

Collaborative Trailheads

Maintaining SGID Data in OpenStreetMap

Erik Neemann | Greg Bunce



UGRC does not imply endorsement by, or affiliation with, the OpenStreetMap Foundation

1980/90s - 2020 (covid)



UTAH AGRC
Automated Geographic Reference Center





Looking South from 500 N

2022



2
0
2
6

North Capitol Project



SGID (background)

...the State Geographic Information Datasource (SGID)

1970s

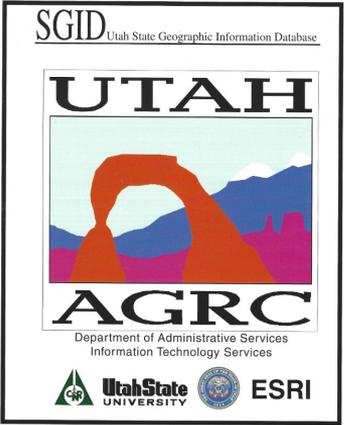
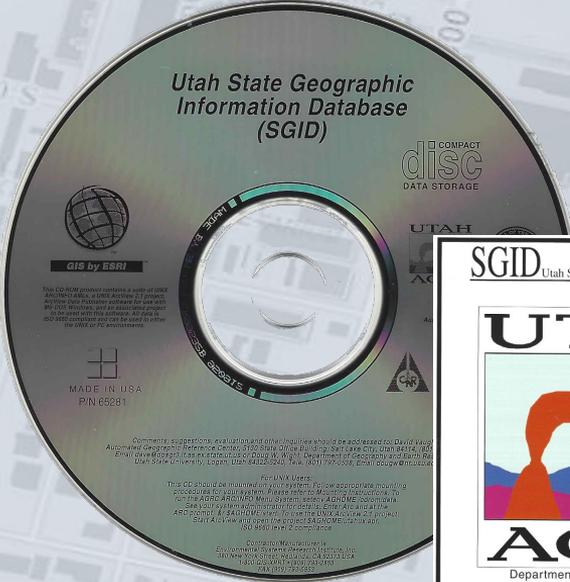
- Discussions about statewide geographic data

1980s

- State signed a contract with ESRI
- State GIS office was established

1990s

- State Geographic Information Datasource (SGID) was established via legislation



SGID

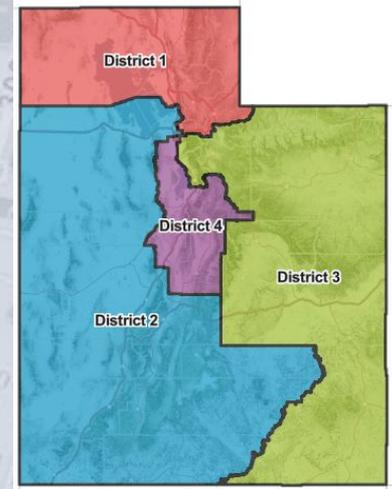
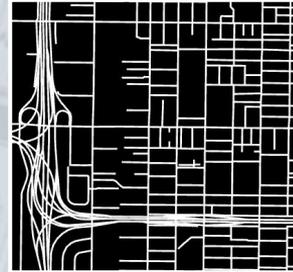
STATE GEOGRAPHIC
INFORMATION DATASOURCE

"Encourage and facilitate the effective use of geospatial information and technology for Utah"

Authoritative SGID Datasets

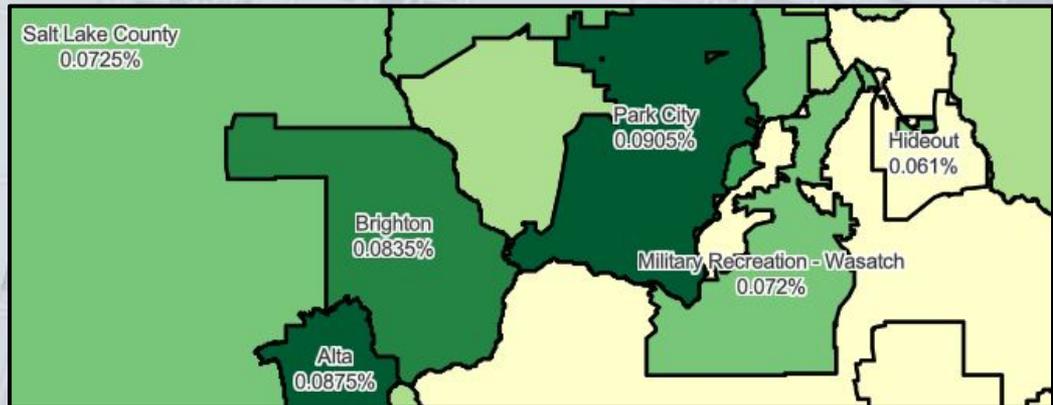
...Utah's Framework data

- **Authoritative datasets** are framework layers that can be used as building blocks to derive other datasets or drive applications and critical business systems
 - Sourced from **well-defined data stewards**
 - A relative few, **high-impact** datasets are a focus for recurring updates



Utah's Framework layers (not an inclusive list)

- Address Points
- Road Centerlines
- PSAP Boundaries
- County/Municipal Boundaries
- Assessor Parcels
- Voting Precincts
- Political Districts
- Land Ownership
- School Districts
- Tax Areas



Other SGID Datasets

...a couple hundred more layers

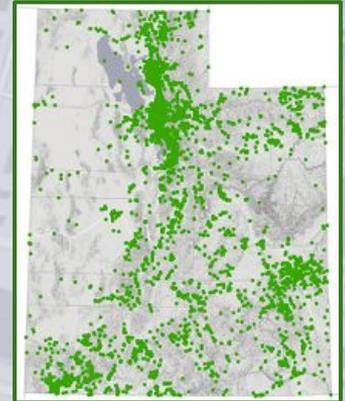
- Many other datasets get less attention because:
 - not as "high-impact"
 - no well-defined data steward
- These datasets get updated less frequently or even left behind
- Often these fall into our 'Recreation' and 'Society' data categories



"How can we improve these datasets? What other avenues are there for data updates?"

OpenStreetMap (OSM)

- Leverage the community of open source mappers to benefit everyone
- Previous success in building from OSM data:
 - Utah Open Source Places
 - 26K+ features, rebuilt every two weeks from OSM data
 - Carries the same ODbL 1.0 license as OSM



Trailheads Project

...a collaborative venture

Low-risk datasets under initial consideration as a pilot in OSM:

- Golf Courses
- Fire Stations
- Libraries
- Trails
- Ski Lifts
- **Trailheads!**



zionnationalpark.net



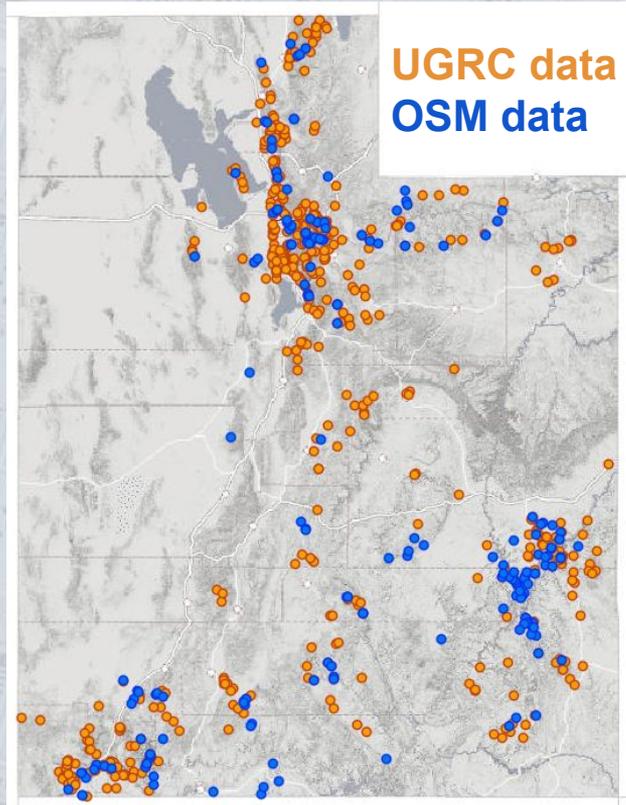
KUTV

- Outreach for OSM perspective
 - Martijn van Exel - local OSM guru
 - OSM Trails Working Group
- Created UGRC [Collaborative Trailheads GitHub Repo](#)
- Reviewed existing OSM trailhead guidance
- Determined "best practices" for adding trailheads



Trailheads Project

...data comparison



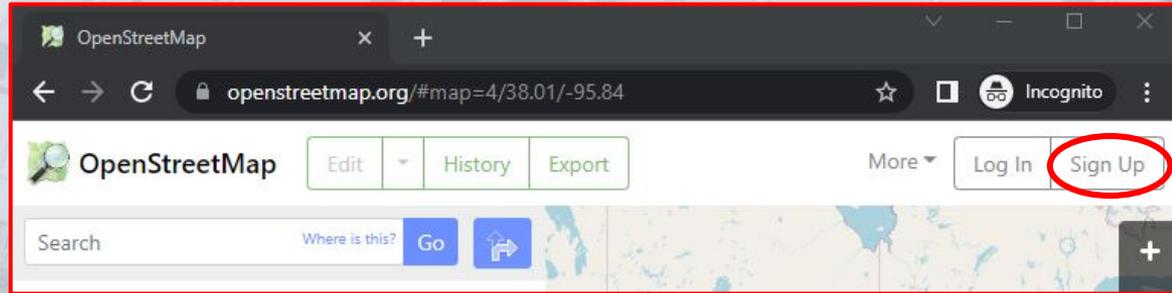
- Initial datasets:
 - 568 UGRC trailheads
 - 222 OSM trailheads in Utah
 - 188 were "named"
- Combined datasets by excluding UGRC points within 200m of OSM points (64)
 - Final count of 725 trailheads
- Data review needed...more in a moment
 - Is there a name? Is the name correct?
 - Is the location correct?
 - What other info can be provided?



How to Participate?

...OpenStreetMap

- 1) Create an OSM account
- 2) Log in and make edits



Data Editors

- Web-based iD editor
- Desktop and Mobile (Android and iOS)
 - JOSM, Vespucci, GoMap!!

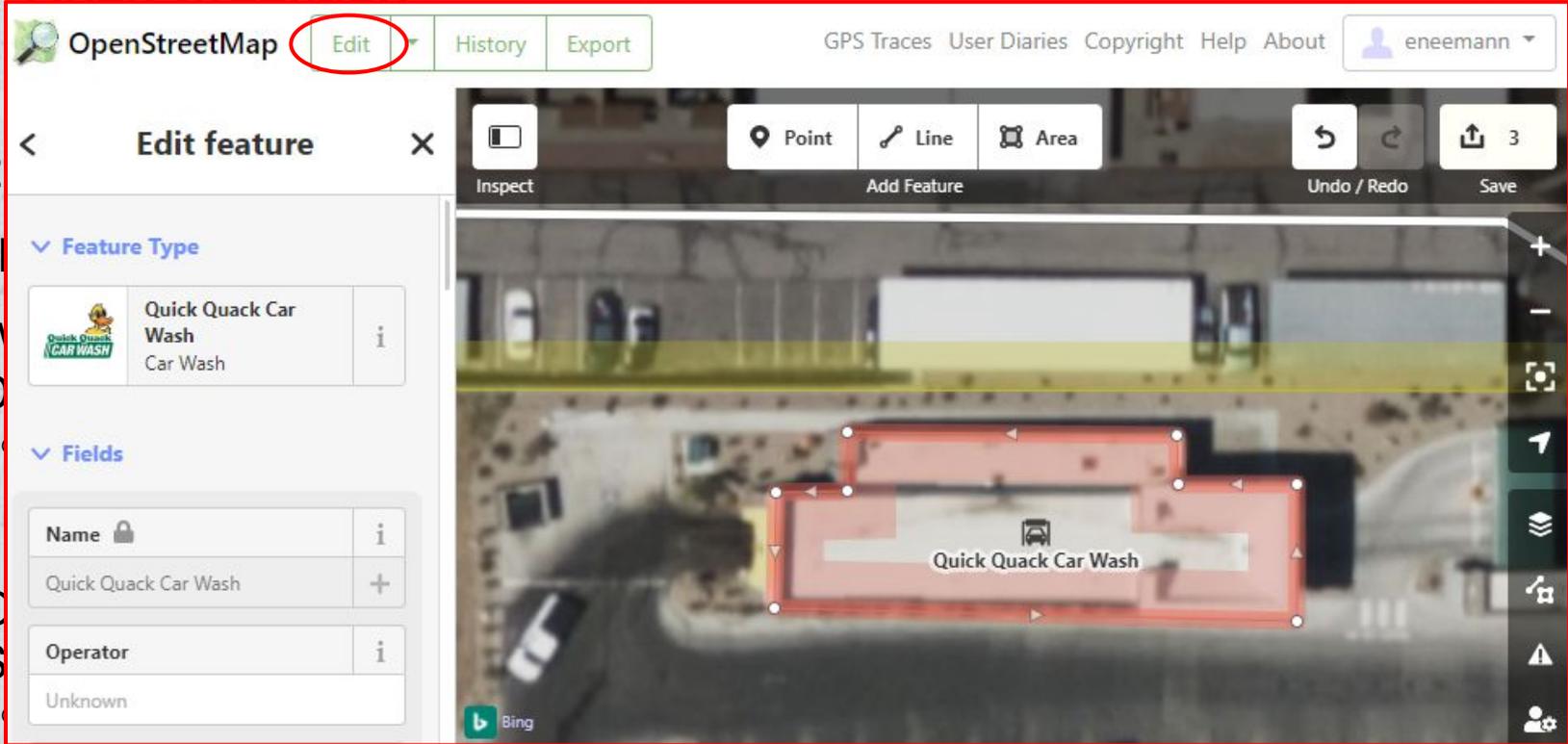
OSM Community

- OSM Calendar shows upcoming events: <https://osmcal.org/?in=United%20States>
- Slack community: <https://slack.openstreetmap.us/>
 - Specifically, the #local-utah channel

UGRC Blog Post: <https://gis.utah.gov/collaborative-trailheads/>

How to Participate?

OpenStreetMap



OpenStreetMap **Edit** History Export GPS Traces User Diaries Copyright Help About eneemann

Edit feature

Feature Type

	Quick Quack Car Wash Car Wash	i
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Fields

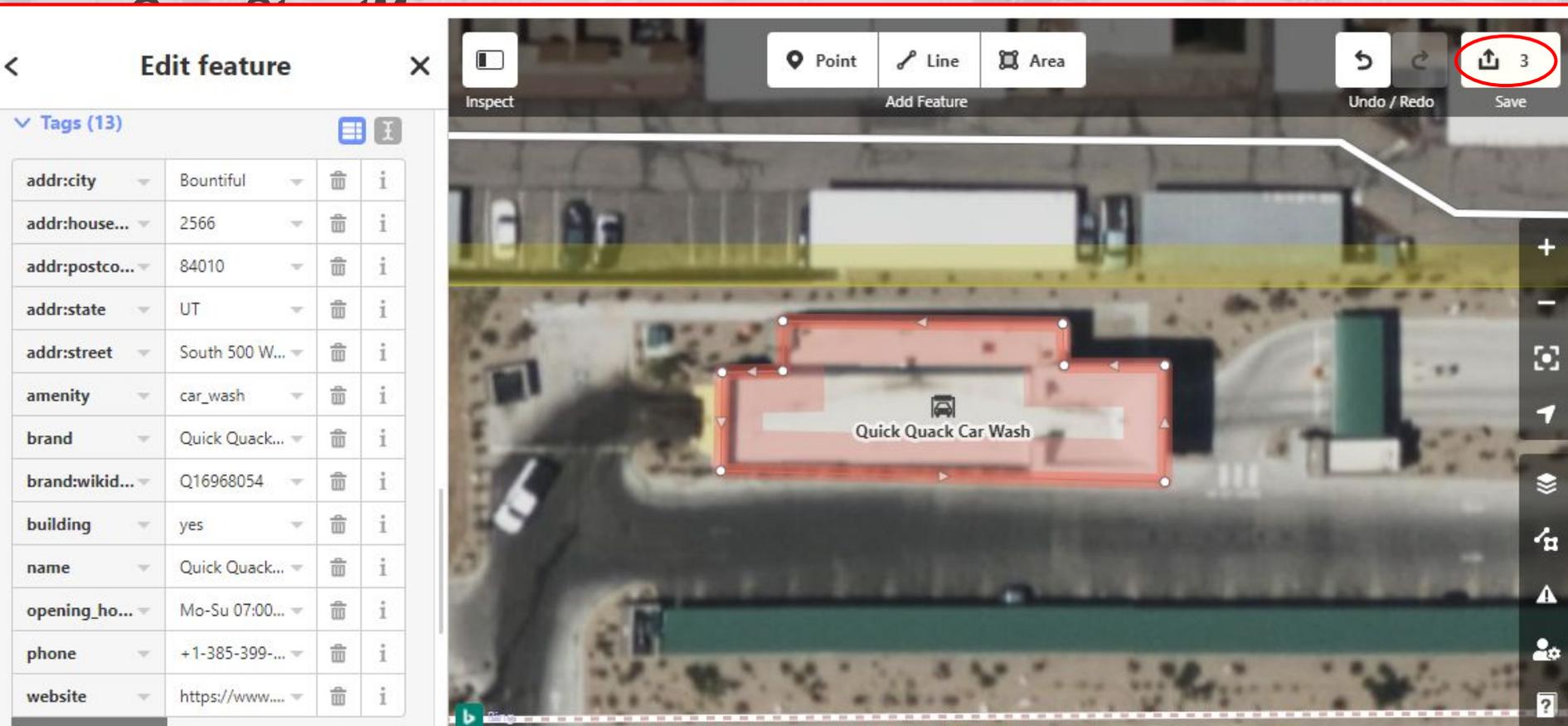
Name 	i
Quick Quack Car Wash	+
Operator	i
Unknown	

Inspect Add Feature (Point, Line, Area) Undo / Redo Save 3

Sign Up

- 1
- 2
- Data
- W
- D
- OSM
- C
- S

How to Participate?



Edit feature

Tags (13)

addr:city	Bountiful	🗑️	i
addr:house...	2566	🗑️	i
addr:postco...	84010	🗑️	i
addr:state	UT	🗑️	i
addr:street	South 500 W...	🗑️	i
amenity	car_wash	🗑️	i
brand	Quick Quack...	🗑️	i
brand:wikid...	Q16968054	🗑️	i
building	yes	🗑️	i
name	Quick Quack...	🗑️	i
opening_ho...	Mo-Su 07:00...	🗑️	i
phone	+1-385-399-...	🗑️	i
website	https://www....	🗑️	i

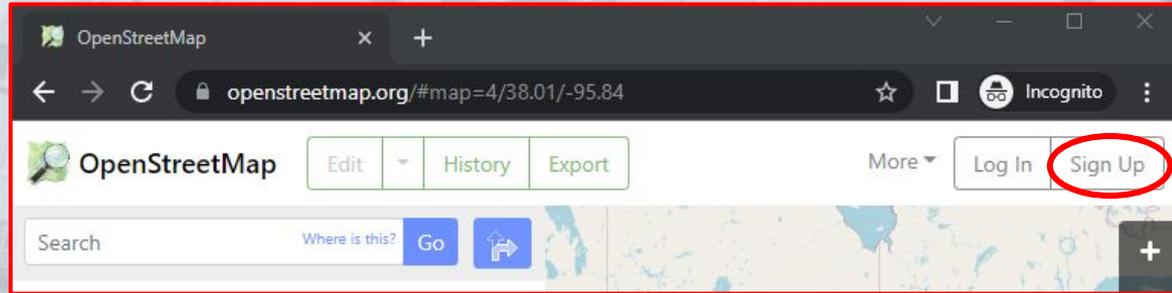
Inspect | Add Feature (Point, Line, Area) | Undo / Redo | Save (3)

Quick Quack Car Wash

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How to Help with Trailheads?

...MapRoulette

- Tool that serves random micro-tasks for OSM data improvements
- Challenges are created by users with specific tasks
- Other users can participate and improve the data
- Find the '[Improve Trailheads in Utah](https://maproulette.org/challenge/28673)' challenge!
 - <https://maproulette.org/challenge/28673>
 - Review/update existing OSM trailheads or create new ones from the UGRC data



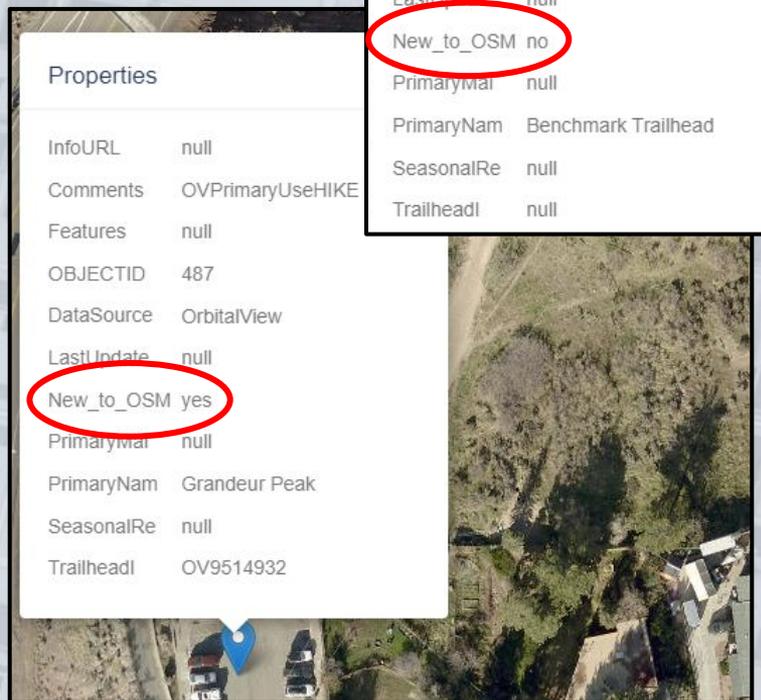
The screenshot shows the MapRoulette website interface. The top navigation bar includes the MapRoulette logo, a search icon, and links for Dashboard, Find Challenges, Leaderboard, and Learn. A user profile for 'eneemann' is visible in the top right. The main content area features a map of Utah with several numbered markers (41, 18, 25, 14, 144, 37, 4, 3, 6, 4) indicating challenge locations. The challenge title 'Improve Trailheads in Utah' is displayed, along with its difficulty level (Easy), task data sourced date (September 08, 2022), and a view of the leaderboard. A 'Get In Touch' link is also present.



How to Help with Trailheads?

...MapRoulette

- **Two Primary types of tasks:**
 - 1) Review/update existing OSM trailheads (`New_to_OSM = no`)
 - 2) Add UGRC trailheads missing from OSM (`New_to_OSM = yes`)
- **Required OSM Tags**
 - [highway = trailhead](#)
 - name = Grandeur Peak (strongly recommended)
- **UGRC Recommended OSM Tags**
 - [operator](#) = Salt Lake City
 - [drinking_water](#) = yes / no
 - [bin](#) = yes / no (waste basket)
 - [toilets](#) = no / yes
 - [website](#) = url_with_official_info.org
 - [fee](#) = no / yes / conditional
 - [access](#) = yes / no / private / permit / customers



How to Help with Trailheads?



MapRoulette

Dashboard

Find Challenges

Leaderboard

Learn



MY POINTS

1

1

7



eneemann



Improve Trailheads in Utah

Utah Improvements



INSTRUCTIONS

This challenge has locations for existing OSM trailheads (`highway=trailhead`) and locations sourced from the Utah Geospatial Resource Center's (UGRC) trailheads data set. The existing data should be reviewed for accuracy/improvements or new data should be added, where applicable.

There are two types of locations to be reviewed in this challenge

COMPLETION

Add MR Tags

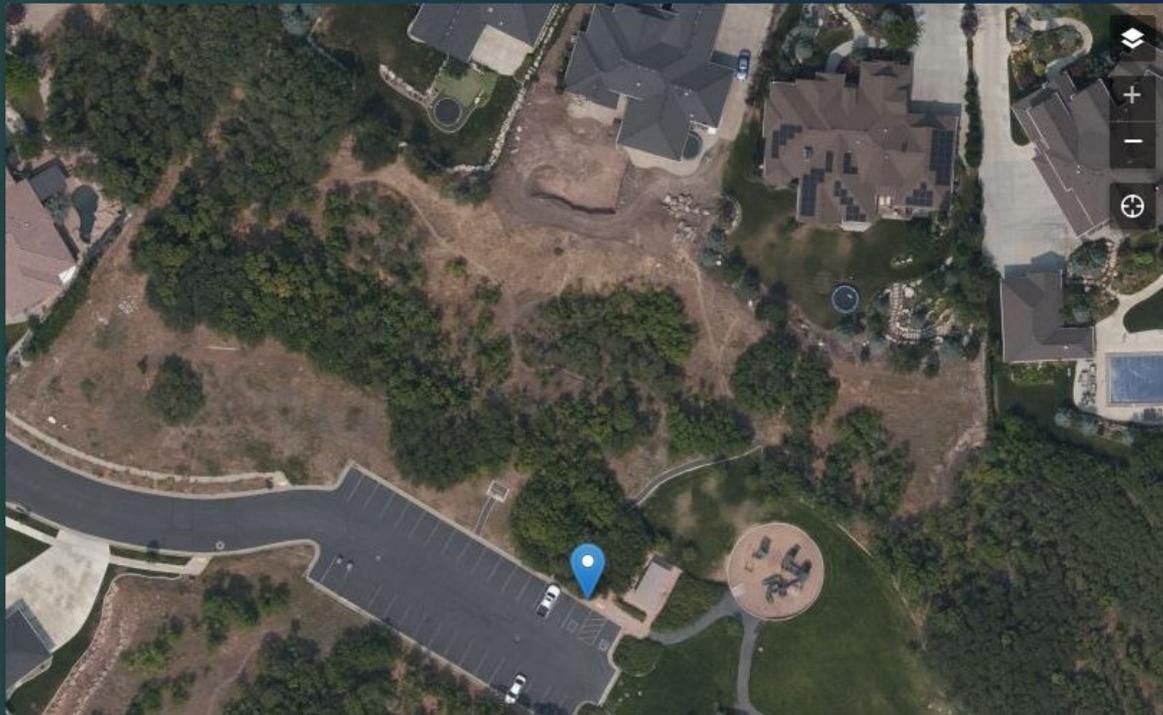
Current Editor: [Edit in iD](#) (web editor) 

Edit

Not an Issue

Skip

Other...



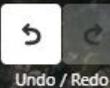
Edit feature



Inspect

Point Line Area

Add Feature



Undo / Redo



Save

Feature Type

Trailhead i

Fields

Name i

Wild Rose Trailhead +

Operator i

North Salt Lake City

Elevation (Meters) i

Unknown

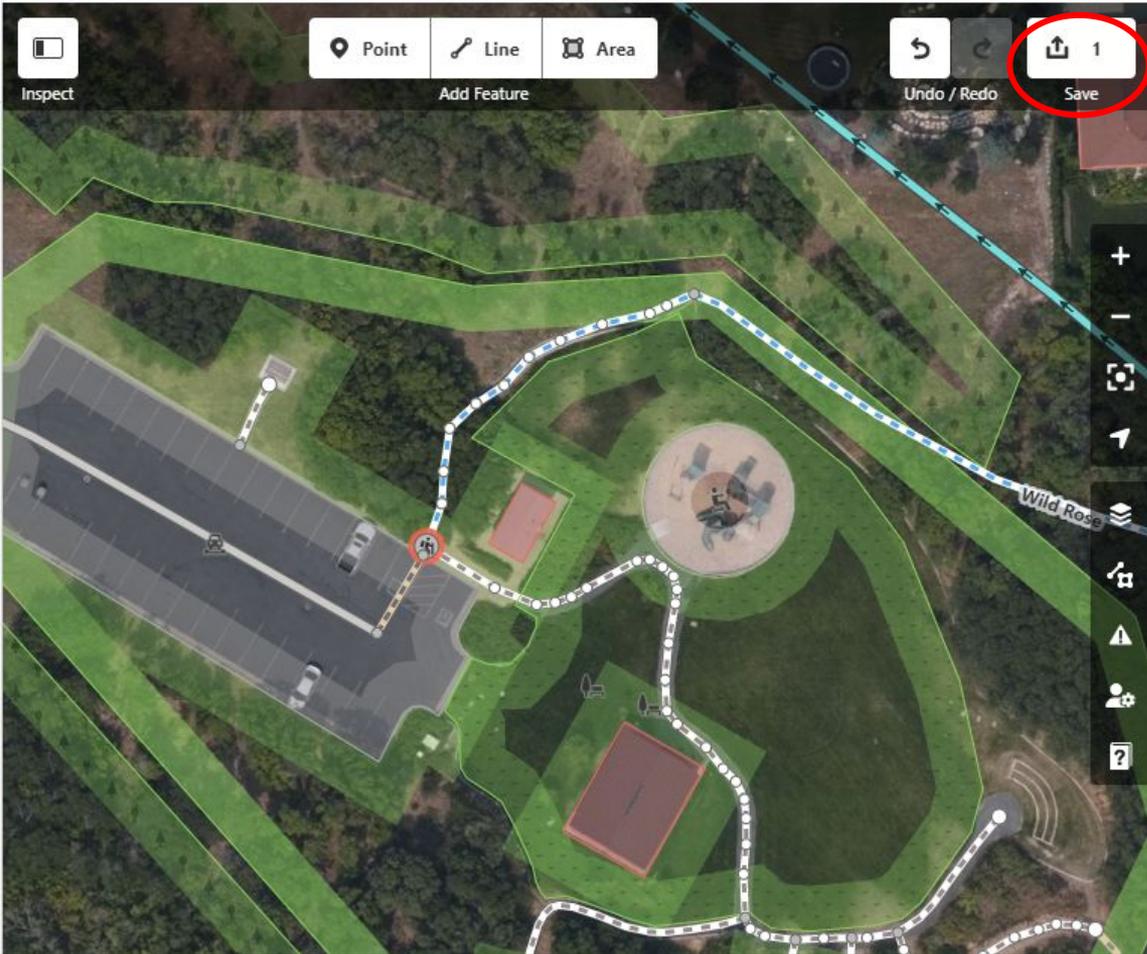
Address i

123 Street Unit

City State Postcode

Allowed Access i

Public



How to Help with Trailheads?

Improve Trailheads in Utah  

Utah Improvements 

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I fixed it!

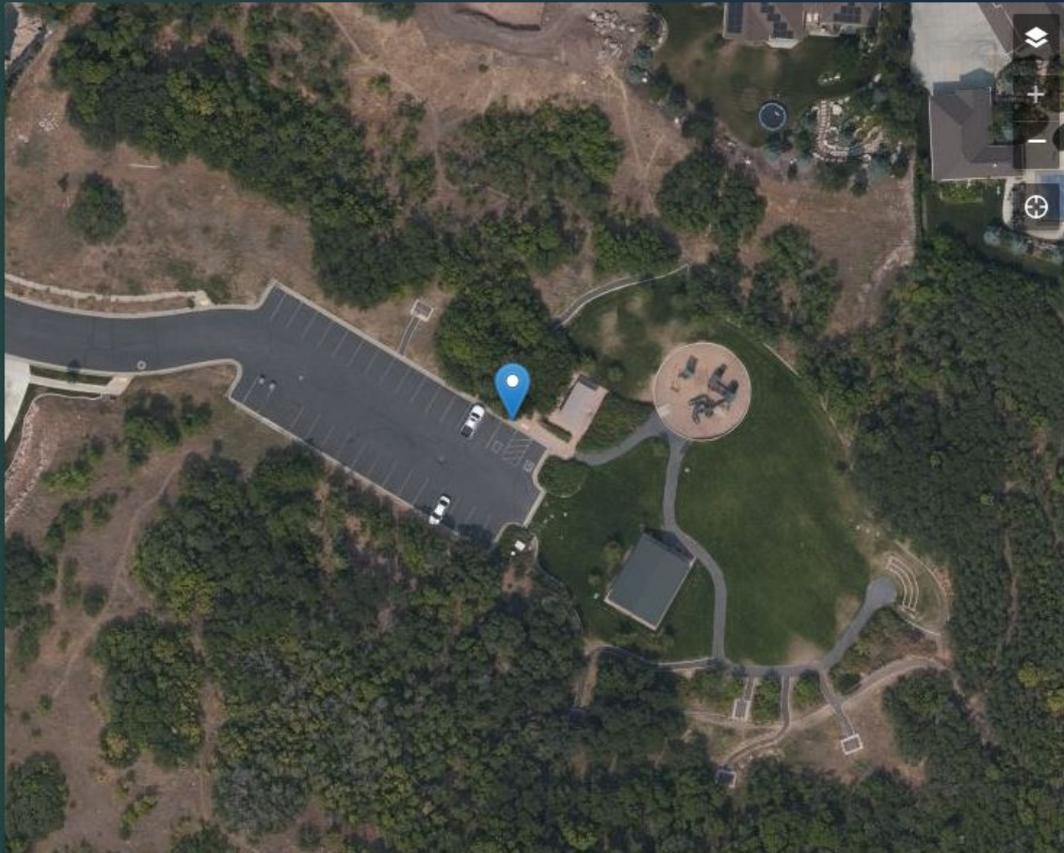
Too hard / Can't see

Already fixed

Not an Issue

Other...

Cancel Editing



How to Help with Trailheads?

Improve Trailheads in Utah  

Utah Improvements

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COMPLETION

Add MR Tags

I fixed it!

Too hard / Can't see

Already fixed

Not an Issue

Other...

Cancel Editing

Please Confirm

FIXED

WRITE | PREVIEW

44/1500

Added Wild Rose Trailhead in North Salt Lake

Add MR Tags

Need an extra set of eyes? Check here to have your work reviewed by a human

Cancel

Submit

Next task: Random Nearby

[View Task Instructions](#)

Takeaway(s)

...the crowdsourcing advantage

- UGRC doesn't have staffing to constantly update every layer
- There may be better ways to maintain certain datasets...OpenStreetMap
- Benefits of maintaining non-authoritative SGID data in OpenStreetMap:
 - More/better data in OpenStreetMap
 - UGRC/citizens gets more updates to statewide datasets
 - Community involvement and teamwork
 - Full transparency and data history
- Trailheads are our first pilot project
- You can participate!



if you
SEE | **SAY**
something | something®

Questions?



Location matters

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Erik Neemann

email: eneemann@utah.gov

twitter: [@Erik_UGRC](https://twitter.com/Erik_UGRC)