

MRA Mission Data Portal

November 14th, 2016

Mountain Rescue Association and the
NAPSG Foundation



Introduction

- Monty Bell, Mountain Rescue Association
- Paul Doherty, NAPSG Foundation
<http://www.napsgfoundation.org/>



MRA: Who We Are

The Mountain Rescue Association (MRA) - established in 1959

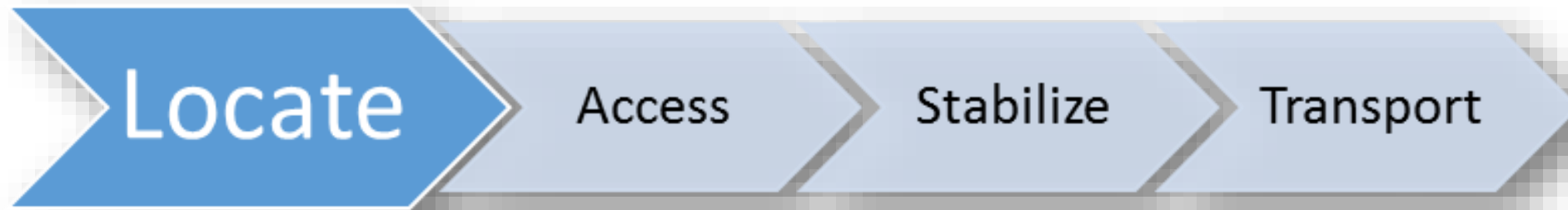
The MRA is an organization of teams dedicated to saving lives through rescue and mountain safety education.

We do so by improving the quality, availability, and safety of mountain search and rescue.

With over 90 government authorized units, the MRA has grown to become the critical mountain search and rescue resource in the United States.

Problem

- Search and Rescue (SAR), whether Urban or Wildland, is an inherently spatial problem...



- But SAR Teams do not (often) collect spatial data

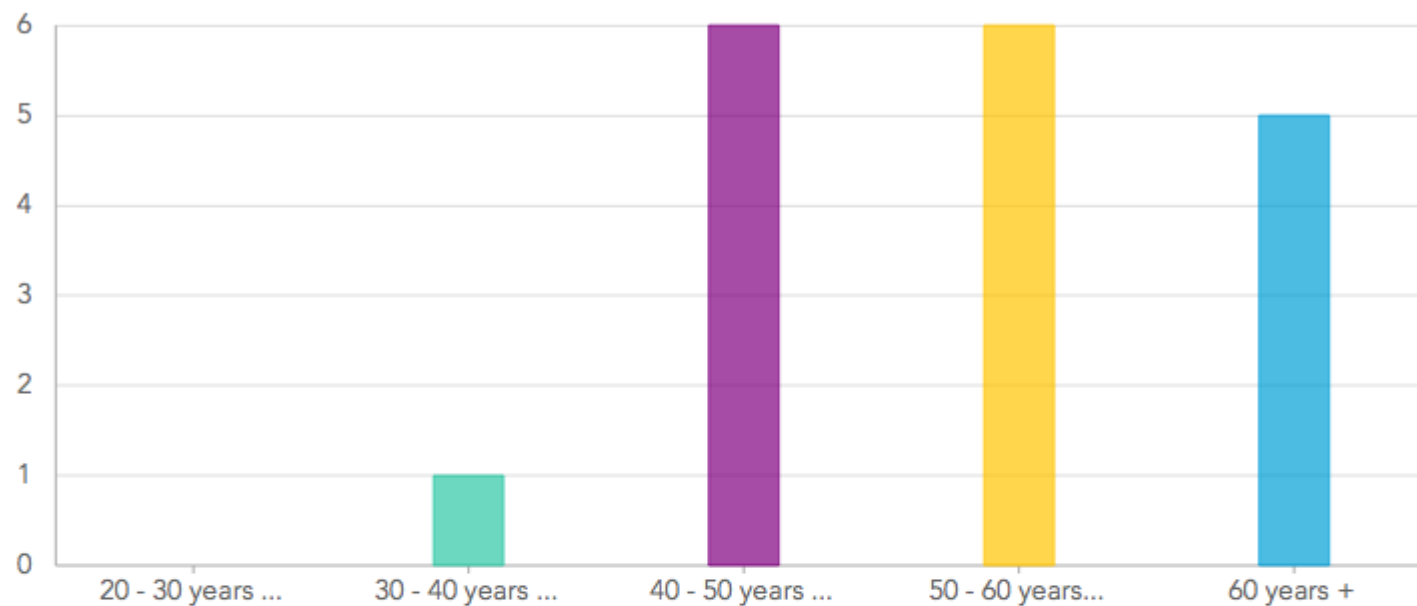
MRA Mapping Portal

Challenges

- Before 2013, the strategy for data collection
 - Each team submits a summary
 - Low participation
 - 0% spatial data
- The majority of data entry participants are not familiar with web mapping technology (age, experience, volunteers)
- Some teams are already using their own data collection system

Please select your age group.

Column Bar



[Hide Table](#)

Empty Categories [Sort](#)

Answers	Count	Percentage
20 - 30 years old	0	0.00%
30 - 40 years old	1	5.00%
40 - 50 years old	6	30.00%
50 - 60 years old	6	30.00%
60 years +	5	25.00%

Answered: 20 Skipped: 0

MRA Mapping Portal

Solution

- ArcGIS Online is an online, collaborative web GIS that allows you **to use, create, and share maps, scenes, apps, layers, analytics, and data.**
- Can create easy to use, focused applications
- Teams get maps of their data in return
- Can import data from other systems

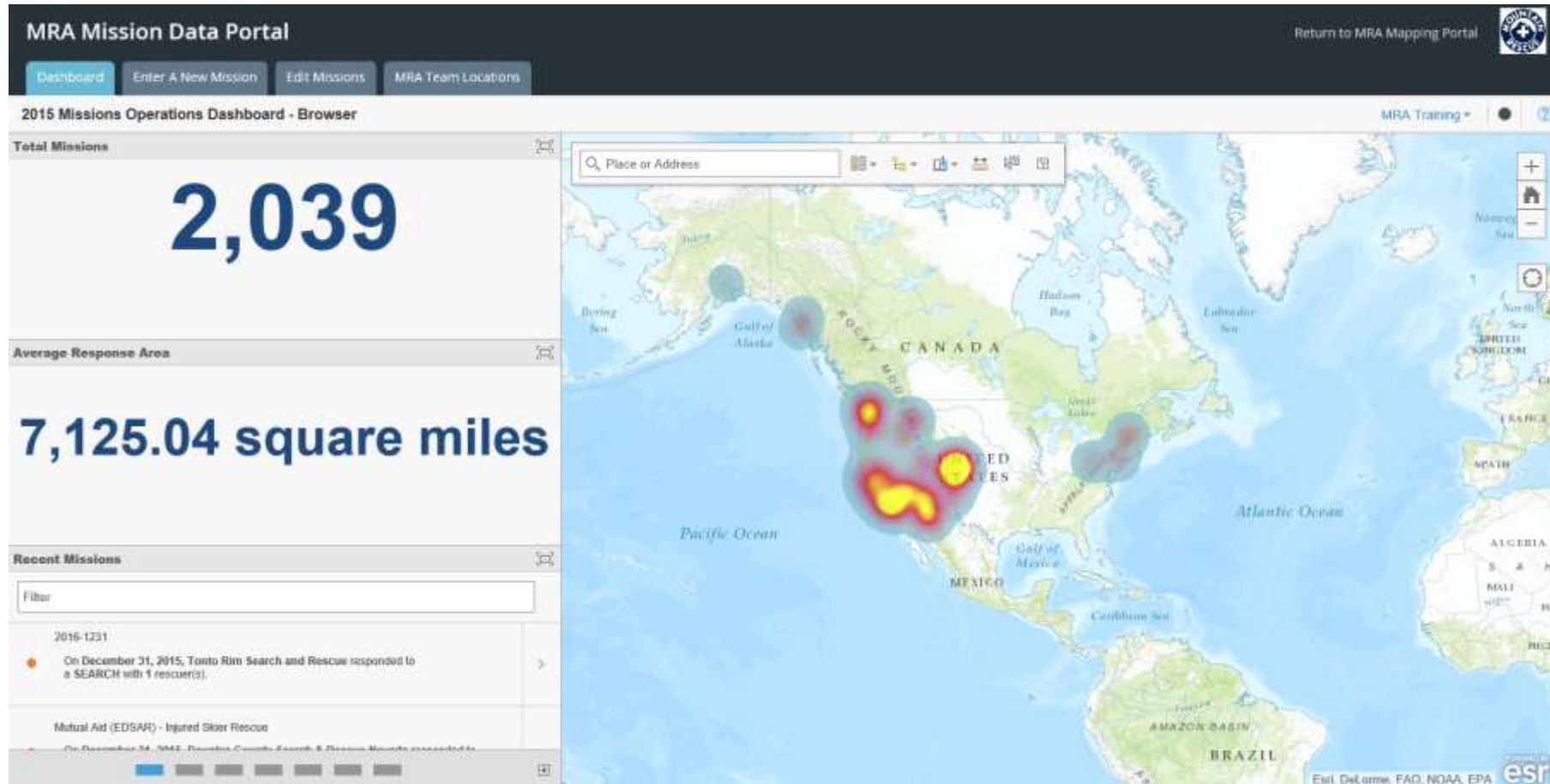
MRA Mapping Portal



2015 Mission Data

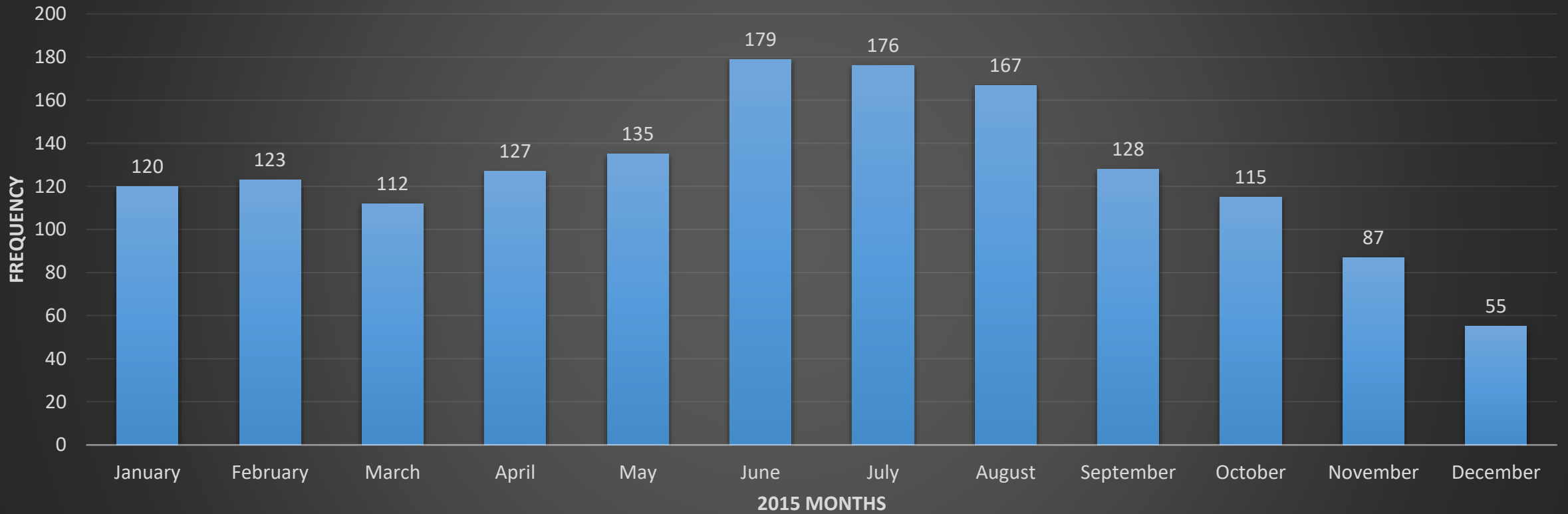
- Number of Incidents and Where
- Types of Missions, Demographics
- Number of People Rescued
- Number of Missions per Team
- Team Response Area
- Other Mission Queries (# Fatalities, Aircraft Used, etc.)

2015 Mission Data

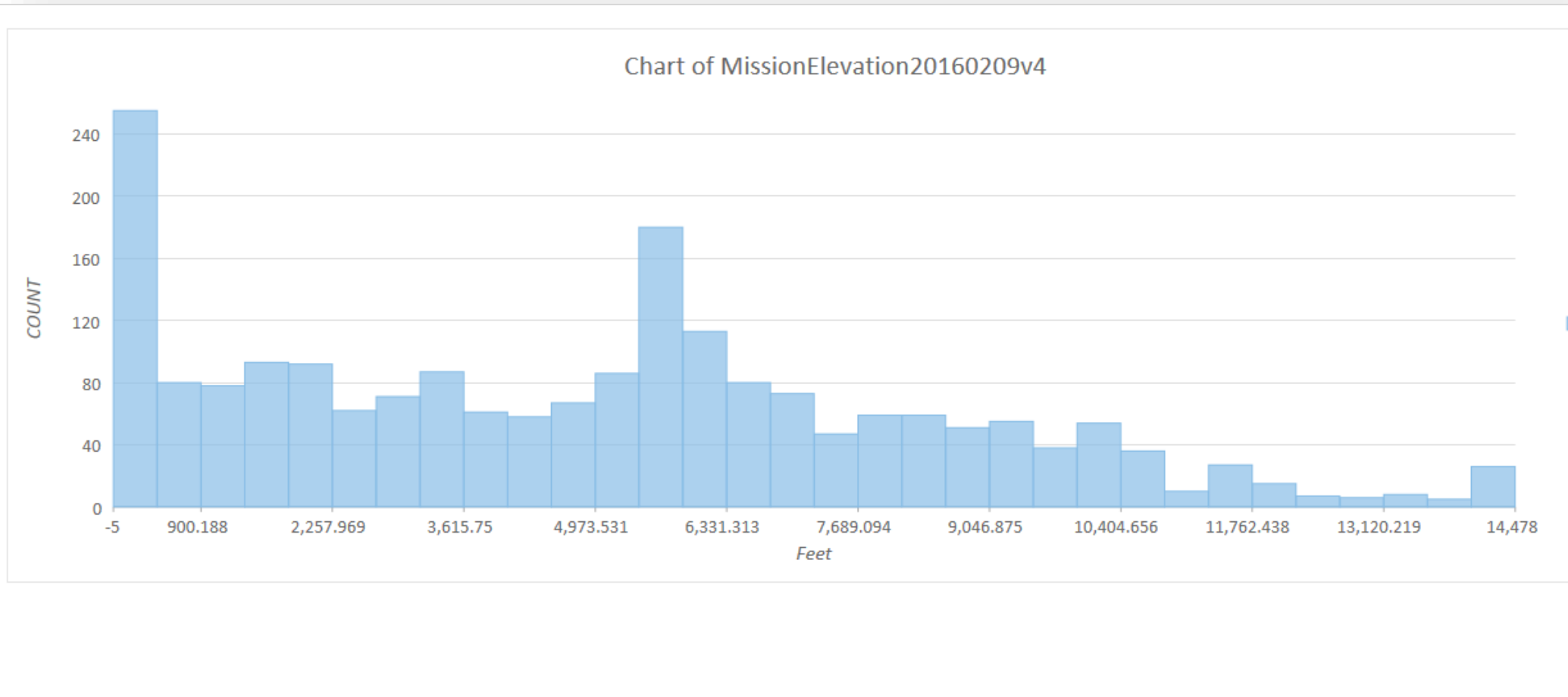


2015 Missions Data

Missions Per Month



Future Analyses?



2015 Mission Data – What did we learn?

- We have increased participation by members
- Some teams have very large response areas with +60,000 volunteer hours total (median ~6,590 miles)
- Aircraft are used frequently (~30%%) and across the entire response area
- We have opportunities to exploit our data for analysis, fundraising, and raise awareness

2016 Mission Data Portal


- Enter Data (Short Form vs. Long Form)
- Edit Data (Web Mapping Application)
- MapSAR Online
- MRA “Mapping Hangouts”

2016 Mission Data Portal

2016 MRA Mission Data Portal

No issues detected Edit Return to MRA Mapping Portal

Enter A New Mission (Short Form) Enter a New Mission (Long Form) Edit Missions (Web Map App) 2015 Dashboard (2016 Coming Soon)

 MOUNTAIN RESCUE ASSOCIATION

Enter Missions (SHORT FORM)

As soon as you are done with a mission (i.e. not at the end of the year) - enter new mission data and confirm the location of the incident using this form. For complex incidents or recording missing person search operation statistics - please see the ["Long Form"](#).

1. Enter Incident Information
2. Enter the Location of the Mission (best available location)
3. Complete Form

Data can be reviewed and edited later using the Edit Mission Web App if needed. If you have questions or need help, please send an email to mramapping@gmail.com.

1. Enter Information

Mission # or Name (required)

Enter Data


2016 Mission Data Portal

Search Lat/Lon USNG **UTM**

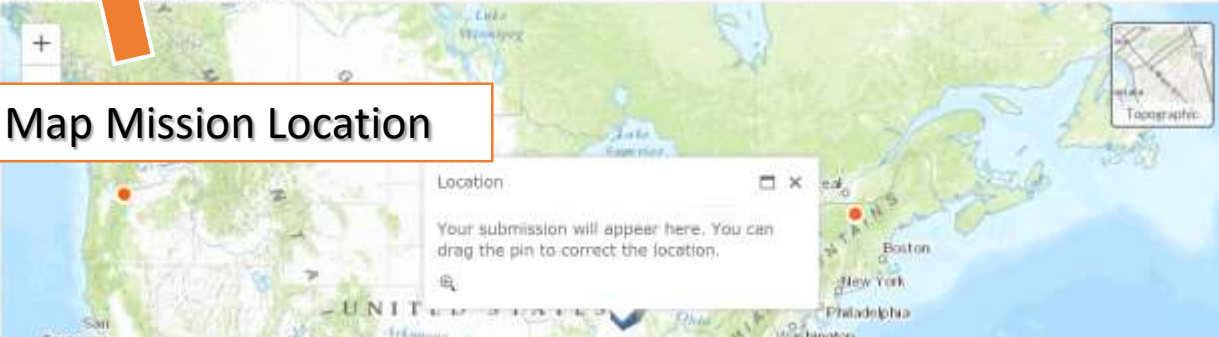
Northing
4277202

Easting
385983

Zone Number
16

 Set Location

Latitude: 51. Longitude: -129.58747



Map Mission Location

2016 Mission Data Portal

2016 MRA Mission Data Portal

No issues detected | Edit | Return to MRA Mapping Portal

Enter A New Mission (Short Form) | Enter a New Mission (Long Form) | **Edit Missions (Web Map App)** | 2015 Dashboard (2016 Coming Soon)

Edit (2016) Search for location --> Place, etc. degrees, USNG

Web Map App

SEARCH: Clark123

Comments	MRA Demonstration
Type of Mission	SEARCH
Date Mission Started	January 11, 2016
Mission In County?	YES
Number of Personnel	4
Total Volunteer Hours	4
Number of Subjects	1
Subject Gender	MALE
Subject Age	62
Subject Fitness Level	UNKNOWN

[Zoom to](#)

Read Me (click the x to close --->)

Below is a brief explanation of tools in the WebApp, click the help links to learn more about each tool. The Edit tool is open by default, so you can 1) click on one of your missions on the map and 2) edit the information or move the location by dragging the point.

- [Edit mission locations. Help](#)
- [Open a table to see all missions Help](#)
- [Print a copy of your screen. Help](#)
- [Turn Layers on / off \(download\). Help](#)
- [Change the Basemap \(imagery, USGS Topo, etc\). Help](#)
- [See a Map Legend. Help](#)

[Read More](#)

37.782 -119.436 Degrees | 0.2mi | SUNRISE MOUNTAIN | Bureau of Land Management, Carl, HERE, DeLorme, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA | esri

MRA Team Membership Map

The screenshot displays the Mountain Rescue Association (MRA) website's 'All MRA Teams' page. At the top, the MRA logo is on the left, and the text 'MOUNTAIN RESCUE ASSOCIATION' is centered, with the tagline 'Courage. Commitment. Compassion.' to the right. Below this is a navigation menu with links for Home, About MRA, Donate, Teams (highlighted), Sponsors, Training & Education, Member Service, and Links. The main content area is titled 'All MRA Teams' and includes the instruction: 'Zoom in and click on any dot for information on that MRA team. Zoom In will display team names.' Below this is a map of North America with numerous blue dots representing MRA teams. The map interface includes a search bar with the text 'Find address or place', zoom controls, and a home button. To the right of the map is a sidebar with the MRA logo and the heading 'Compassion'. This sidebar contains two bullet points: 'Whether it is a hiker that stumbles, a climber that falls, or a child that wanders away from a family gathering, Mountain Rescue Association teams are there to help.' and 'Teams perform 5,000 search and rescue operations in the United States each year.' Below the text, it states 'The 100 Mountain-Rescue Association member teams represent 2,000 professional volunteers, many of whom are certified with specific EMS qualifications including Emergency Medical Technician (Paramedic, Intermediate, and Basic levels) and Wilderness First Responder.' and provides the website address 'www.mra.org'. At the bottom of the sidebar are three small images showing rescue operations.

Conclusion

- We have data!
- We can better explain the who, what, **where**, when, why of our organization
- Provide basic mapping tools for teams and connect them with GIS Specialists
- Other agencies adopting the model!

CalOES Adopting the MRA Mission Data Approach



California SAR Data Portal

Please send feedback on this site to sarstats@caloes.ca.gov.

2016 Missions Dashboard | Mission Information | Found Subject Information | California SAR Edit and Analysis Page | SAR Discussion Area



SAR Mission Data Entry

Enter new mission data including the initial planning point using this form. All fields are required, except where noted otherwise. Once the subject is found please use the Found Form to record information regarding the circumstances and location where the subject was found. This information may be able to help in resource allocations and in the analysis of lost person behavior.

If you have questions or need help, please send an email to sarstats@caloes.ca.gov.

1. Enter Information



Resources

- <http://msar.maps.arcgis.com/>
 - Videos
 - Tutorials
- <http://data.msar.opendata.arcgis.com/>
 - MRA Mission Data Model
 - MRA Team Locations
- ArcGIS Online Templates
 - GeoForm
 - Web AppBuilder
 - Story Map Series
- <http://www.esri.com/nonprofit>

Thank You!

MRA Mapping Team: mramapping@gmail.com