanced Editors (+200 & QA review)

■ User guides and online materials

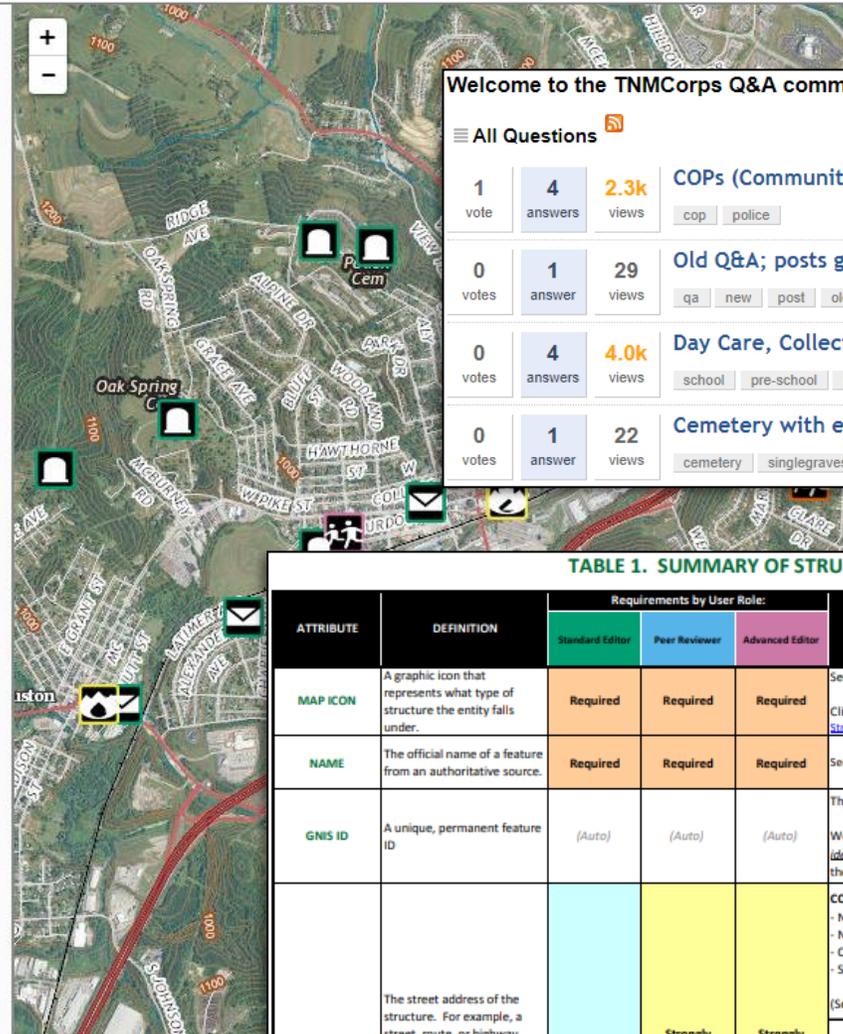
- Describes editing process, what to collect/not to collect, attribute formatting
- Q&A and FAQs

General School, Elementary School, Middle School, High School, College / University, Technical/Trade School, Fire Station / EMS, Law Enforcement, Ambulance Service, Prison / Correctional Facility, Post Office, Hospital / Medical Center, Cemetery

All Points

Edit Status Key

- Unedited
- Edited
- Peer Reviewed
- Advanced Edited
- Approved



Welcome to the TNMCorps Q&A community!

All Questions active newest hottest most voted

1 vote, 4 answers, 2.3k views: COPs (Community Oriented Police Houses) cop police 2 days ago

0 votes, 1 answer, 29 views: Old Q&A; posts getting updated qa new post old updates 28 Mar, 15:06

0 votes, 4 answers, 4.0k views: Day Care, Collect or not school pre-school preschool 28 Mar, 11:10

0 votes, 1 answer, 22 views: Cemetery with extra point for a single gravesite cemetery singlegravesite graveyard gravesite 27 Mar, 17:36

TABLE 1. SUMMARY OF STRUCTURES ATTRIBUTES

ATTRIBUTE	DEFINITION	Requirements by User Role:			NOTES
		Standard Editor	Peer Reviewer	Advanced Editor	
MAP ICON	A graphic icon that represents what type of structure the entity falls under.	Required	Required	Required	See the User Guide for more information on how to change symbols. Click here for more information on the different symbols and what they represent: Structures List
NAME	The official name of a feature from an authoritative source.	Required	Required	Required	See Table 2 for some guidelines for populating this field.
GNIS ID	A unique, permanent feature ID	(Auto)	(Auto)	(Auto)	This field is automatically populated by USGS's databases. We only ask users to make note of this field when reviewing duplicate features and <i>identifying which duplicate feature to delete</i> . Users should delete the duplicate point with the higher GNIS ID.
ADDRESS 1	The street address of the structure. For example, a street, route, or highway address representing the physical location of a	Optional	Strongly Encouraged	Strongly Encouraged	CORRECT: - Numbered address (e.g. 311 Main Street) - Numbered address and suite no. (e.g., 311 Main Street, Suite 150) - Cross streets (e.g. Main Street and 31st Avenue) - Street name only without numbered address (e.g. Main Street) (See Tables 2 and 3 for additional guidelines for populating this field.) INCORRECT: - Post Office (PO) box - Rural route

+ 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

Fetch

Filter:

Basic

GNIS Name **Type**

AMERICAN HERITAGE ACADEMY **Delete**

Dorchester County Courthouse **Create**

Perm ID: 71d3694d-80f7-46cf-8a8c-a5773e12771c

Edit Details: GeometryOther

Editor: **Show All Editors**

Edit Date: 03/25/2018 02:35:42 PM

Reason(s): **Show Failures**

Comment: <https://www.dorchestercountysc.gov/services/courts-judicial-services/clerk-of-court/courthouse>

Preview **Approve** **Reject**

Dillon Police Department **Update**

Dillon County Sheriff's Office **Update**



Hi RiverRunner,

Thanks for giving our project a try and for taking the time to do some editing! We really appreciate your involvement and we hope you'll continue to work with us!

Since you've been doing a significant amount of editing lately, we performed another check on a sample of your points. This is something we do for all of our volunteers to see where we can provide assistance while making sure that the data going into [The National Map](#) is of excellent quality.

As I was reviewing your points, I made a few adjustments.

Fosston High School

This school was labeled as a high school when grade levels posted on its [website](#) and [handbook](#) fall into the category of a combined middle- and high-school. So I changed the symbol from a high school to a general school:

Possible Errors Have Occurred

The edit has been saved but will require additional review. The issues are listed below:

Naming

- Please include one of the following in the "Name" field: Post Office, Postal Unit, Postal Station

OK

User Edit Activity Search 2018-03-01

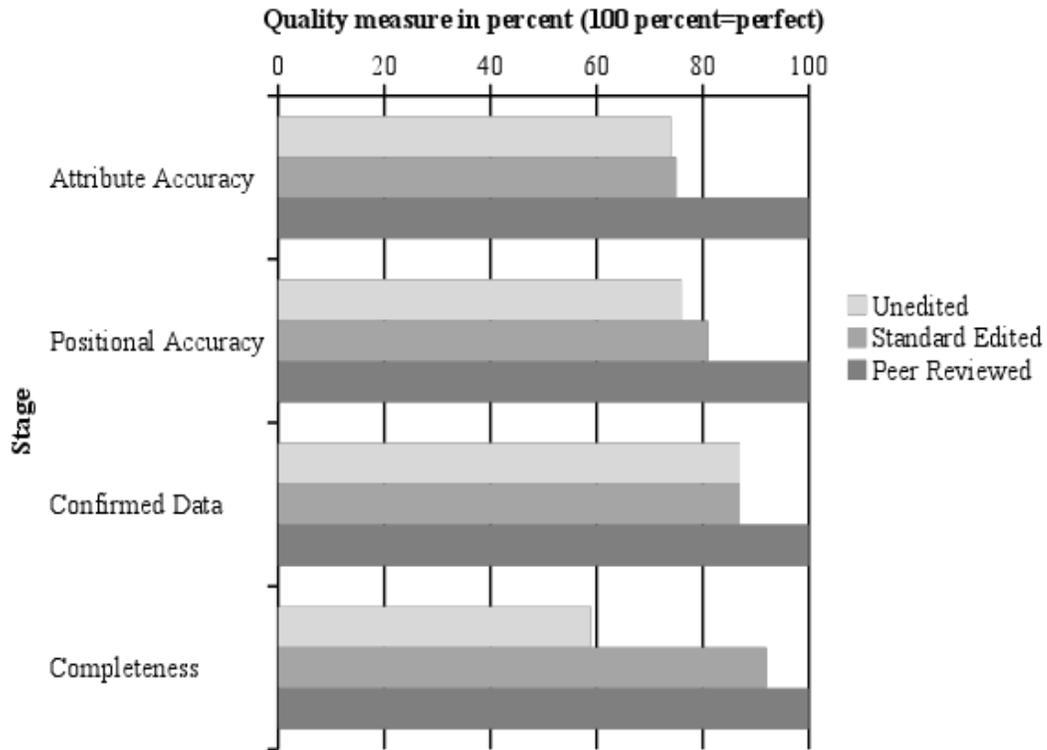
Username	Total Edit Count	Distinct Edit Count	Delete Edit Count
Rick Ely	1309	1267	533
superlemur	949	926	61
Dart14kb	695	681	103
erjaramillo	668	628	22
msean21	704	533	18
bmorales55	551	508	74
TSDNAV	452	444	30

Export CSV

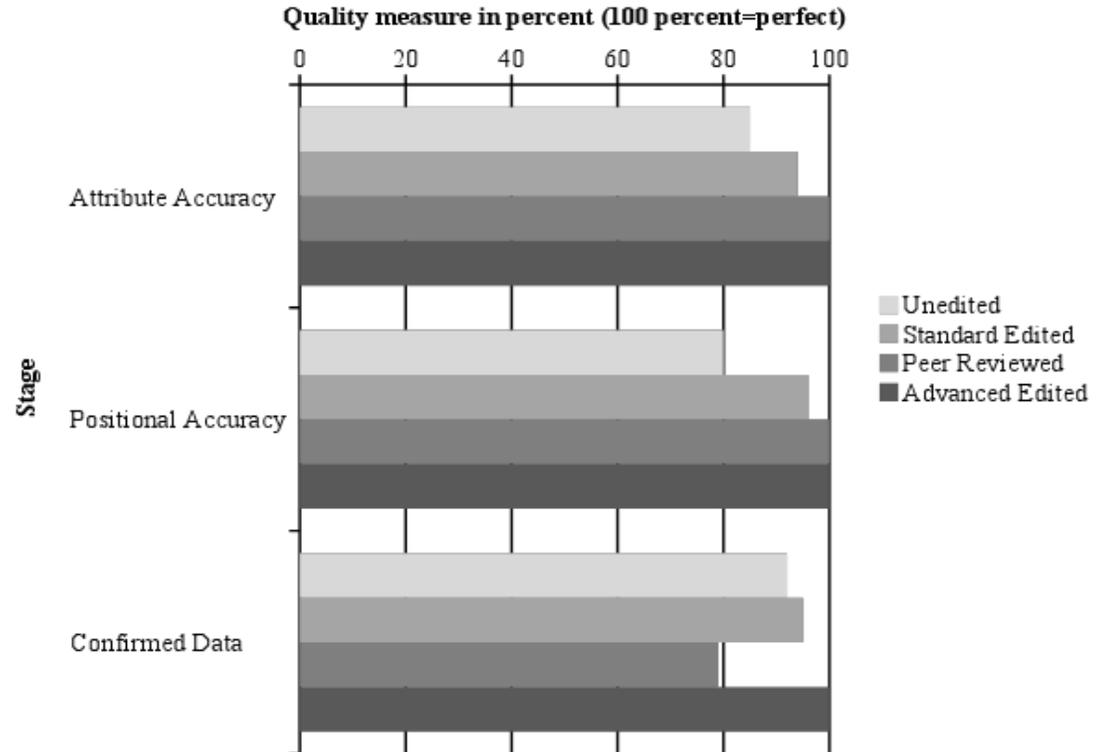


Quality Studies

Colorado Quality Study (FY2012)



National Quality Study (FY2014)

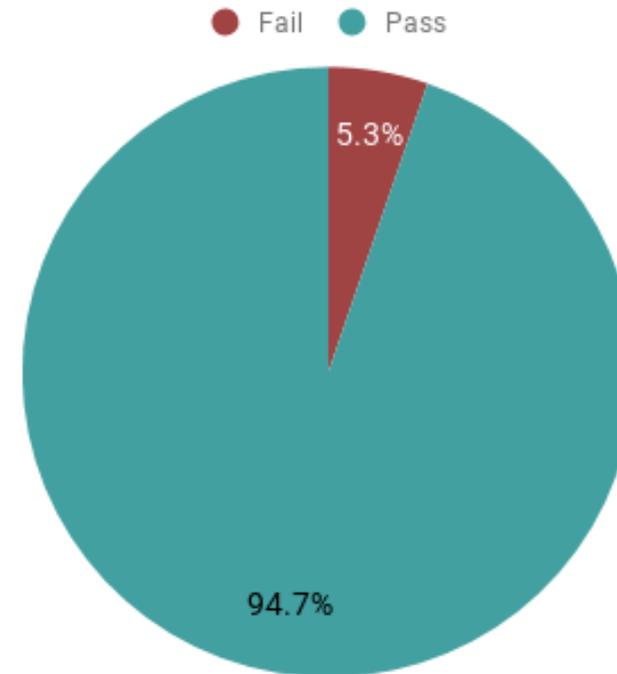




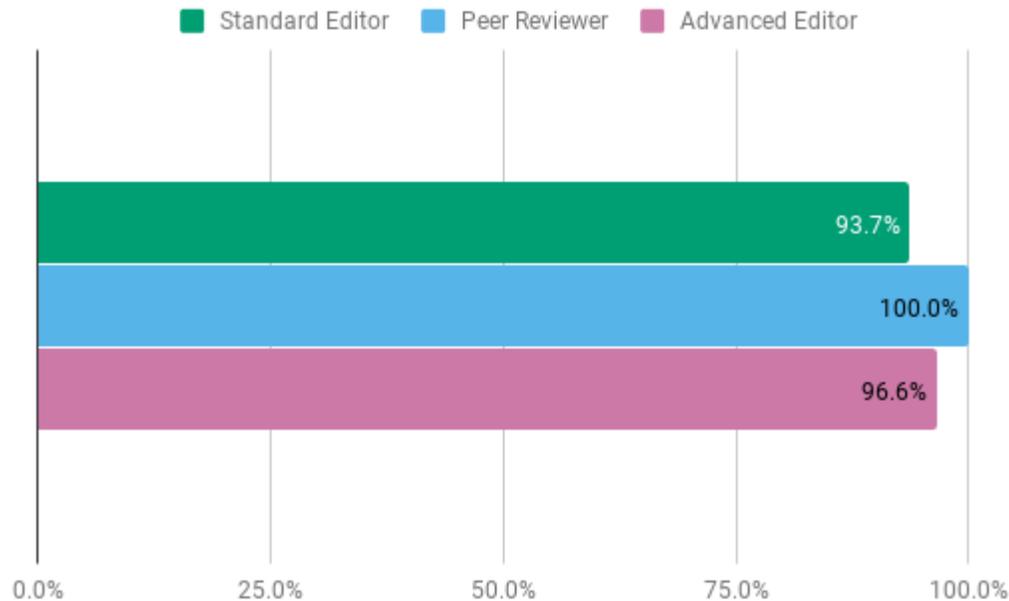
2018 Data Review

- 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

The National Map @USGSTNM · May 15
 Angela P, @kehcoelho, & Andrew Tscherne advance to the Society of the Steel Tape level – almost 100 points submitted. go.usa.gov/xnhrq #TNMCorps, @FedCitSci #citsci #citizenscience #USGS #USGS #mapping #GIS




Welcome to the TNMCorps Q&A community!

All Questions		
1 vote	1 answer	11 views
Public Attractions Icon		
[actions] [public]		
1 vote	2 answers	35 views
Hospitals - Historic		
[hospital]		
2 votes	1 answer	36 views
Columbarium		
[cemetery] [columbarium]		
1 vote	4 answers	105 views
Identifying Cemeteries		
[cemetery]		
1 vote	3 answers	639 views
How can I filter unedit		
[filter] [query]		
0 votes	2 answers	862 views
Prison or Jail?		
[jail] [prison]		

Newsletters Connect About

Mapping Challenges Updates April 2022



Quarterly mapping challenges updates and summary statistics.

[Mapping Challenges Updates April 2022](#)

Weekly List of New Recognition Members



This list showcases volunteers who earn new recognition badges week to week.

[New Recognition Members](#)

Past TNMCorps Newsletters Articles

Citizen Science Month is Coming Up!



Browse all TNMCorps newsletter articles by month.

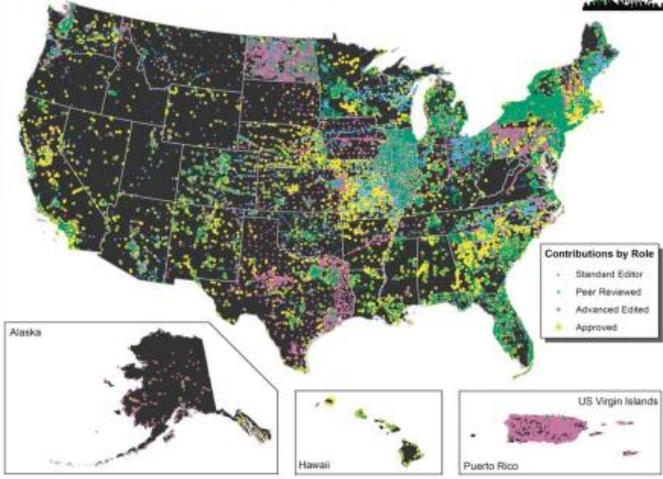
[Past TNMCorps Newsletter Articles](#)

Volunteer.gov
 America's Natural and Cultural Resources Volunteer Portal



TNMCorps News
 VOLUME 4, ISSUE 1 THE NATIONAL MAP CORPS JANUARY 2018

2017: Year in Review



INSIDE THIS ISSUE

- 2017: Year in Review
- Fending off the Winter Blues
- Courthouse Pilot Project
- Making the Call
- Resources Review
- More than a Dot on the Map: Curry County Courthouse
- Aerial Photo Interpretation Part 3: Fire Stations/EMS
- Bias from the Past: Earth Science Corps
- TNMCorps Cryptogram
- Recognition

2017
 16,914 ESTIMATED VOLUNTEER HOURS
 8 EQUIVALENT FULL TIME EMPLOYEES

ALL TIME
 61,669 ESTIMATED VOLUNTEER HOURS
 30 EQUIVALENT FULL TIME EMPLOYEES

2017
 84,569 UNIQUE POINTS EDITED
 94,275 TOTAL EDITS

ALL TIME
 308,346 UNIQUE POINTS EDITED
 409,596 TOTAL EDITS

Edit Summary by Role

STANDARD	53,007
PEER REVIEW	11,408
ADVANCED	27,325
USGS ADMIN	1,286

Review Queue
 97.15% EDIT ACCEPTANCE RATE
 106,494 Accepted Edits

1,300 New Editors
724 Contributing Editors
6 Newsletters
5 Mapping Challenges
379 Recognition Badges

TNMCorps was highlighted **5x** during USGS Mapping Month!!



Engagement

- Welcome emails
- Structure Finder
- New content (e.g. courthouses and city/town halls, Pacific Territories)
- Volunteer stories/articles

TNMCorps News Page 5

LTPZ's Son Places in Top 10 in Illinois GeoBee!

What do TNMCorps and the National Geographic GeoBee have in common? The answer is TNMCorps volunteer Lisa (LTPZ) and her son Andriy!

On Friday, March 23rd, 2019, my son Andriy had the honor of being named by the National Geographic Society as one of the 2019 Illinois State Top-10 "GeoBee" Finalists in this year's annual National Geographic State Competition.

For those who aren't familiar with the competition, the National Geographic "GeoBee" is now in its 31st year. It was developed by the National Geographic Society in 1988 to promote geographic knowledge among young people in the United States. It is an academic competition open to public, private, and homeschools in the United States and its territories, as well as the Department of Defense Dependent Schools (DDSDS).

Annually, students in grades 4-8 from nearly 10,000 schools compete locally to determine their school champion and for the chance to be able to sit for the online qualifying exam. The National Geographic Society then uses that exam to invite up to 100 of the top-scoring students in each of the 50 states, the District of Columbia, Department of Defense Dependent Schools, and U.S. territories to compete at the State level GeoBee Semifinals. The semifinalists then have a chance to qualify for one of the 10 spots on stage of the State Finals, which are held later the same day. Placing in the Top-10 qualifies the students for a chance to win prizes like college scholarships and to represent their state at the national level championships, which are held in Washington DC.

At first glance, Andriy is a typical seventh grader. Three times a week, he arrives with his trombone, along with his classmates, for 7:00 am Symphonic Band rehearsal. The rest of his school day is like any other straight "A" student's at his school.

When not traveling with his parents, Andriy loves to read and watch programs like Star Trek, Home Gun - Wild Travel, North Woods Law, Mysteries at the Museum, and channels like History, Discovery, and of course the Travel and National Geographic Channels.

What does Andriy want to be someday? Well, yesterday it was an Astrogeologist. Today, it's an aeronautical Engineer, Technician! Who knows, but for now, with his love and knowledge of geography, and a little guidance from mom, Andriy is hoping he too will be able to join TNMCorps!

As seen by the map which Andriy drew when he was in first grade, he has been interested in mapping and the relationship between him, his environment, and the world around him, since an early age.

One of his fond early memories is Geocaching with his mom Lisa, when she was preparing to teach basic map & compass skills, or more advanced GPS navigation to scouts or other youth groups. Another fond memory is learning all the flags and capitals of all the countries of the world with his dad, Yuriy. By the beginning of second grade Andriy already knew all of them, and one of his favorite songs was about naming all the countries of the world.

Andriy loves traveling and exploring new and/or rediscovering old places. In fact, his first trip was to Hawaii at only 6 weeks old, and was where he visited his first National Park site, **Volcanoes National Park**, on the Big Island. Since then, he and his parents have traveled and explored countless locations in North America. So many, that with a little help from mom's love of the **USA Junior Ranger Program**, Andriy has earned a collection of well over 300 Junior Ranger badges and patches from locations as near as Chicago, and as far away as Alaska, Guam, Puerto Rico and Maine.

Congratulations to Andriy and Lisa! We are not surprised at all to find out that our amazing TNMCorps volunteers would have such geographically inclined kids! We are looking forward to having them as future TNMCorps volunteers!

Continued on next page.

New TNMCorps Editor - WELCOME! Welcome Emails x

GS-N-NGTOC Volunteer Geographic Information <nationalmapcorps@usgs.gov> Tue, Jul 10, 7:30 AM (7 days ago)

Hi shelding!

Thank you for your interest in [The National Map Corps](#) and welcome to the team! The National Map Corps (TNMCorps) is a community of volunteers who review and confirm the structures data that is part of [The National Map](#) and gets published on [USGS Topo Maps](#). So by participating in TNMCorps, you're actually considered a **citizen scientist!** (That's one for your resume... 😊)

As you setup your user account, we've highlighted a few pieces to help you become familiar with the Web Editor:

OVERVIEW: What Will I Be Doing?

- The [User Guide](#) provides a thorough review of the Editor and the editing process.
- For a quick overview, check out our [QuickStart Guide](#).
- Here is a [List of Structures](#) that we currently publish on our maps and use this process to collect.
- Our [Map Challenges](#) identify areas that need to be edited, and are a good place for new users to start.

New users, also called **Standard Editors**, should start out by editing points with a **red border**. To find these unedited points, use our handy dropdown menu in the [Edit tab](#). Click on the dropdown menu and select 'Unedited Only' to identify the red points:

(P)awesome Volunteer Update: Stella!

Back in our [September 2019 newsletter](#) we featured the newest four-legged member of the TNMCorps team: Stella! At the time she was only 9 months old and a little too full of "puppy energy" to assist the [Rhode Island historic cemetery mapping contingent](#) with their cemetery mapping missions. But she's grown up, and over a month ago joined the contingent for her first mapping excursion!

By Cgibson:

"[Stella] is a bit over 1 year old now, and although she's still a crazy puppy, she is old enough to walk (actually, run...this dog never strolls) a relatively straight line on a trail. [This] was her first day out, at cemetery 'NK021.' This was on an old rail trail near my house, so not as remote as some, but still out in the woods. Unfortunately, many of the headstones are damaged, but the couple I could read are very old — from the 1700s. So, it was still interesting. Here's Stella, celebrating her first mapping point for TNMCorps!"

Be sure to check out the articles linked above to learn more about the work volunteers Cgibson and RISailor are doing to verify all the historical cemeteries in Rhode Island!

MAY 24, 2022

NEW TNMCorps Mapping Challenge for US Pacific Territories!

Calling all Editors!! Are you interested in a unique project? The USGS is working on updating our US Pacific Territories layers. We need your help...

[Read Article](#) →

+ Participant Motivation

Recognition Program

- Earn virtual badges
- Recognition via social media, newsletters, websites



Courthouse Badges are Here!

Back in our July newsletter, we hinted at our soon-to-be-released Courthouse Pilot Project recognition badges. Well, the time has arrived!

To thank the dedicated volunteers who participated in the project, we've created 4 brand new badges. Check them out and see if your name is on the list!

Check out our [updated recognition page](#) for more information!

INSIDE THIS ISSUE

- 1 [Courthouse Badges are Here!](#)
- 2 [Volunteer GMA: What's Your Favorite Structure to Edit?](#)
- 2 [New America Feature! Introducing 2016-2017 Data](#)
- 2 [New Mapping Challenge: "Town & City"](#)
- 3 [American Architecture Party: The Performance](#)
- 6 [Anti-Ethnic Intentional Party: The Performance](#)
- 9 [TNM Corps Plans](#)
- 10 [December](#)



U.S. Geological Survey (USGS)
September 11

Catching Mole Trapper: The USGS crowdsourcing project called The National Map Corps uses citizen scientists to validate or edit structures to improve topographic maps. To reward and recognize those volunteers, TNMCorps assigns points to the submissions which lead to virtual badges. One of the most active data providers to reach the top award, the Theodolite Assemblage, is Mole Trapper. "I am 80 years old. I work 3 days a week for a golf course trapping moles and gophers", he explained. "I spent 11 years volunteering for fish and wildlife. When the big slide at Oso, Washington happened I went on the USGS website and discovered the map corps. I worked summers while in high school for a surveyor who was very precise and who told me an inaccurate survey is worthless. I hate inaccurate maps so this program was just right for me. I hope my work is as accurate as I want it to be but if it isn't I plead old age. Good Mapping to all." You can assist Mole Trapper and contribute to The National Map. Join The National Corps to begin editing points today! <http://bit.ly/11e0VLu>



The National Map @USGSTNM · May 13
 "Teri2115" has surpassed the Theodolite Assemblage award. More than 2,000 points submitted, as citizen scientists make America's maps better!
go.usa.gov/xnhrg #USGS #TNMCorps @FedCitSci #citSci #citizenscience #USGS #GIS #mapping

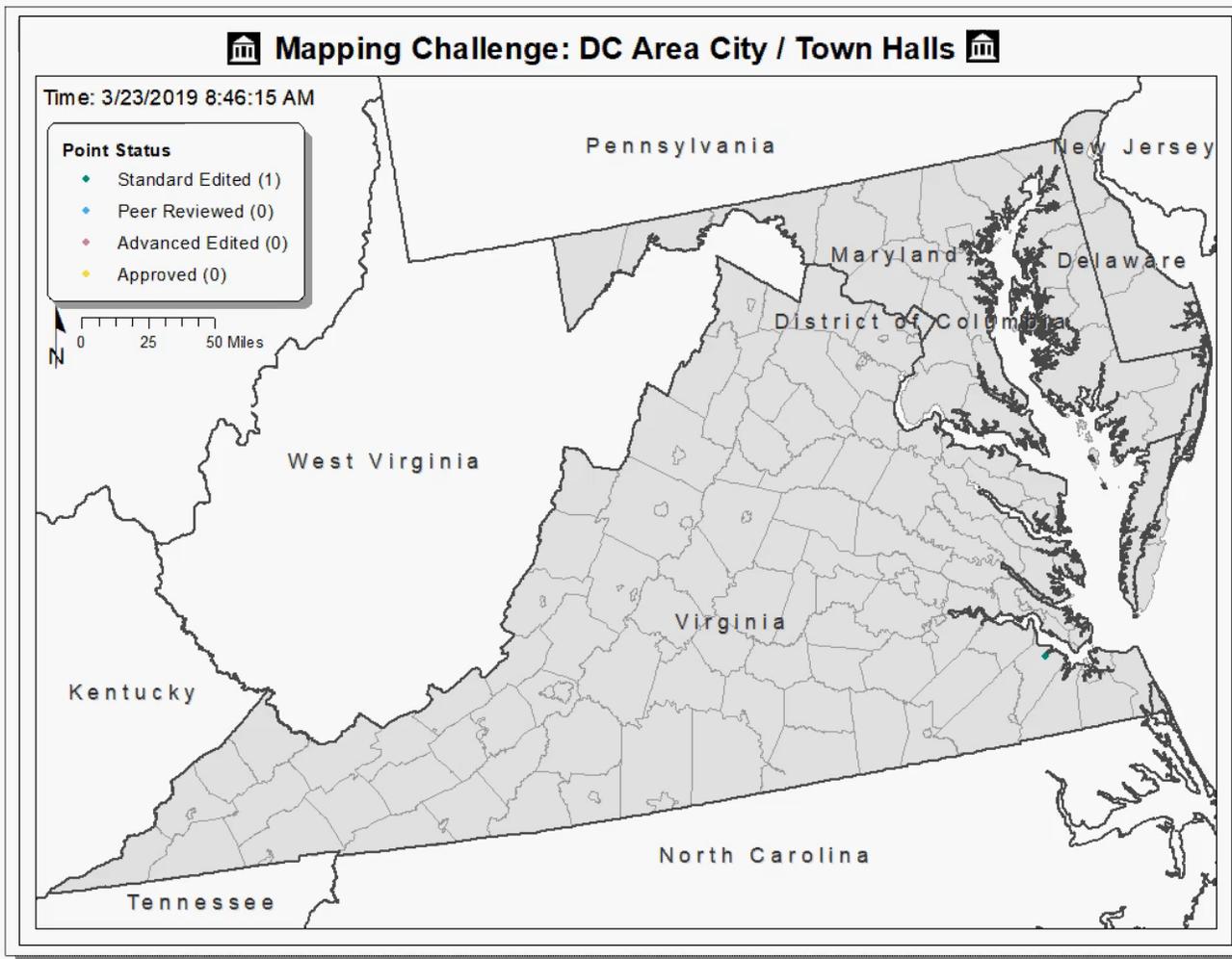
1 5

Unlike · Comment · Share 72 Shares

You, Kathryn Yoder and 259 others like this. Top Comments

+ Participant Motivation / Engagement

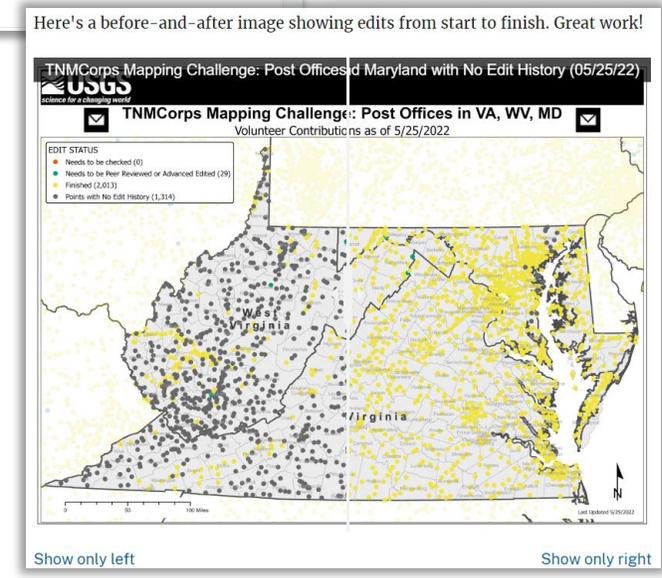
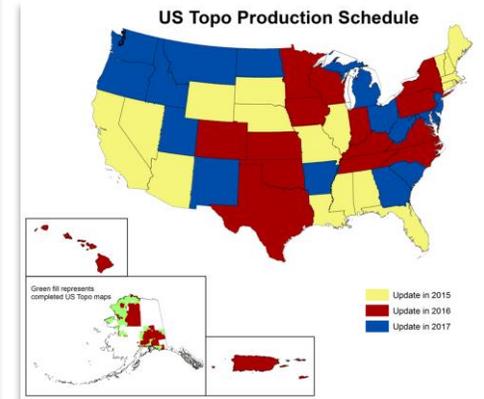
Map Challenges & Focused Data Editing



The National Map @USGSTNM · Aug 13
 New #Mapping Challenge! Help #USGS #TNMCorps add #Prison points in #Tennessee bit.ly/12A0Vcp #GIS #VGI

View more photos and videos

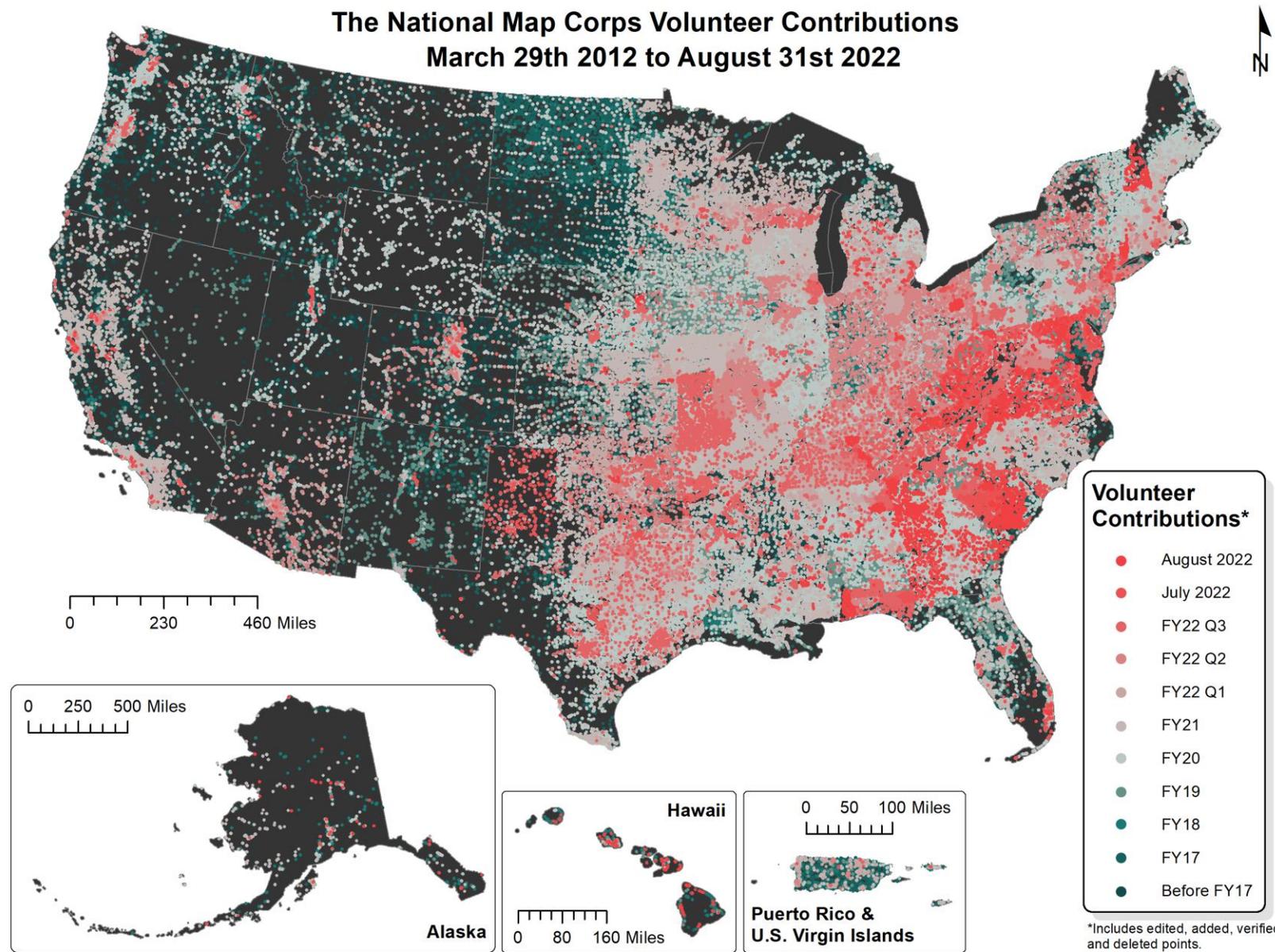
The National Map @USGSTNM · Aug 12
 Thx to HGeisler & fconley for helping in #TNMCorps Okla. Panhandle #PostOffice #Mapping Challenge! bit.ly/12A0Vcp #GIS #USGS



+ 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.

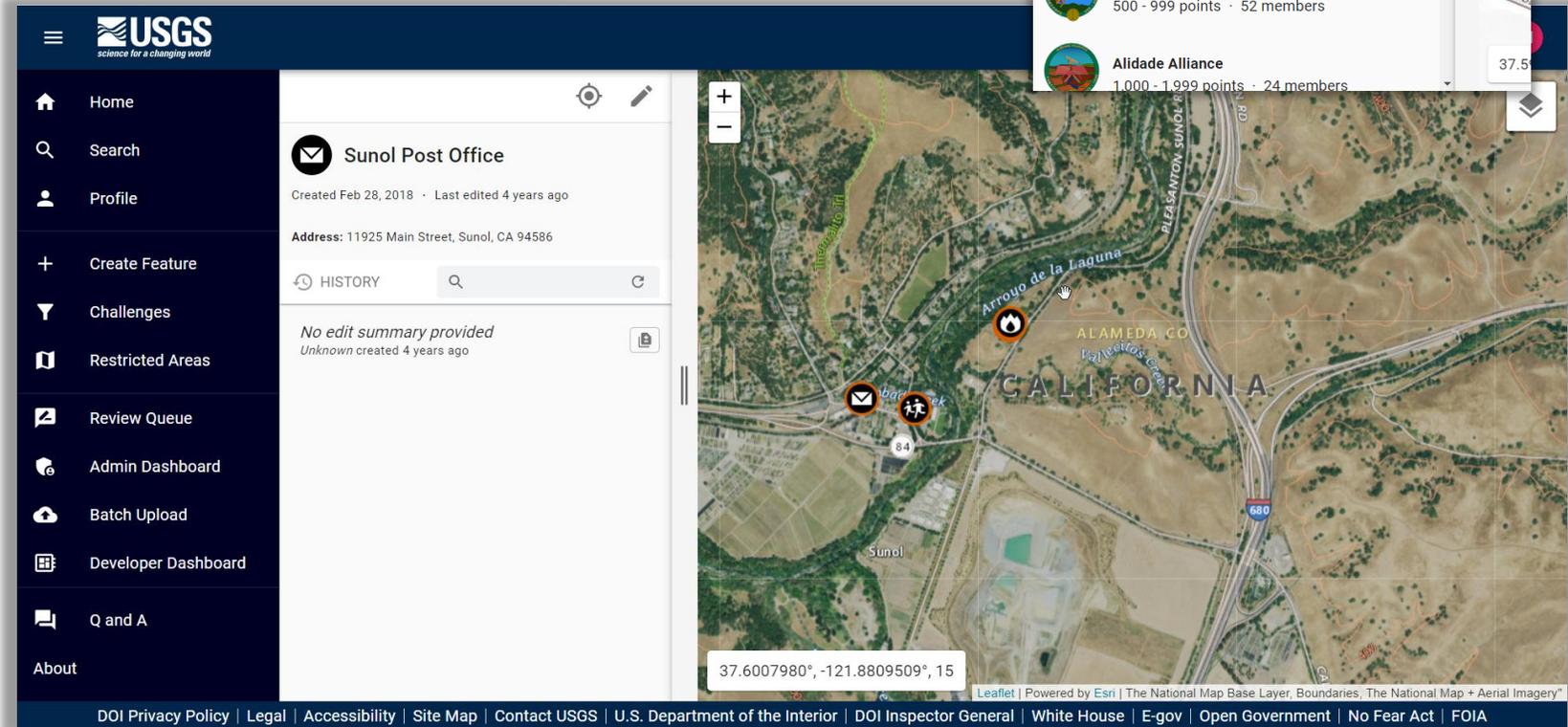
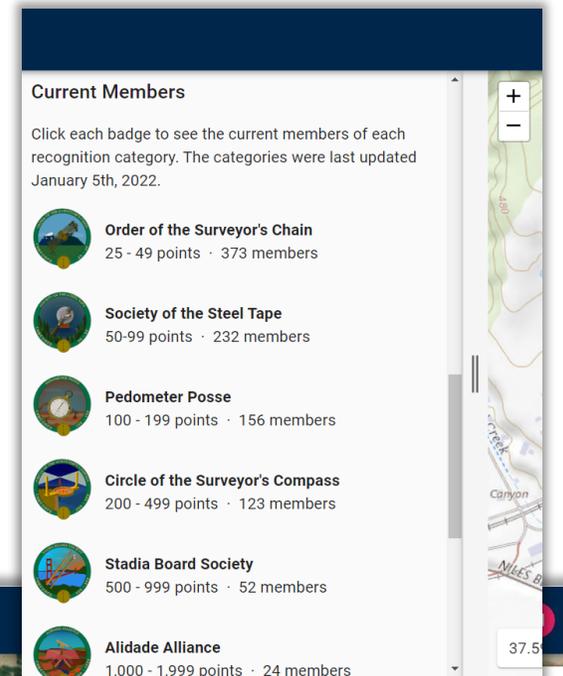
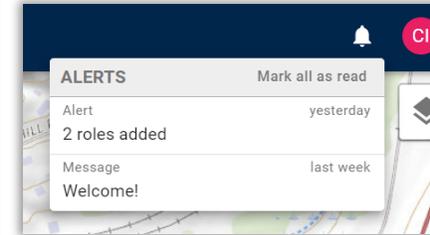
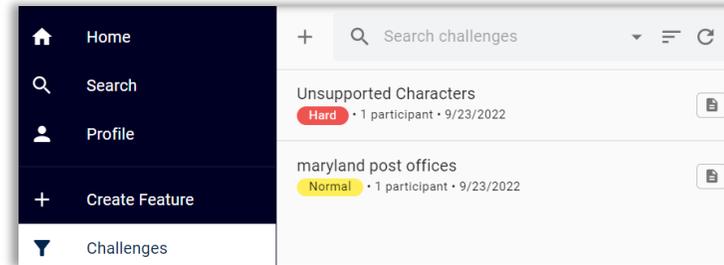
+ Priority Improvements for FY23

- 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

+ New Editing Application

Coming Soon

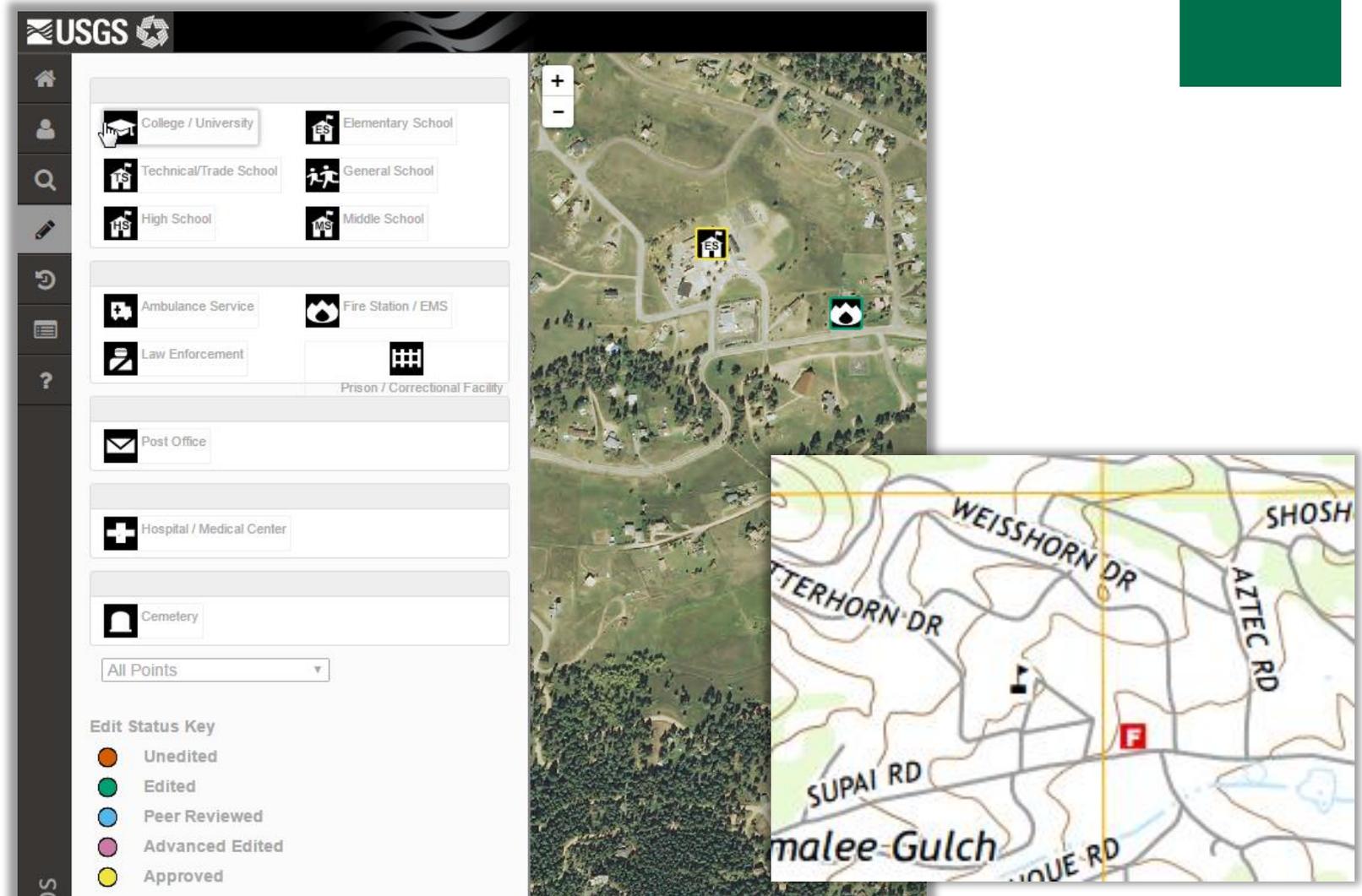
- Improved and modernized
- Integrated mapping challenges, recognition, volunteer communication and Q&A
- Leaderboards
- User added services
- Partner data capabilities
 - Batch uploads
 - Restricted editing



+ 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?

Editor: edits.nationalmap.gov/tnmcorps

Twitter: @USGSTNM #TNMCorps

nationalmapcorps@usgs.gov

ekorris@usgs.gov

