

Best Practices in Using Technology for Public Information



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Program Manager
NAPSG Foundation

Having situational awareness in the EOC....

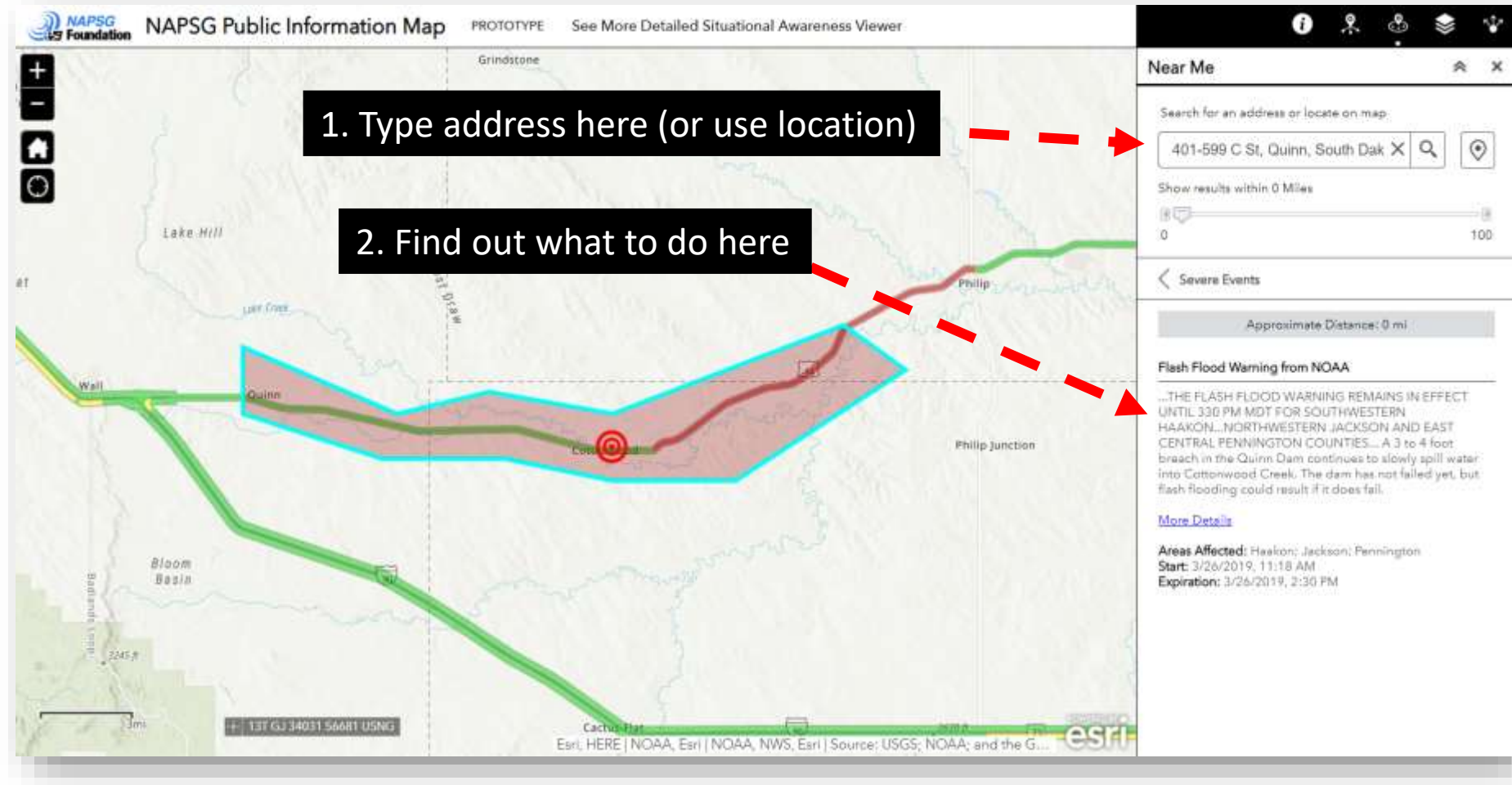


...means nothing without situational awareness in the living room



Why Use Maps?

- Easy to understand*
- Up to date
- Spatially explicit information



Example: Live Wildfire App

Thursday, October 31, 2019 10:04AM

CALIFORNIA (KABC) – See an interactive map related to all the fires burning in Southern California, including the [Hillside Fire in San Bernardino](#) that has prompted evacuation orders as it spread rapidly throughout the area.

The map shows fire hot spots, current wind directions as well as the fire origin point.

TOP STORIES

- San Bernardino blaze prompts evacuations, damages homes**
Updated 4 minutes ago
- Junipa Valley brush fire erupts after police chase, CRA**
Updated 7 min
- California map: Fires quality in S**
Updated 25 m
- Mandatory evacuations lifted Valley brush fire**
Updated 2 hours ago
- LA crime rate higher on Halk data finds**
Updated an hour ago

EYEWITNESS NEWS WATCH VIDEOS

InnovAge INNOVAGE PAGE Program of All-inclusive Care for the Elderly LEARN MORE

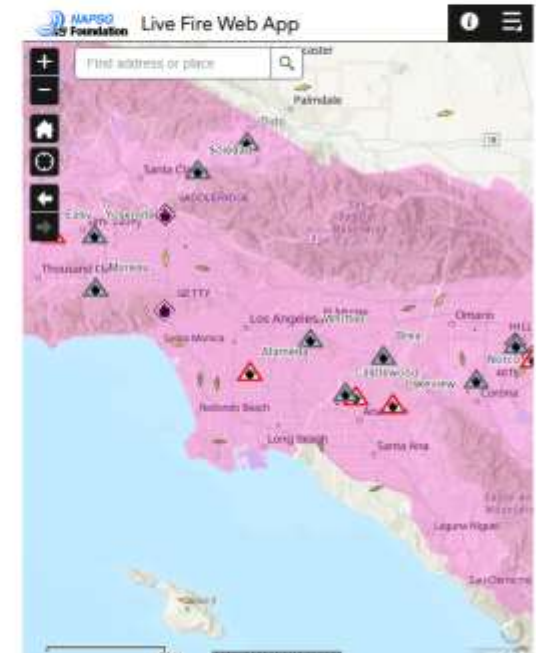
Ralph's Fresh food. Low prices. View Weekly Ad

CALIFORNIA FIRE MAP: Live updates for the Hillside Fire in San Bernardino

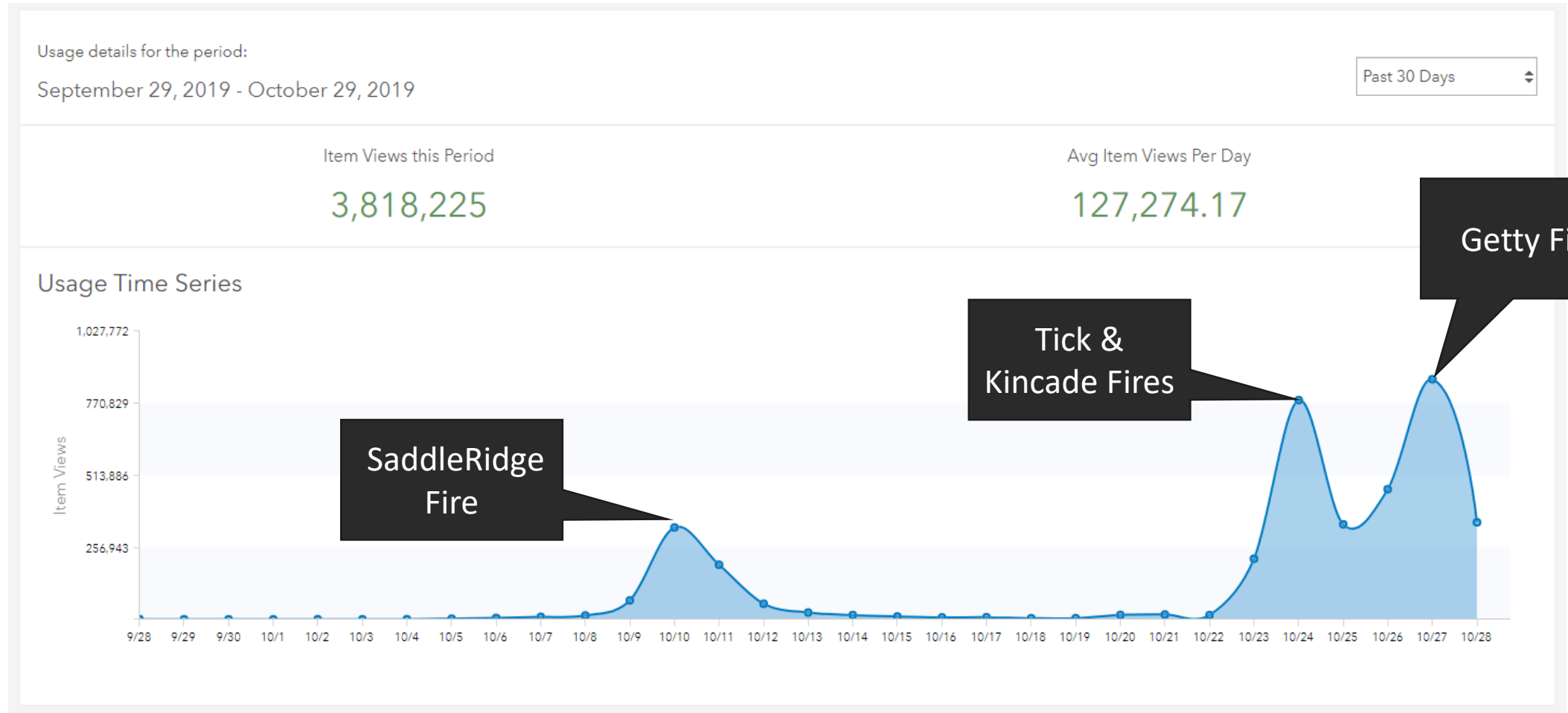
See an interactive map related to the Hillside Fire burning in San Bernardino, as well as other blazes in Southern

state have consumed more than 162,600 acres.

The map below shows live updates on the position and conditions of the California wildfires.



Example: Live Wildfire Map



Today's Objectives

Everyone should leave this workshop with:

An understanding of common challenges associated with NOT using maps for public information sharing.

A checklist of best practices for public information maps.

- Technical
- Operational

A draft worksheet for maintaining and sharing public information maps as part of a geospatial game plan.

Agenda

- Common Challenges
- Case Studies
 - City of Boulder
 - Mariposa County
 - State of Oregon
- Best Practices
 - Technical
 - Operational
- Hands-On – Create A Game Plan
- Using the USDA Media Tool
- Amplify Your Message

Exercise: Be The Public

Access this public information map: <https://arcg.is/1TvWye>

1. Type in this address on the right: **900 Grape Ave., Boulder, CO**
2. Do you need to evacuate right now?
3. Where is your nearest open shelter?
4. Are there any road closures to be aware of?

Scan the QR with
your camera



Common Challenges

Don't want these posts to be about your agency?

Mariposa County
Anderson Valley.



Like · Reply · 2h

Kaye Potter Thar
Like · Reply · 1h

Mary A. Dempse
Nixle comes out a
where have the a
a panic 🤔

Like · Reply · 2m



4:42 PM · Oct 24, 2019 · Twitter for iPhone

153 Retweets 129 Likes

Greg Gerardo @GregGerardo · 1h
Replying to @LACoFDPIO
Is there a real-time online map available?

Brian Bledsoe
@BrianBledsoe

The second wildfire this week involving MANDATORY evac. There was never an evac map for the Blainey Rd Fire & still no official evacuation map for the #DeckerFire... Someone PLEASE help me understand this! A list of roads does NOTHING to those digesting the info #cowx

1:56 PM · Oct 2, 2019 · Twitter Web App

1 Retweet 14 Likes

Markus Kaeppli
@markuskaeppli

I am trying to find an updated (detail) map for #TickFire But somehow nob up... not even the official fire and po or if they have, the maps are imp then to read.

#TickFire #LACoFD @LACoFDPIO @LASDHQ

6:38 PM · Oct 24, 2019 · Twitter Web App

Mendocino Sheriff
@MendoSheriff

EVACUATION WARNING - PLS RT !!!
Mendocino County Sheriff's Office is issuing a new evacuation warning for the #RiverFire in the Hopland area. Affected area is south of Hwy 175, east of Old River Road to Highway 101 and east to Old Toll Road and Ranch Road area.

9:03 PM · 27 Jul 2018

160 Retweets 64 Likes

3 160 64

Tweet your reply

mendovoice @TheMendoVoice · 52m
Replying to @MendoSheriff
Can you clarify this order with a map? Do you mean west to 101?

Mendocino Sheriff @MendoSheriff · 13m
I'm sorry we don't have a clearer map at the moment. If you use google maps you can get a better idea where it's at. It is east. I think you may be thinking of The Toll House on 253?



Common Challenges when NOT using maps

1. Information that is not spatially explicit
2. Information that is difficult to update after it is shared
3. Information that has little or no situational awareness value
4. The media will make their own

...little or no situational awareness value

- Long lists of road names or evacuation zone boundaries
- Very difficult to interpret and make decisions from
- Problem for both internal and external situational awareness
- Often creates cross-jurisdictional issues (e.g., the public may not know which County website they should visit)

Evacuation Info:

Community of French Gulch
SR 299 west of Trinity Mountain Rd to the base of Buckhorn Summit
Whiskey Creek Rd to include the boat launch/day use areas
South along Swasey Dr from SR 299 to Placer Rd
West along Placer Rd from Swasey Dr to Prospekt Dr
North from Prospekt Dr to encompass Middle Park Ranch Land Area
West of Overhill Dr and North of SR 299
North of SR 299 and West of Splnmaker Rd to the end of Harlan Dr
Keswick Dam East to Counter Lane, North to Quartz Hill Rd
North of Sacramento River to Keswick Dam Rd, West of Market Street and
Lake Blvd to Keswick Dam
North at Lake Blvd and Oasis Rd to Pine Grove Ave and Walker Mine Rd West
of Cascade Rd/ I-5
Pine Grove Ave North on Lake Blvd to Shasta Dam Incorporating Summit City,
North Belt Line and Flannigan Rd
Intersection of Placer Rd and Buenaventura Blvd west to Thompson Lane
Buenaventura Blvd from Placer Rd to Westside Rd
Westside Rd to Keyon Drive Incorporating Country Heights and West Redding
neighborhood
Buenaventura Blvd to SR 299 to Placer Rd
Placer Road from Buenaventura Blvd to Cloverdale Rd
Cloverdale Rd from Placer Rod to Clear Creek Rd
Clear Creek Rd west from Cloverdale Rd to Honey Bee Rd
Shasta Dam Visitor Center
All of Shasta Dam Blvd
All of Shasta Lake City

Residents located east of Trinity Mountain Road use evacuation center
located at Shasta College 11555 Old Oregon Trail in Redding. Residents
located west of Trinity Mountain Road use evacuation center located at
Weaverville Elementary School 31020 HWY 3 in Weaverville.

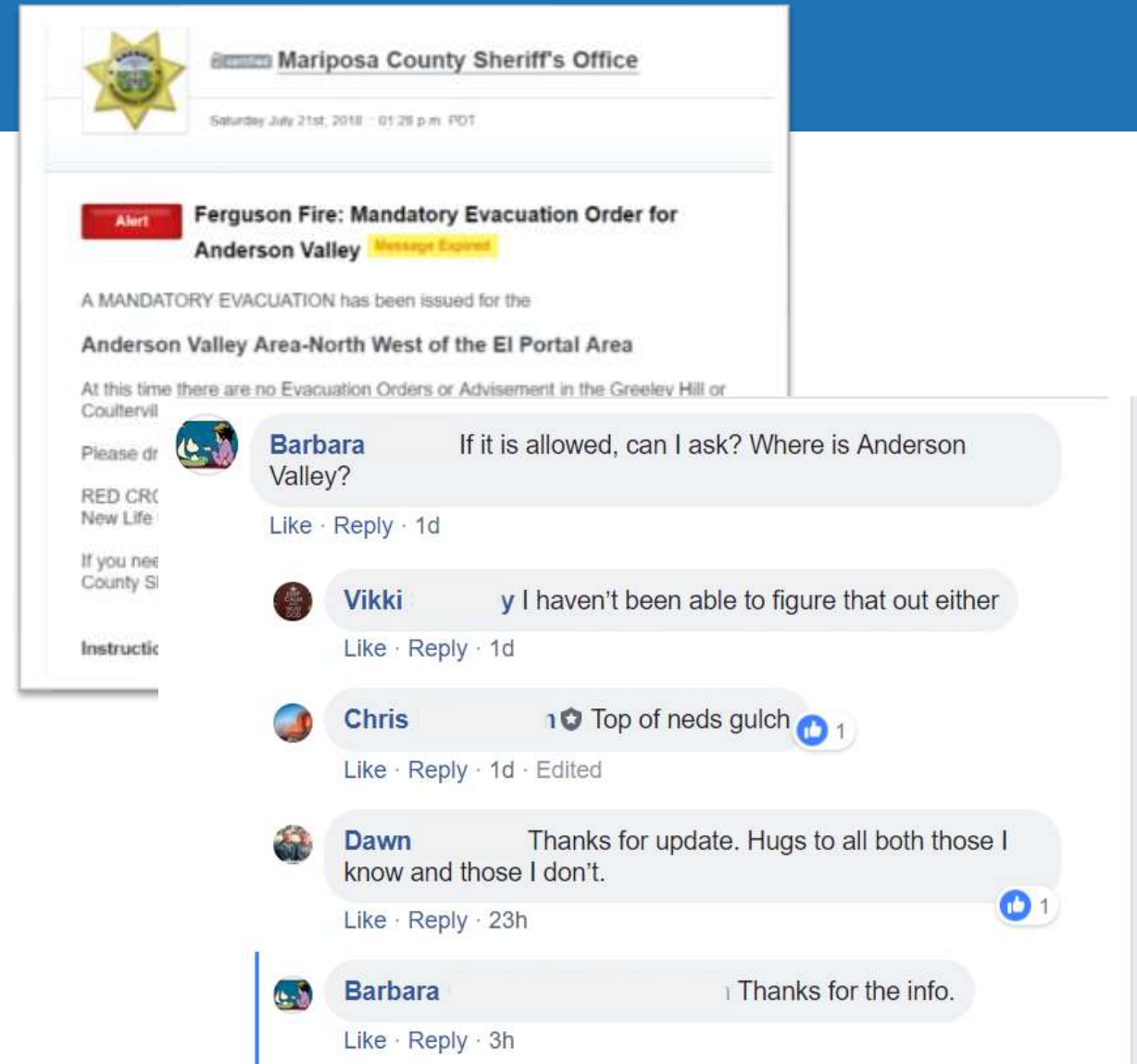
Animal evacuation centers: Large Animal – Redding Rodeo Grounds 715
Auditorium Drive Redding, Ca.
Small Animal – Haven Humane 9417 East Side Drive Redding, Ca.

For information on evacuation notifications visit <http://www.shascom911.com>

**Examples shown in the following slides are not meant to be critical of agency or personnel*

....not spatially explicit

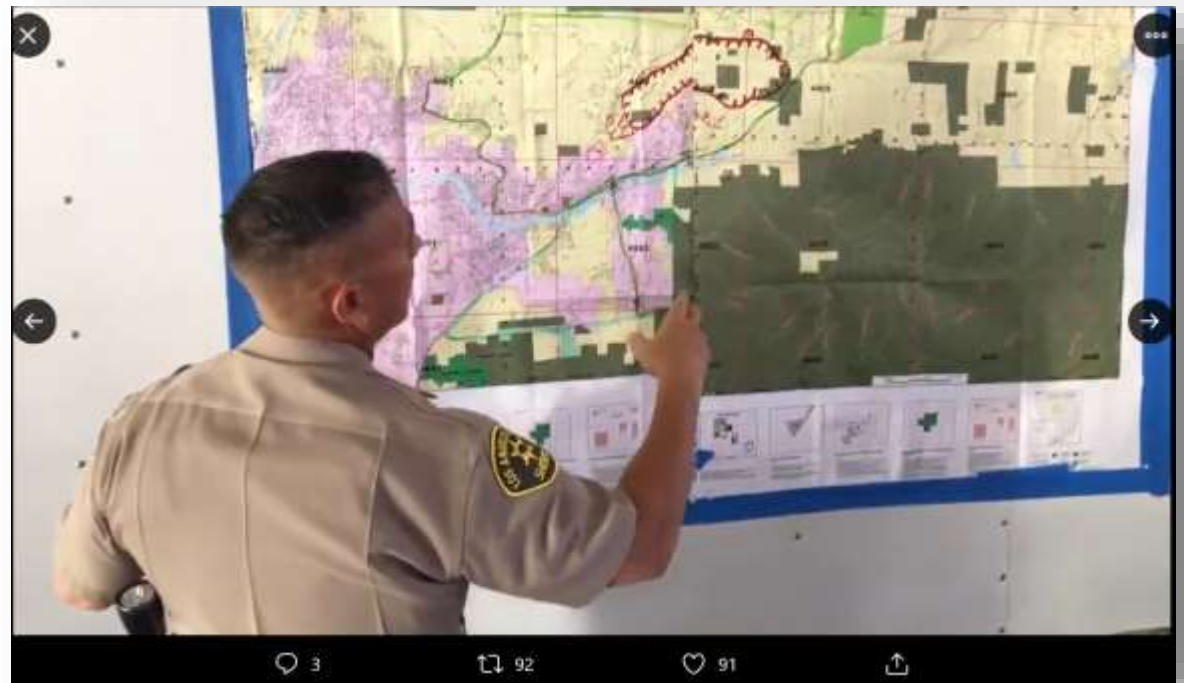
- Creating evacuation zones using street names that don't create an area
- Colloquial names cannot be “Googled” and can mean different locations depending on audience



**Examples shown in the following slides are not meant to be critical of agency or personnel*

...difficult to update once shared

- Once you share a screenshot or static list of placenames, it cannot be unshared
- Tweets and Facebook posts often get reshared hours or even days later!

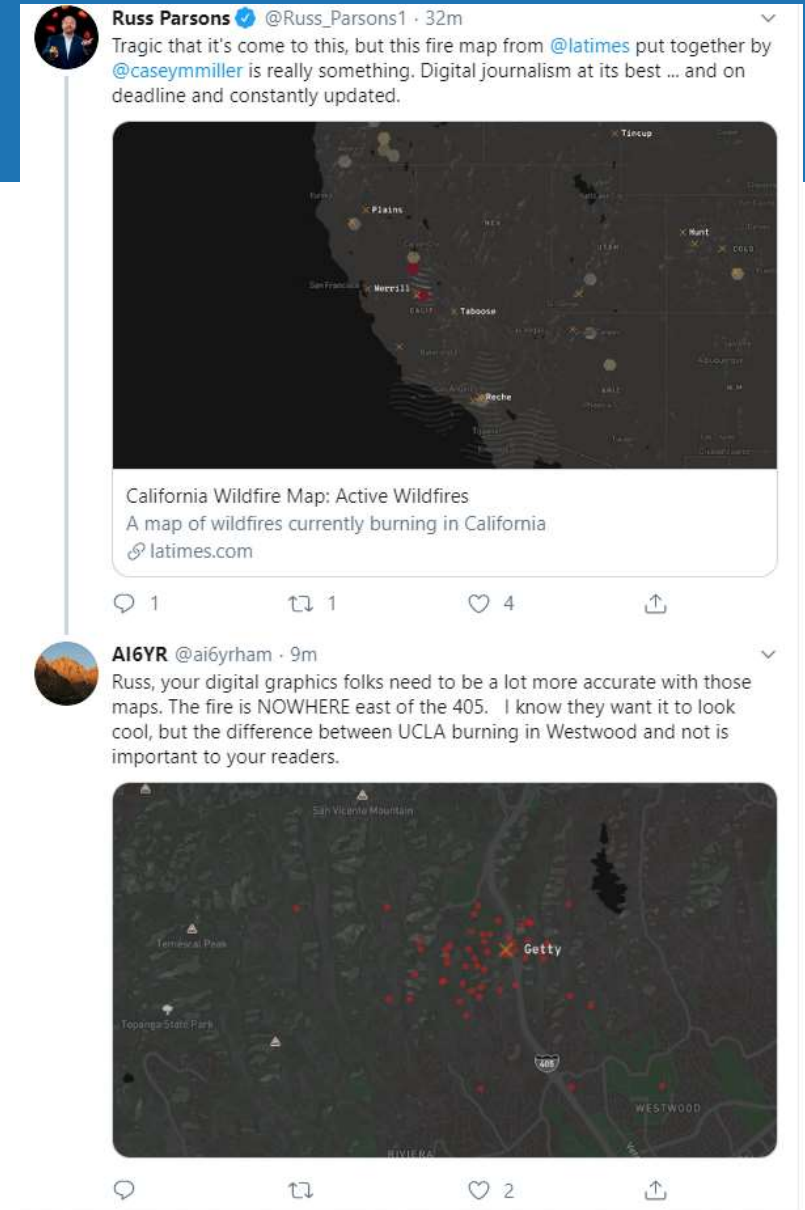


**Examples shown in the following slides are not meant to be critical of agency or personnel*

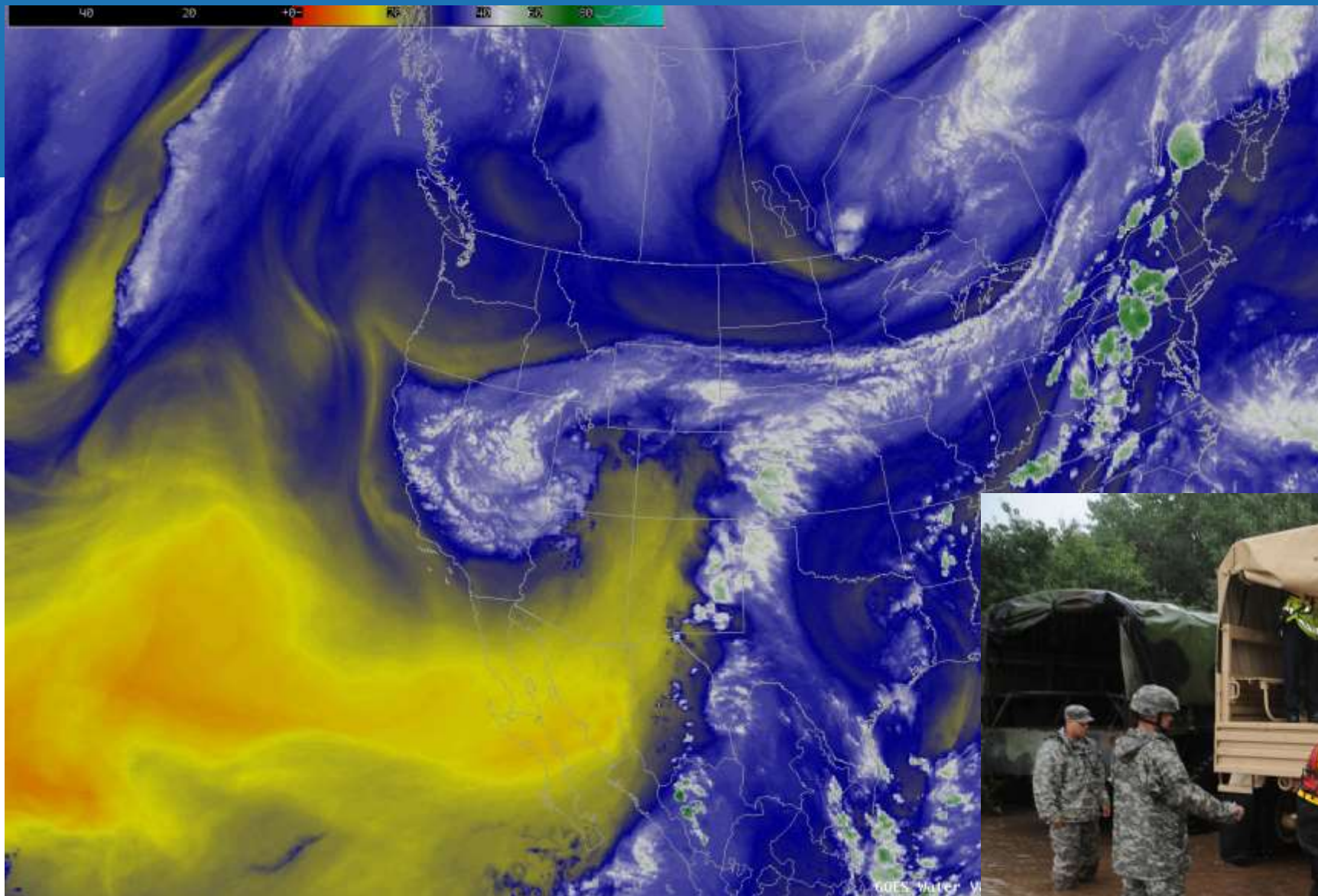
...the media will make their own

- In the absence of agency provided information, the media (news and social media) will make their own maps
- Media maps may be:
 - Inaccurate
 - Not up to date
 - Disconnected from operational tempo

**They may also do a very good job but would always work better in partnership with the agency having jurisdiction.*



Case Study: City and County of Boulder



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City and County of Boulder

Incident: 2013 Floods

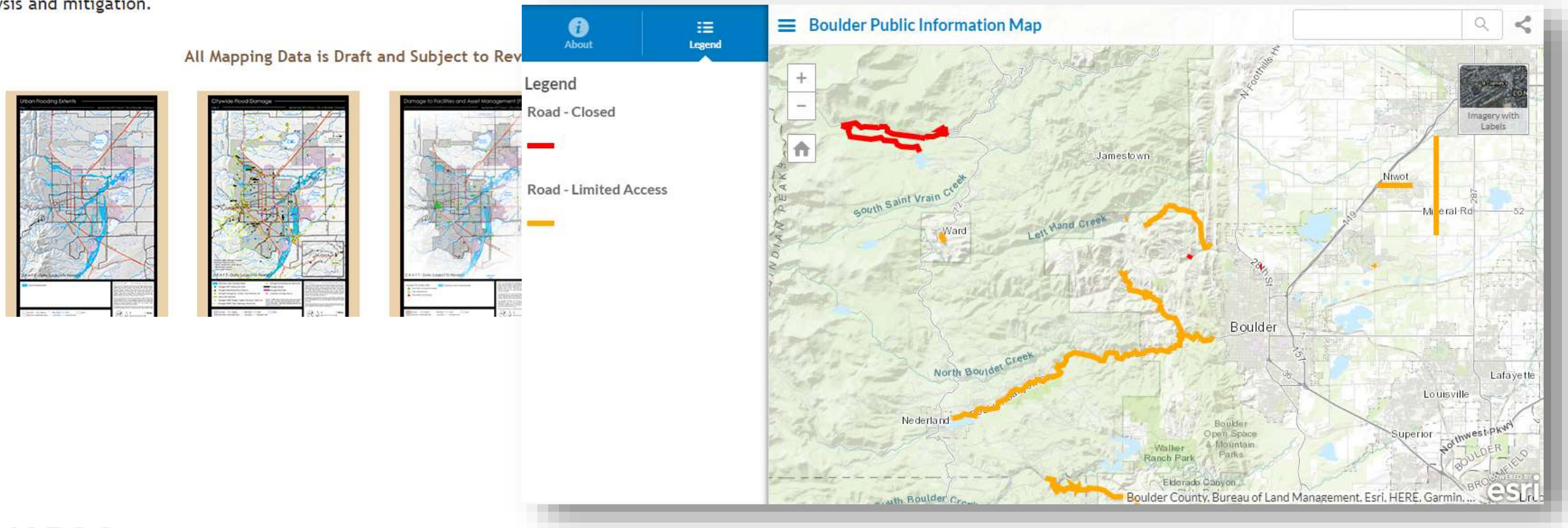
What Went Well?	Not So Well?	Improvements Made to Public Info
Posted a public information map that showed road closures Good connection with the Type 1 IMT GISS EOC was staffed with highly trained GIS professionals	City servers could not handle the load during the first operation period, had to switch to county servers and add resources	Moving everything to ArcGIS Online to improve scalability Creating an evacuation specific application Created internal mapping applications using WebApp builder to help ESFs (connected to Public Info Map)

Improvements Made

2013 FLOOD MAPS

Detailed maps of the September 2013 flooding and associated impacts to people, private property and public infrastructure in the City of Boulder.

This mapping is not used for regulatory purposes and does not change the FEMA floodplains. This information was captured to document the event and provide insight into areas requiring future analysis and mitigation.



Case Study: Mariposa County, CA

Mariposa County, CA

- Town of Mariposa, gateway to Yosemite National Park
- Population ~20,000 people
- Visitors > 1 Million people
- Hazards
 - Wildfire
 - Flood
 - Traffic



Mariposa County, CA

Incident: 2017 Detwiler Fire

What Went Well?	Not So Well?	Improvements Made to Public Info
GIS Staff supported the EOC (1)	There was not enough GIS Staff. There was a huge disconnect between evacuation notice creation by sheriffs and the GIS Team in the planning section. No Public Information Map made available.	None (yet)

Mariposa County, CA



 **Mariposa County Sheriff's Office**

Monday October 7th, 2019 :: 05:52 p.m. PDT



Alert

Briceburg Fire Mandatory Evacuations

A Mandatory Evacuation Order has been issued for the following areas: Both sides of Highway 140 from the Octagon to Colorado Rd. This includes the Bug Hostel area and all of Buffalo Gulch Road.

A Red Cross Evacuation Center has been established at the New Life Christian Church located at 5089 Cole Rd.

Instructions:

Address/Location
[Mariposa County Sheriff's Office](#)
5099 Old Hwy N
Mariposa, CA 95338

Contact

TEXT-A-TIP - Text TIP MARIPOSASO
followed by your message, to 888777

[Submit an anonymous web tip](#)

Alert Details
Severity:
Severe - Significant threat to life or property
Urgency:
Expected - Responsive action SHOULD be taken soon (within next hour)
Certainty:
Observed - Determined to have occurred or to be ongoing
Category:
Fire, suspected and active

Mariposa County, CA

Incident: 2018 Ferguson Fire

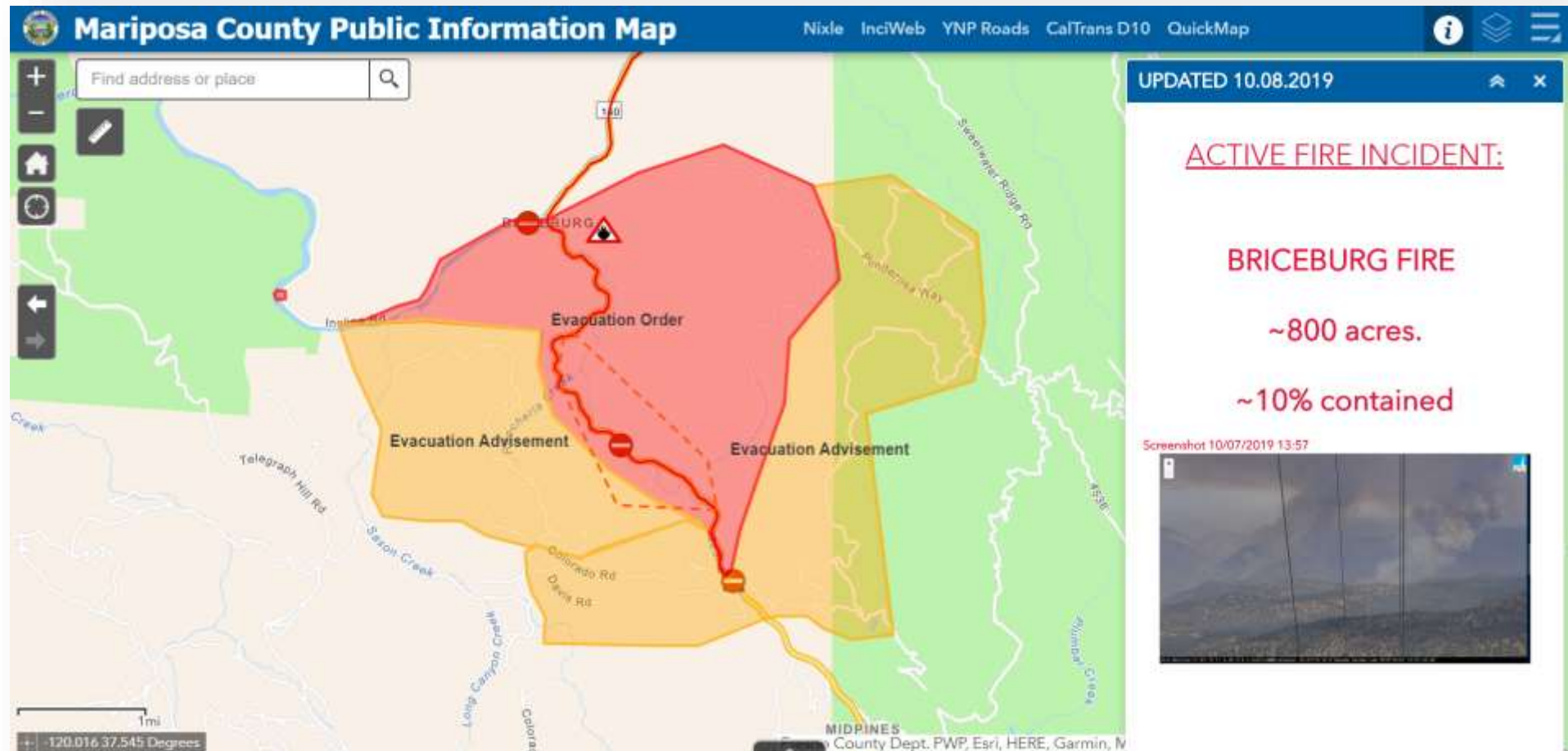
What Went Well?	Not So Well?	Improvements Made to Public Info
More GIS Staff supported the EOC (2). Live Public Information Map released!	GIS Staff are still mapping evacuation notices from Nixle alerts. FEMA National Shelter System not accurate. Not clear how to map road closures. Created public information map “on the fly”.	Formation of a GIS Working Group across local counties, tribal, and federal agencies. Refinements to symbology and process of public information map.

Mariposa County, CA

Incident: 2019 Briceburg Fire

What Went Well?	Not So Well?	Improvements Made to Public Info
Public Information Map shared via Nixle Alerts. Sheriff's started evacuation planning from a map using Collector for ArcGIS. Staff used internal layer to understand number of homes, VRBO, and sensitive needs population in zones.	*Bug with Collector on Android / W10 We still need a game plan for sharing data across agency maps, editing road closures, and shelter status.	Map was shared by our PIO and on social media for the first time. Public Information Map was ready to go (and is now) prior to the incident!

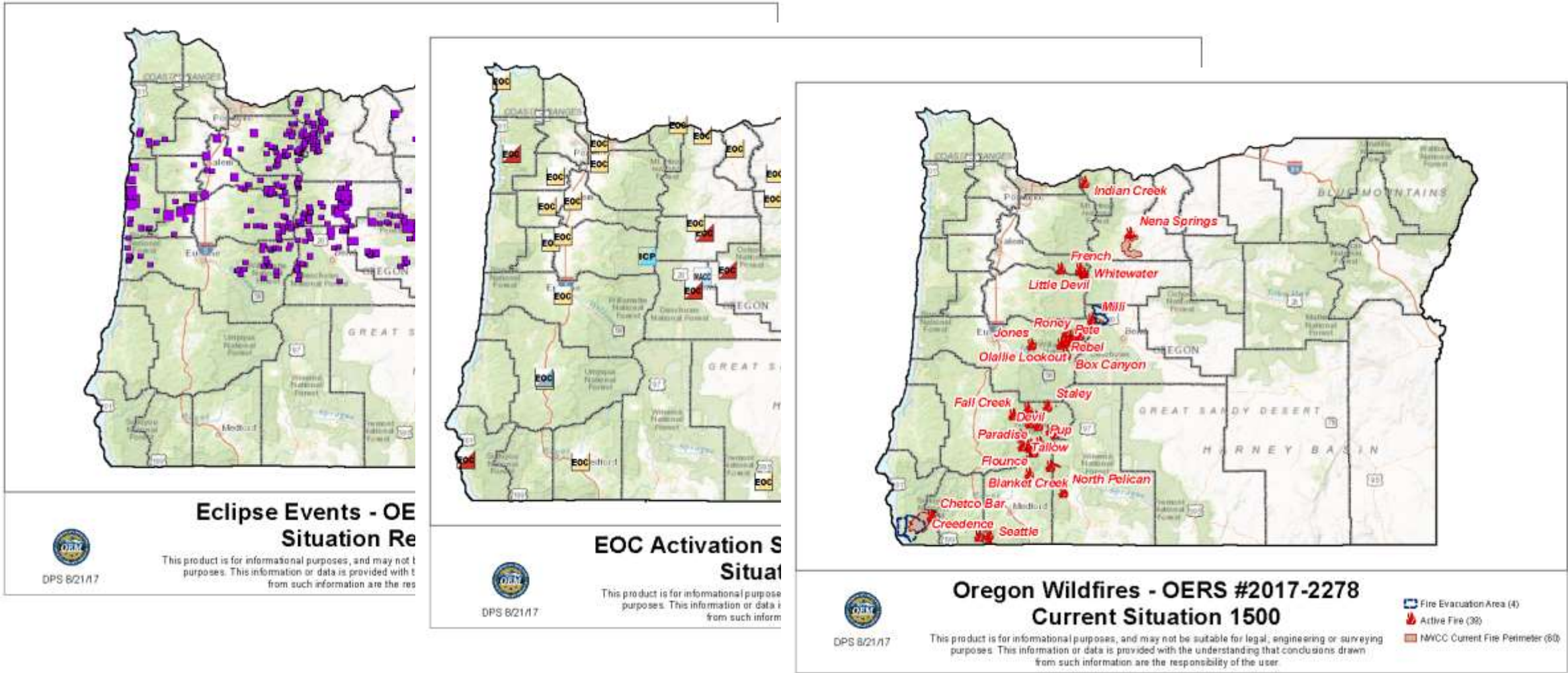
Mariposa County, CA



<https://www.arcgis.com/apps/webappviewer/index.html?id=9cdac8da837f4ef3b9abd8d0a67ec7d4>

Case Study: Oregon State

State of Oregon



State of Oregon

Incident: 2017 Solar Eclipse

What Went Well?	Not So Well?	Improvements Made to Public Info
Input from local/tribal/state community	Not everyone participated	Repeatable process for gathering data
COTS technology utilized	Lack of sharing from some jurisdictions	Connection with news media
Repeatable process		Creation of data sharing agreements
News media utilization		Drove creation of statewide fire evacuation layer
Cross pollination with OpsCenter system (like WebEOC)		Data views for the general public

State of Oregon – What Went Well?

- The entire community (local/tribal emergency managers, state emergency response partners) provided input on creation of a master eclipse events layer
- Were able to use COTS technology (Esri geoform) to populate a master data layer
- Easy to visualize events using data created from geoform as well as a javascript page showing the table view
- Integrated with public mapping program (Public RAPTOR) for keeping the public informed
- Social media integration – used Virtual Operations Support Team (VOST) to help spread the message
- News media caught on to resources available to public
- Integrated OpsCenter (our WebEOC like product) with GIS to indicate active declarations and EOCs
- Used opportunity provided by eclipse to have a master wildfire evacuation layer and shared to public map

State of Oregon – Not So Well?

- Did not get everyone's participation
- Some jurisdictions did not share data during the event

Improvements Made

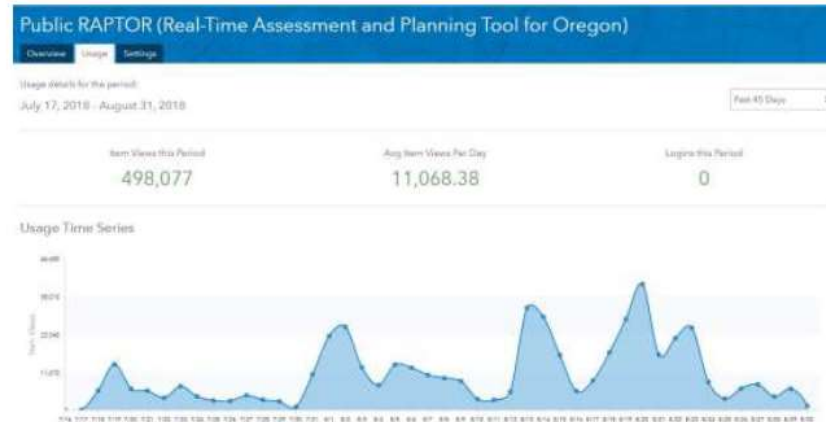
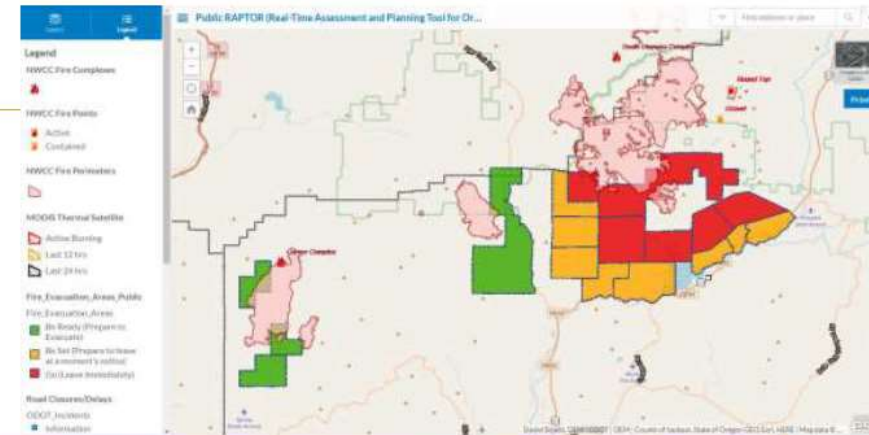
- While the eclipse was a “once in a lifetime event”, did provide a repeatable process for collecting data from partners and helped establish the importance of a wildfire evacuation layer for the state
- Established connection with news media and public information to help spread the word and be the official resource for data – news media is even embedding public RAPTOR on their pages during major events to keep the public informed
- Formalized handshake agreements (now data use agreements with signatures) for consuming and integrating RAPTOR incident data outside the RAPTOR application – GIS server access to data providers and feature service editing capability
- Creation of simpler mapping applications geared towards specific data using storymap/operations dashboard templates (Leadership Briefing product)
- Creation of GIS contacts directory for getting a hold of key players at local/tribal/state/federal level (modeled after NSGIC Emergency Management Contacts Directory)

State of Oregon



2018 Results

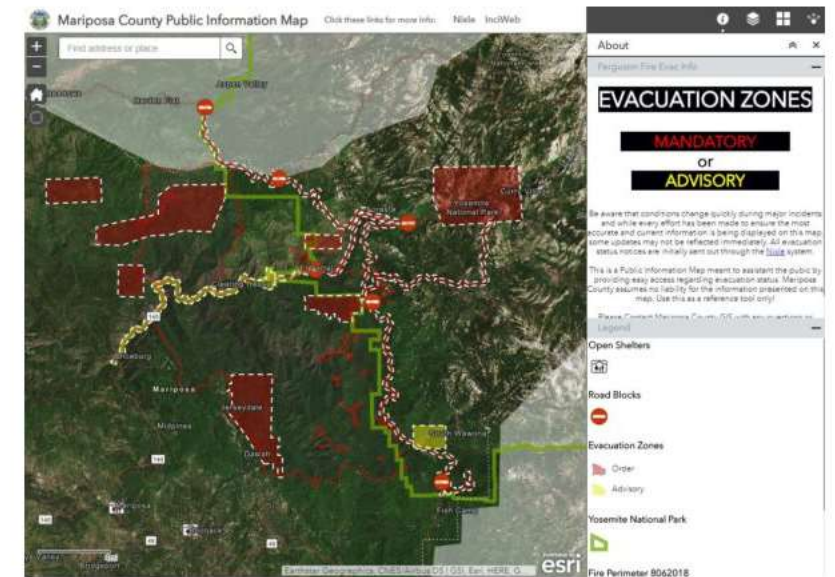
- **Public Engagement:**
 - Become resource for relevant data about wildfire evacuation
 - Take advantage of sharing of services with partners
 - Keep the public informed with accurate and up-to-date information
 - Nearly 500,000 views of Public RAPTOR during fire season



Technical Best Practices

CORE INFORMATION NEEDS FOR THE PUBLIC DURING WILDFIRES

Wildfires increasingly impact populated areas across the West (see [InciWeb](#) for incident details and a quick map of all current incidents). NAPSG Foundation, in conjunction with the [Esri Disaster Response Program](#), has been supporting public safety agencies with best practices for Public Information Maps. This post is a synopsis provided to help agencies get better prepared before the next disaster strikes. The blog is focused on fire incidents, but the same principals apply to most types of disasters.



Screenshot of the Mariposa County Public Information Map on August 7th, 2018

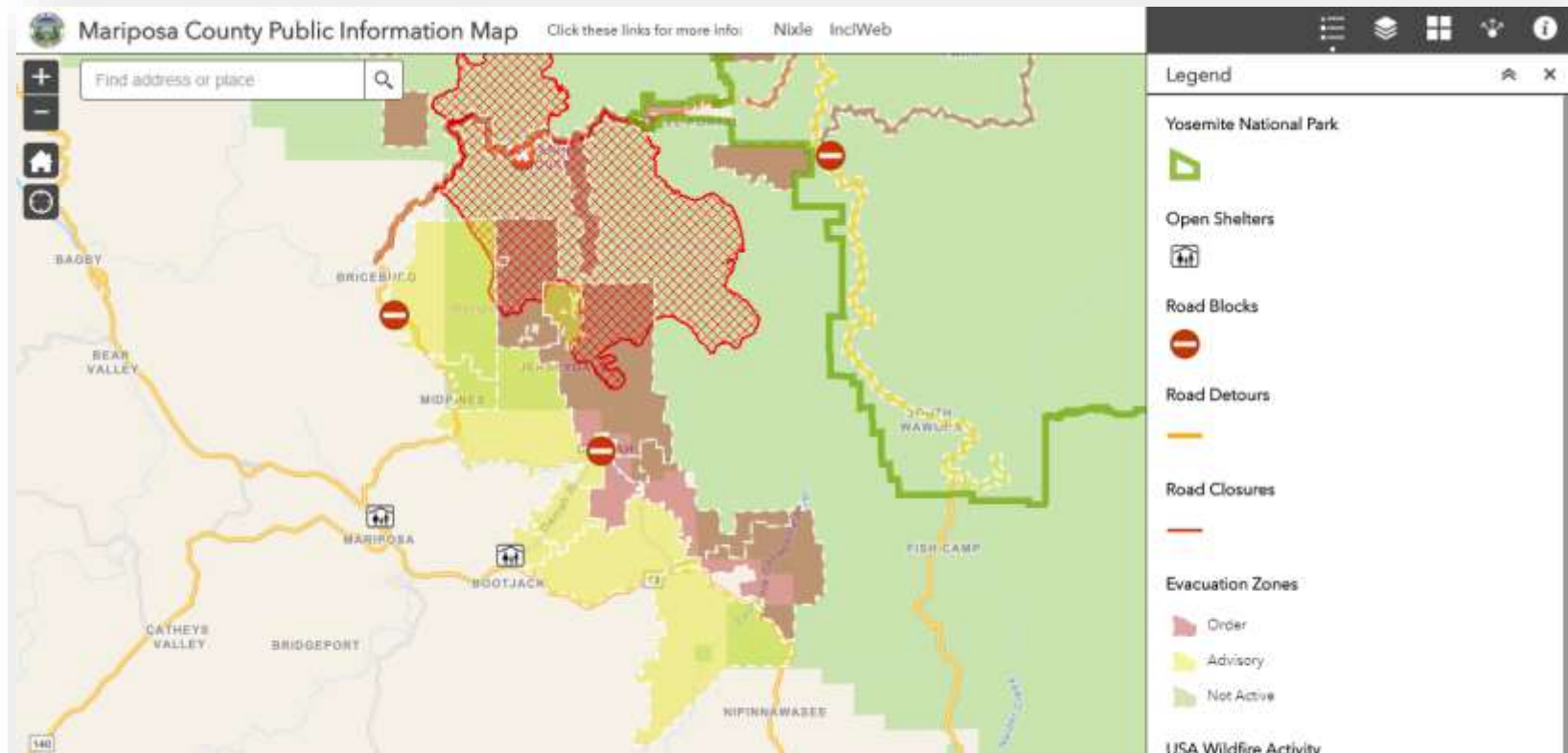
<http://bit.ly/2LKiflQ>

Technical Best Practices

1. Simplicity
2. Scalability
3. Security
4. Smartphone
5. Shareable

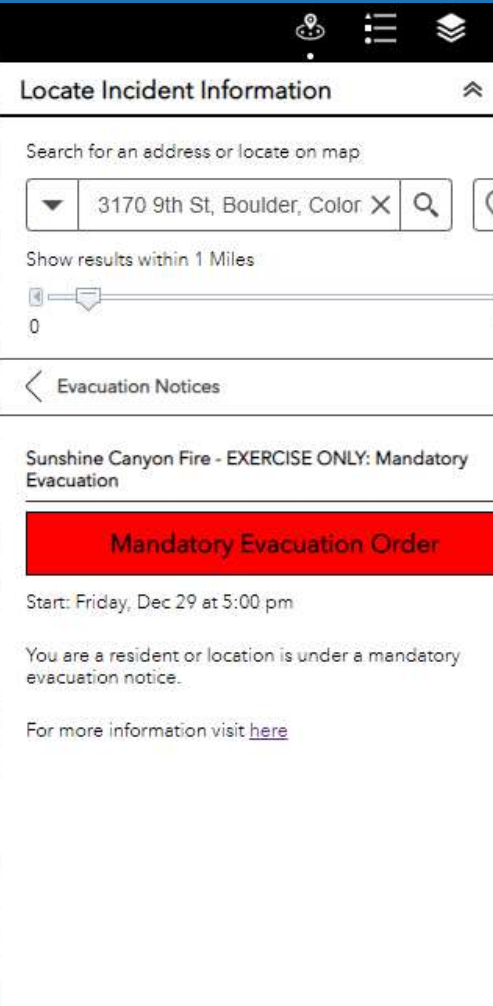
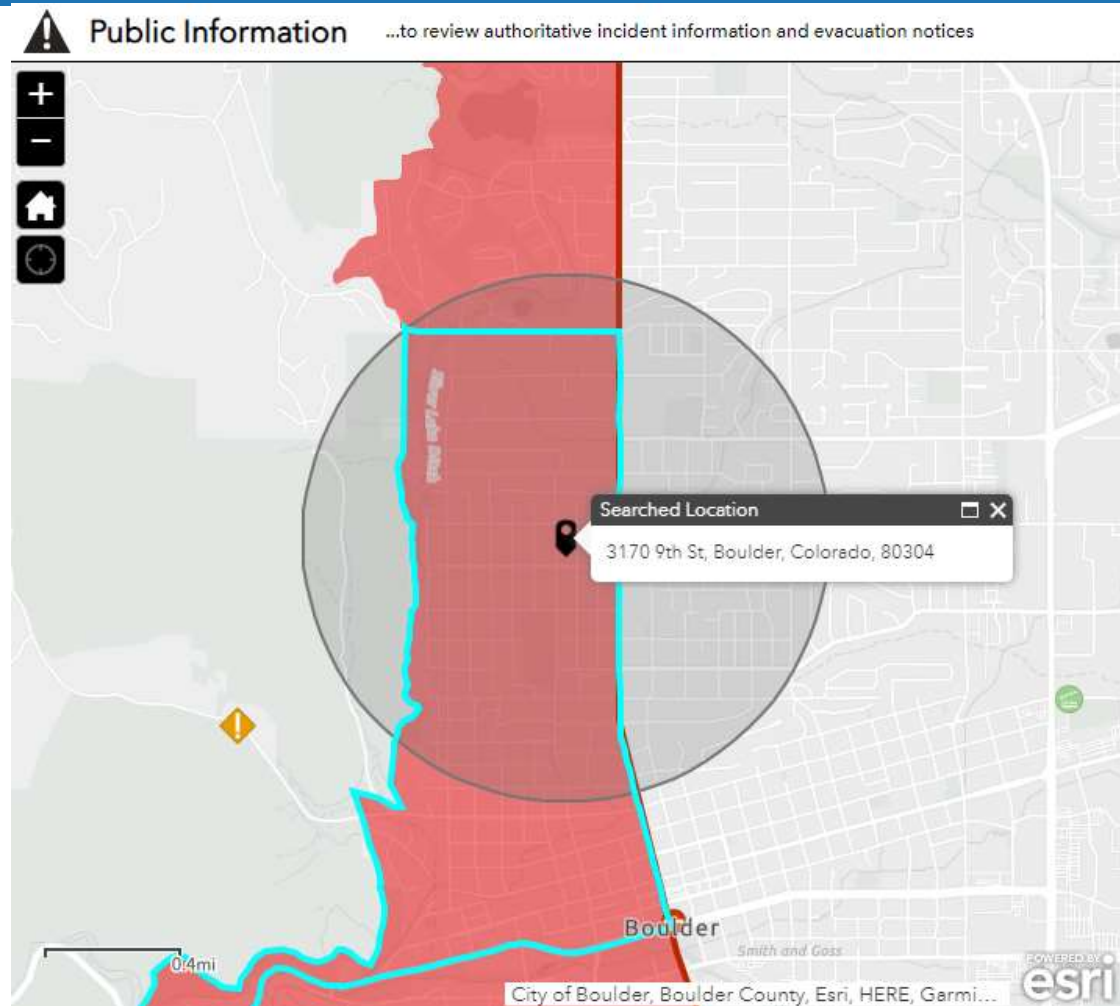
1. Simplicity

- Evacuation Notices
- Open Shelters
- Road Closures
- *Hazards



Mariposa County GIS Staff during the 2018 Ferguson Fire did a great job of keeping their map as simple and up to date as possible. This provided essential information to the Public in a way that was easy to understand.

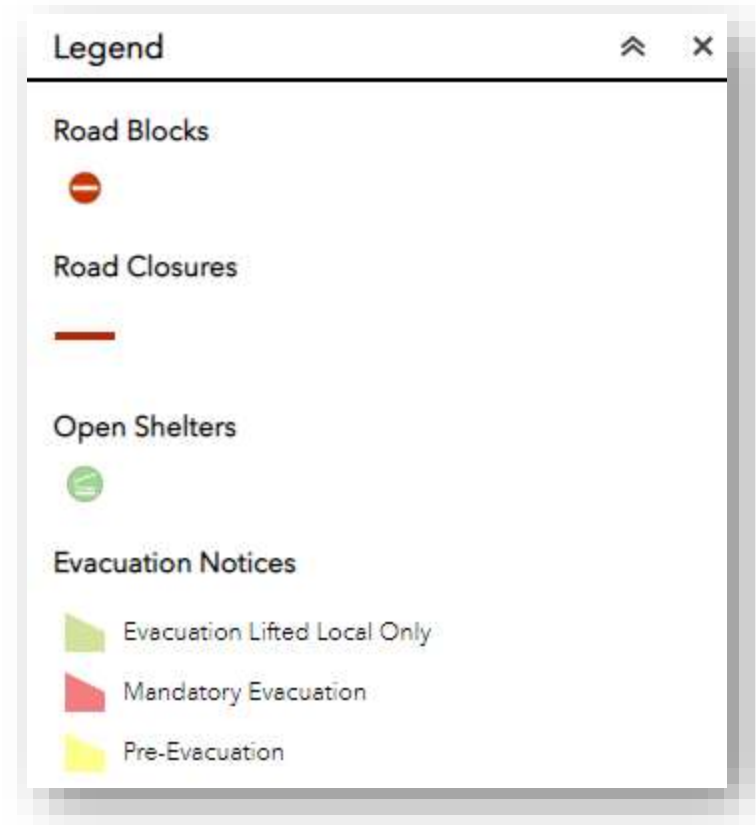
1. Simplicity



1. Simplicity

Evacuations – Am I Safe Here?

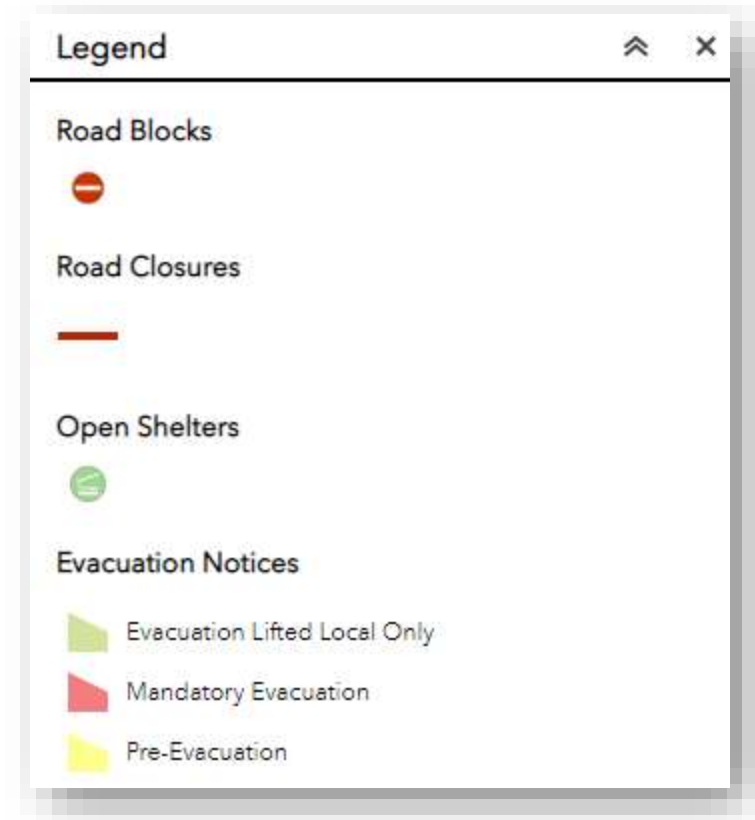
- Keep it simple!
- Red, Yellow, Green
- Address / Place Searchable



1. Simplicity

Shelters – Where can I go?

- Show open shelters
- Are pets allowed? Livestock?
- Regional vs. Local
- Up to date



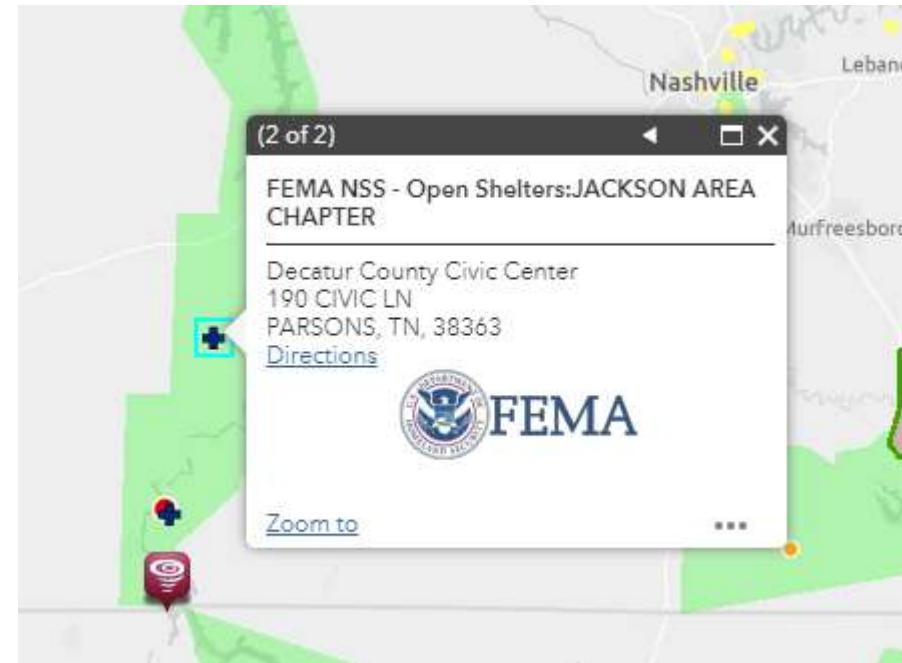
1. Simplicity

National Shelter System

The Red Cross National Shelter System (NSS) contains information for over 56,000

*potential shelter facilities and is used to track and report shelter information during disasters.

**not all shelters participate, potentially moving to a cloud-hosted layer in 2020 but in the meantime be aware of scalability issues*

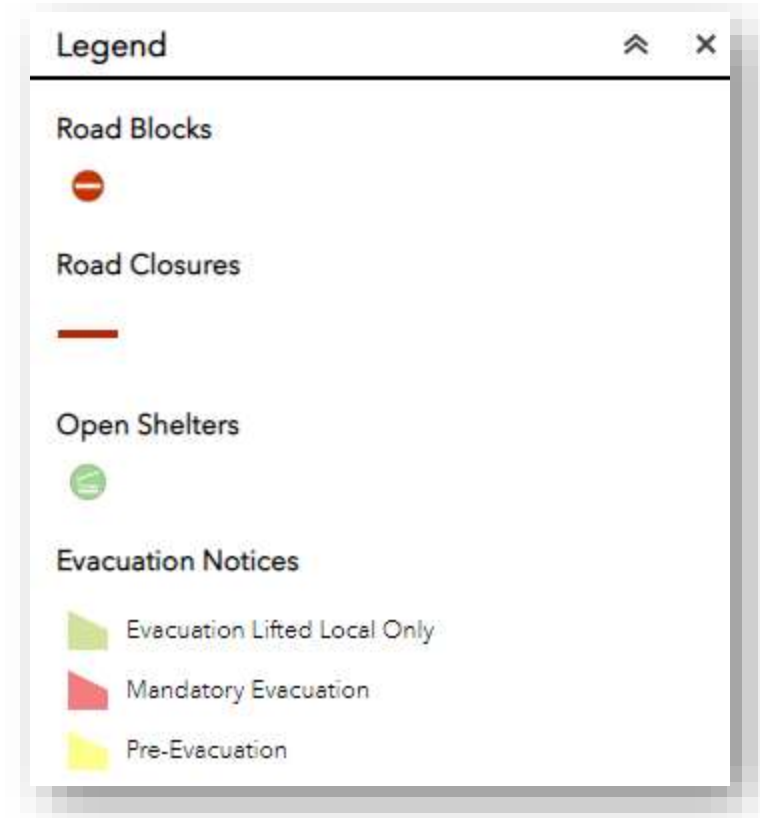


<https://gis.fema.gov/arcgis/rest/services/NSS/OpenShelters/MapServer>

1. Simplicity

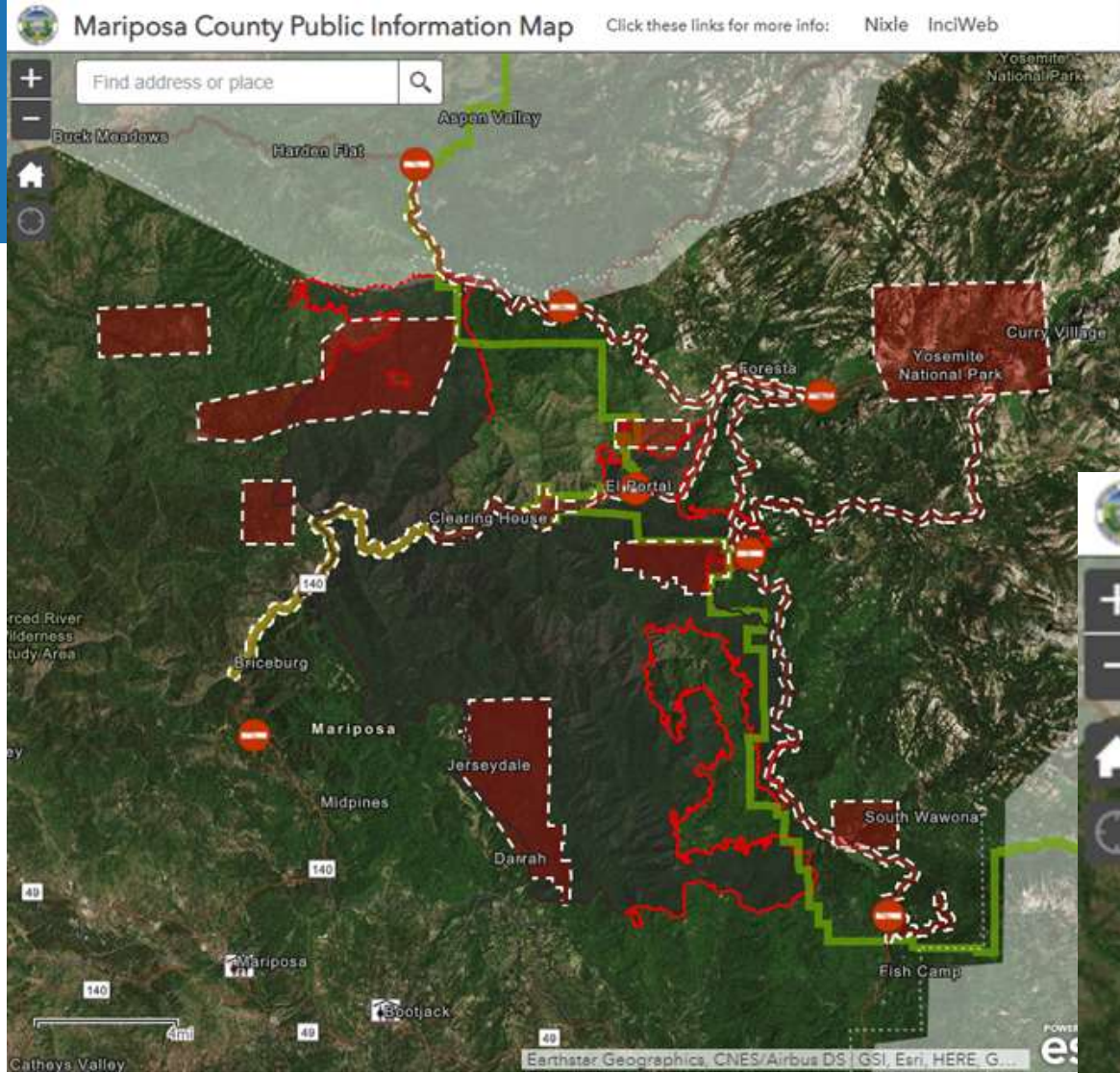
Road Closures – How Do I Get To Safety?

- Show road closures
- Regional
- Updated

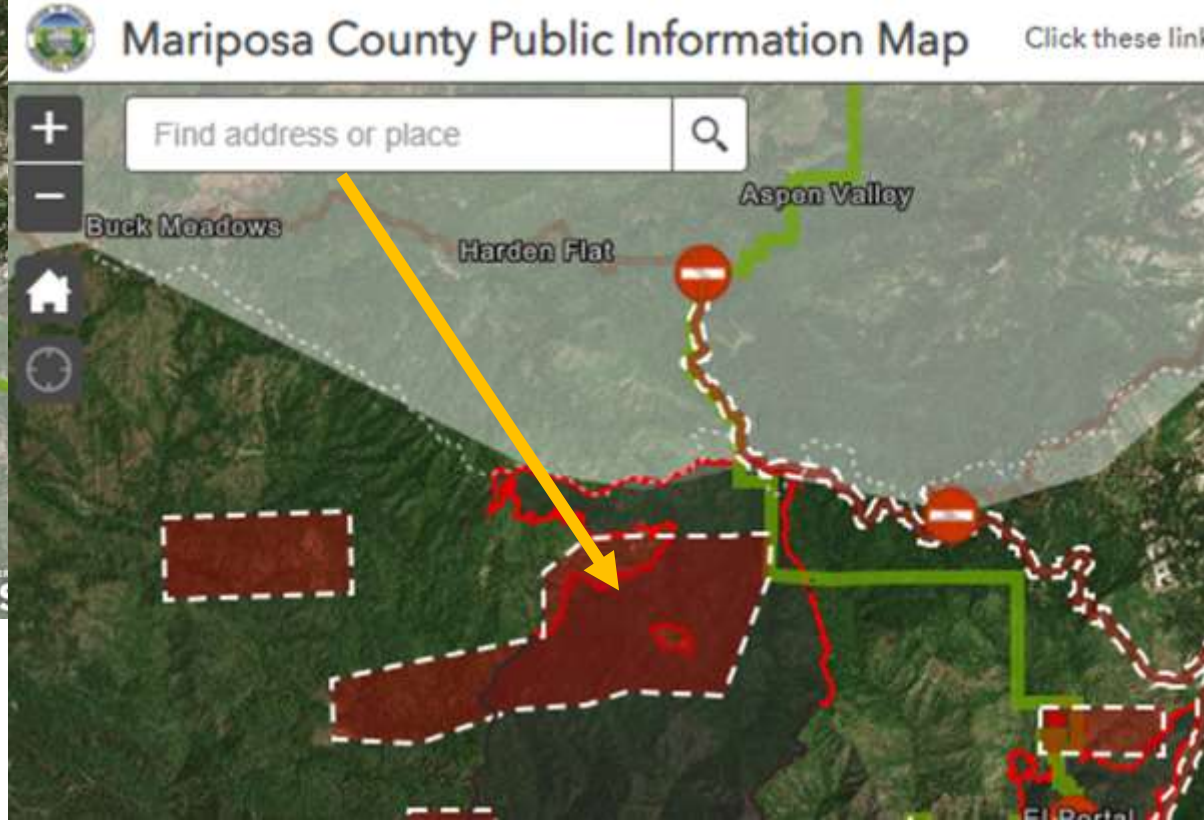


Waze Connected Citizens

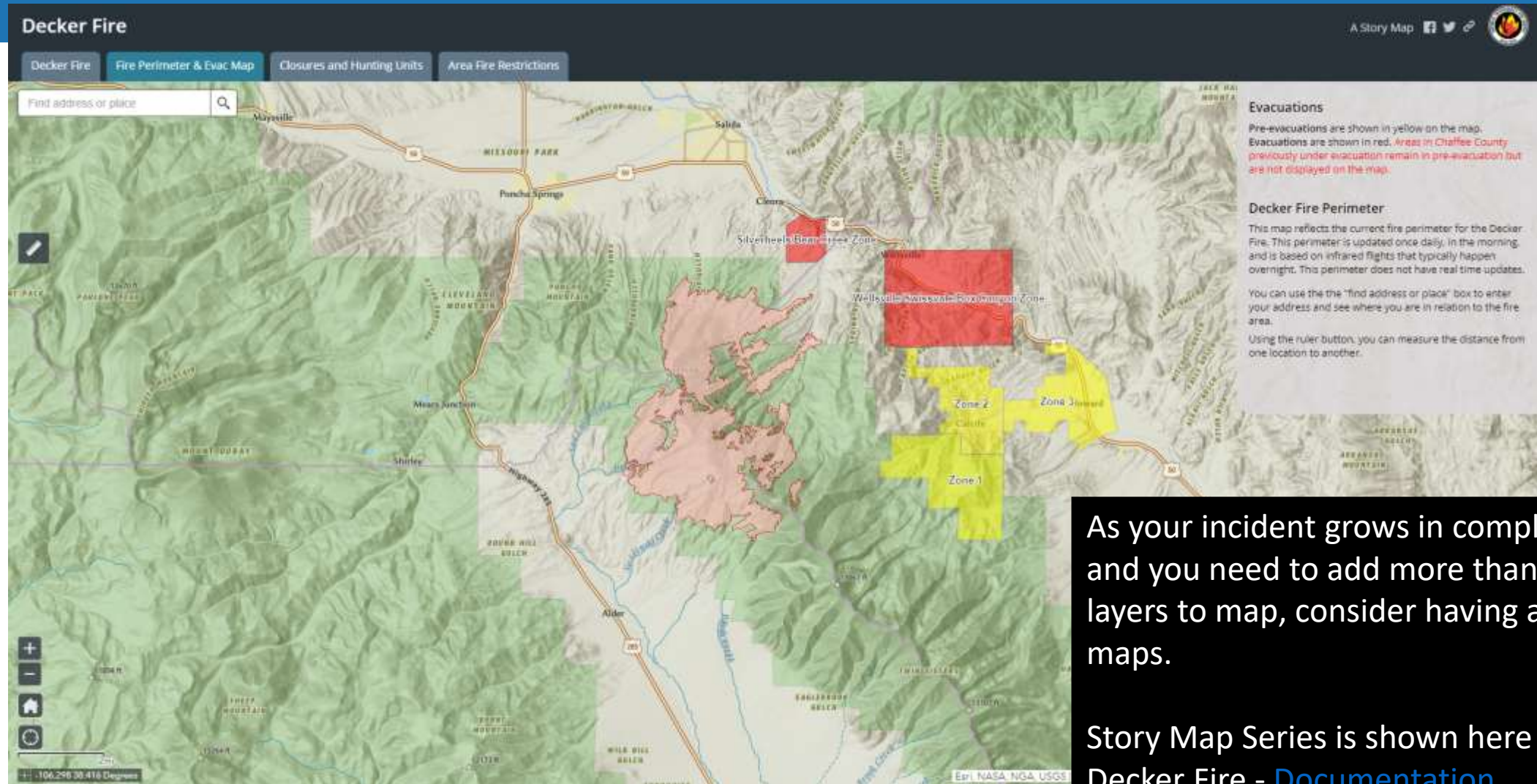




Where is Anderson Valley?



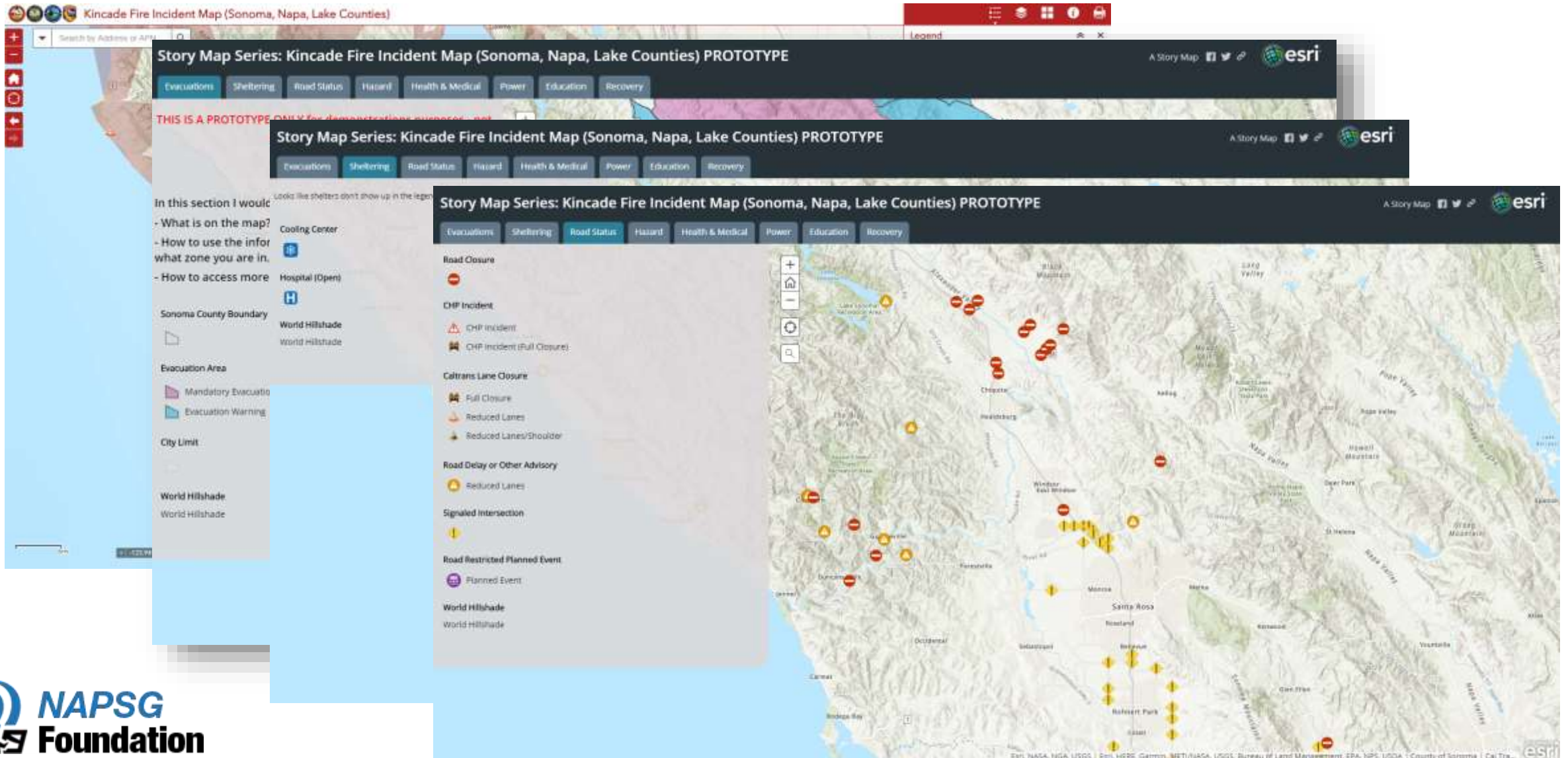
1. Simplicity



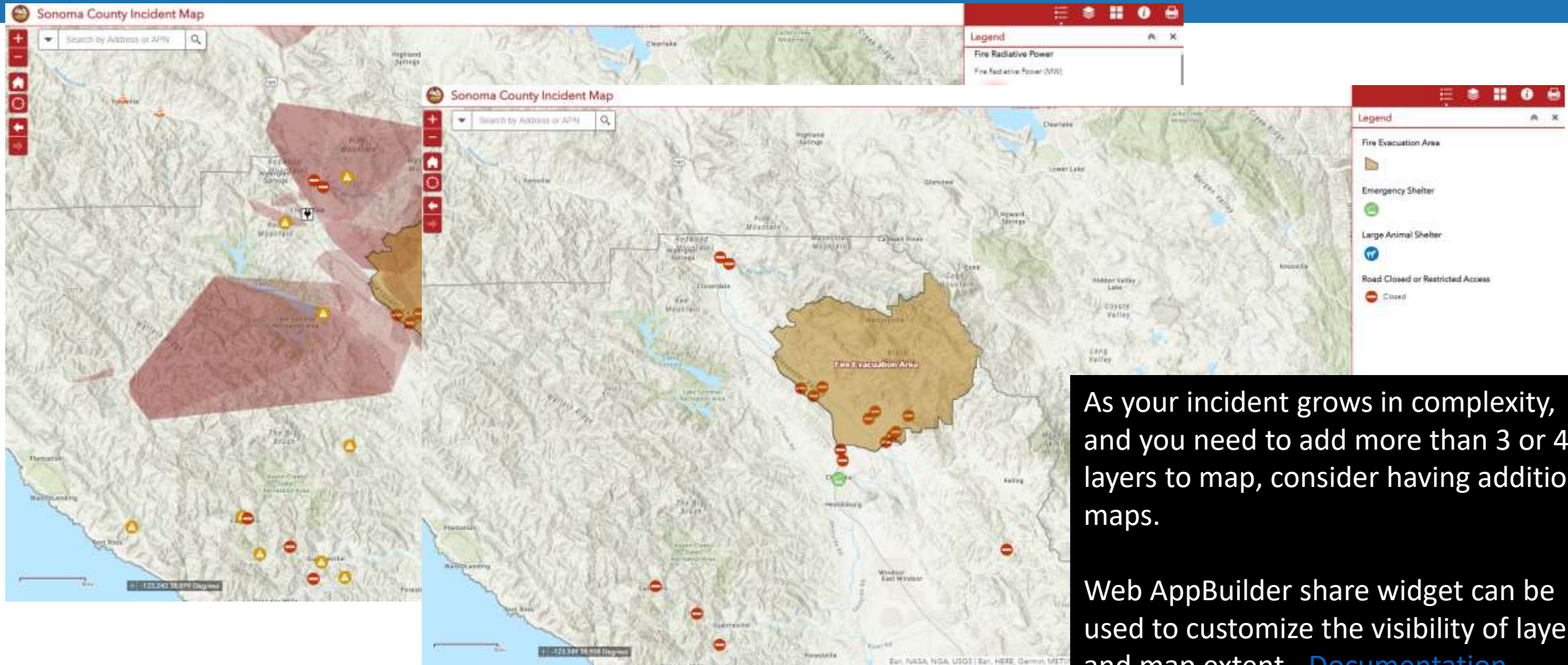
As your incident grows in complexity, and you need to add more than 3 or 4 layers to map, consider having additional maps.

Story Map Series is shown here for the Decker Fire - [Documentation](#)

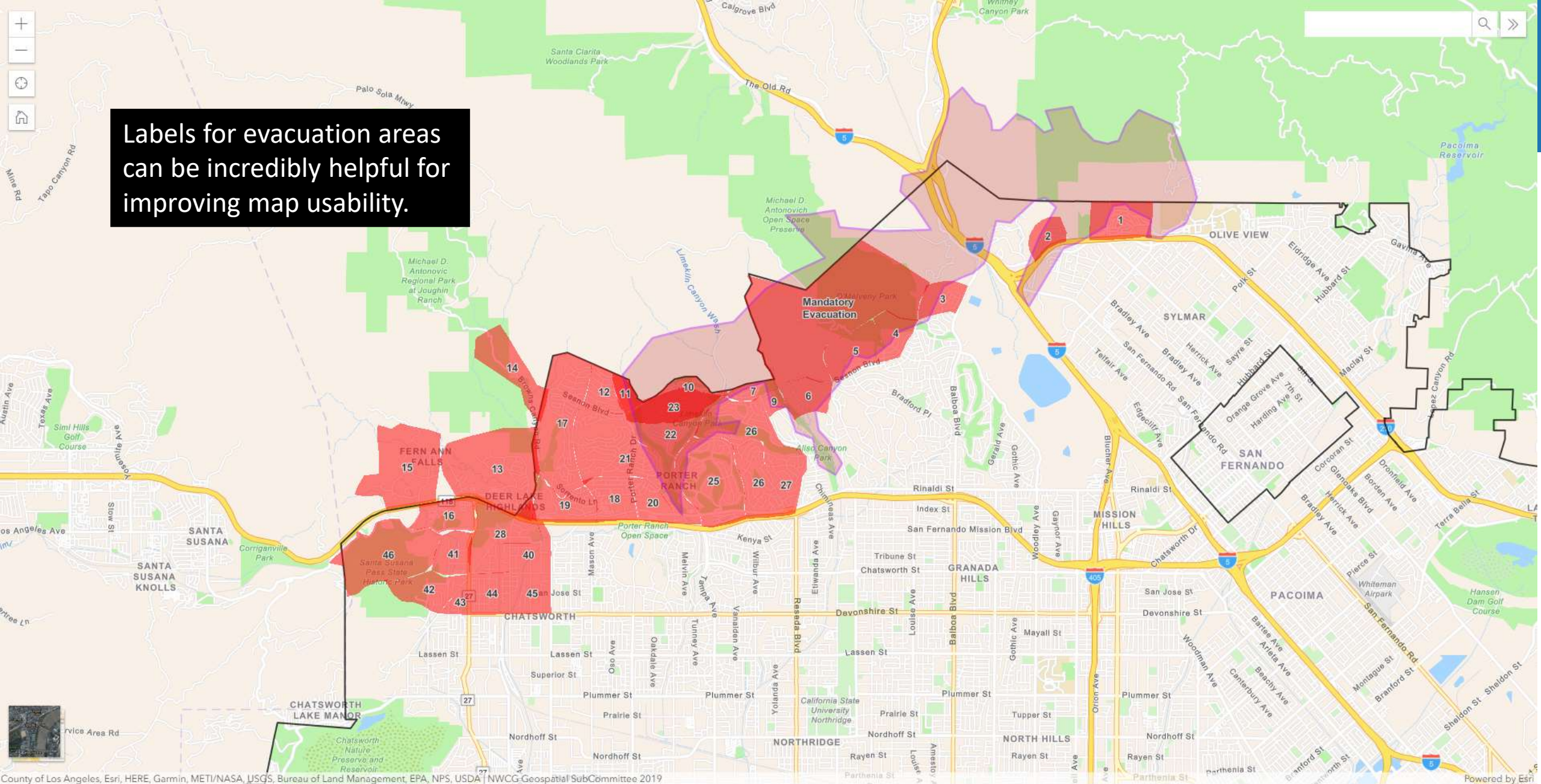
1. Simplicity



1. Simplicity



Labels for evacuation areas can be incredibly helpful for improving map usability.



2. Scalability

- Do not host data on internal servers!
- ArcGIS Online Cloud Hosted layers are scalable and you do not pay per view.

ArcGIS Online

Best Practices for High Demand/Viral Apps

Sharing and Collaboration

September 13, 2018



Kelly Gerrow-Wilcox

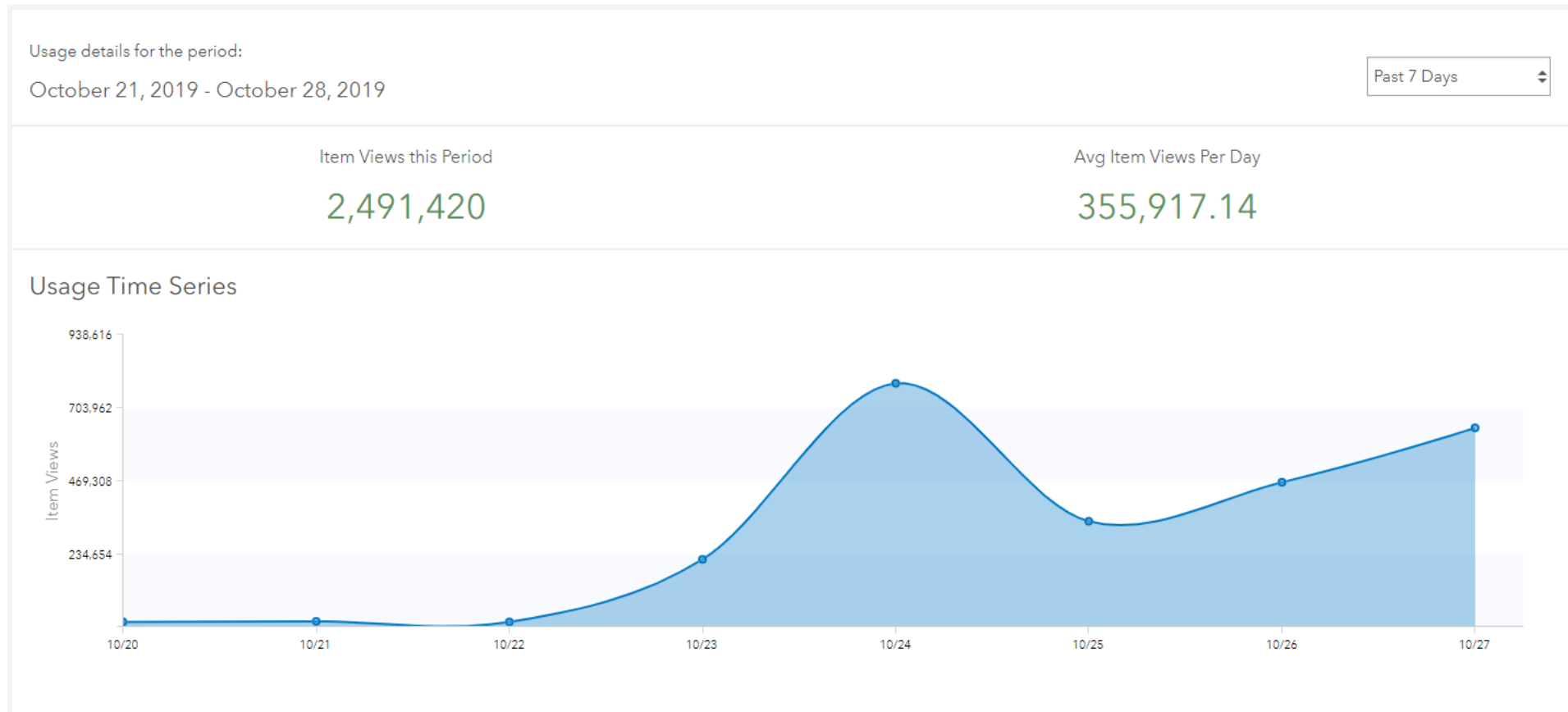
updated from an article published March 2017

News Flash! ArcGIS Online users make great Apps that are used to inform and engage the public about important and interesting geospatial topics. Apps hosted on ArcGIS Online are easily shareable and can receive hundreds of thousands of views in a short amount of time. ArcGIS Online scales to meet the demand of your application, making it easy to create and share applications that may receive a high demand of requests (1000s of request per second) from your users.

Consider a natural disaster, where apps are created to inform the public of evacuation zones and shelters. These apps may receive hundreds of thousands of views in a matter of days, receiving a high amount of web traffic. In order to ensure that these apps are performing at their best under high demand, consider these best practices for layer management, so ArcGIS Online can handle the rest.

[Documentation](#)

2. Scalability



2. Scalability

Feature Layer (hosted, view)

* Setting must be configured on the hosted feature layer that this feature layer view was created from, Initial Attack Form (version 1.0).

Editing

☒ Enable editing.

Keep track of created and updated features.*

☒ Keep track of who created and last updated features.*

☐ Enable Sync (disconnected editing with synchronization)*

Cache Control

When a layer is shared with the public, it is cached by a Content Delivery Network (CDN). A CDN can dramatically decrease latency when delivering your content around the globe. This improves the map load time and the responsiveness of apps, and leads to a better user experience. By default, the CDN regularly checks the feature layer to make sure the CDN cache is current. You can further improve performance by increasing the length of time that the current cache is considered valid. If you do this, public users viewing the data will not immediately see edits made to the data and will have to wait longer to see the updates. [Learn more.](#)

What is the longest time you want your users to wait before seeing updates? 5 Minutes

Export Data

☒ Allow others to export to different formats.

Save Cancel

Hosted Feature Layers and Views

<https://doc.arcgis.com/en/arcgis-online/manage-data/manage-hosted-feature-layers.htm#CDN>

3. Security

- Do not provide public access to editable feature layers in you public web maps and apps.

County App Listed Bernardo Fire as "In Your Pants"

The county explained how the mistake ended up on its map

By Andie Adams and Eric Page



San Diego County residents looking for updates on a brush fire threatening thousands of homes got a not-so-serious message on the Bernardo blaze's latest status when they turned to the county's website and app for information.

Apparently, the location of the fire as of Tuesday was "in your pants." At least,

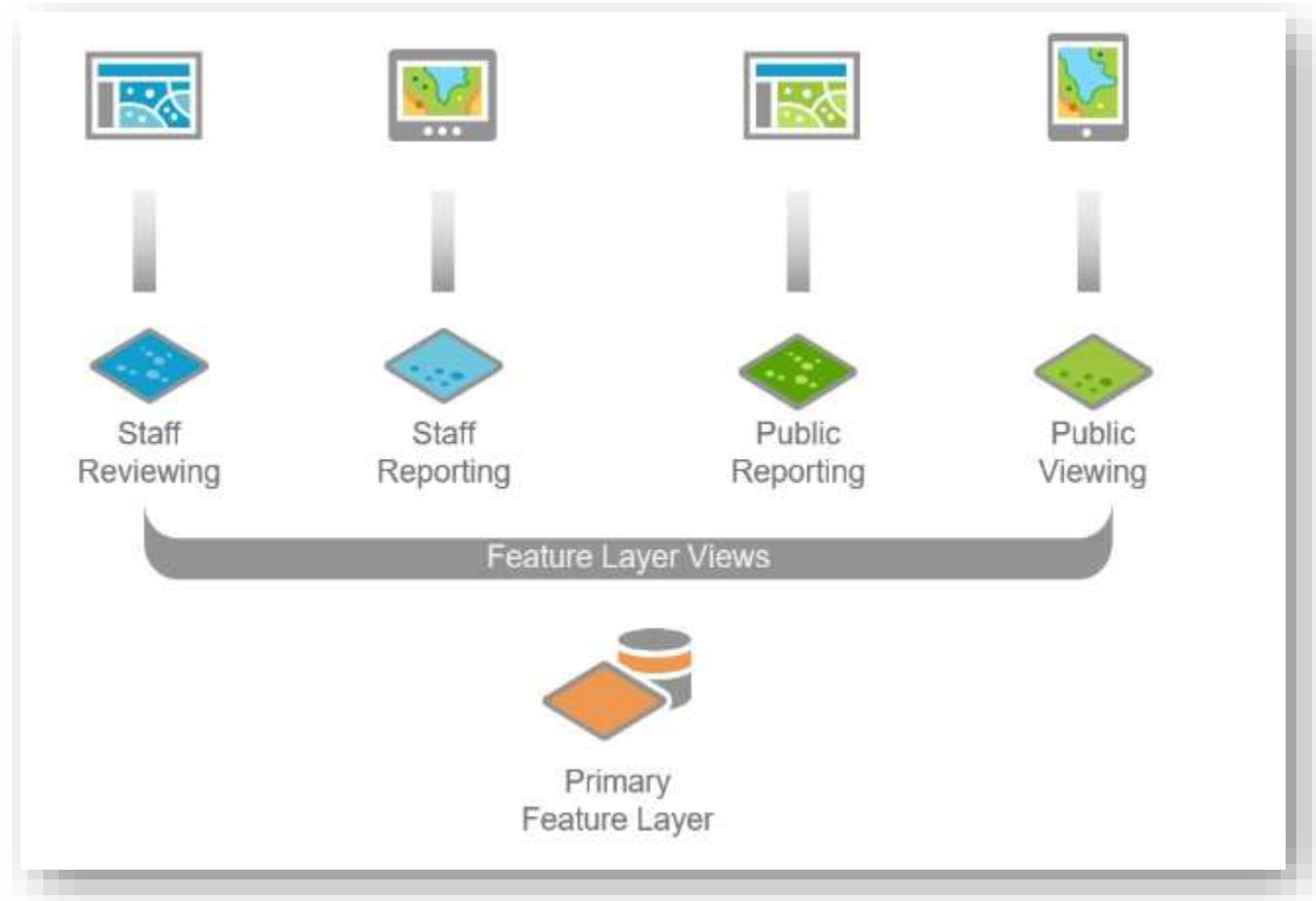
TRENDING

- 1 VIDEO 1 D Plane Crash
- 2 Armed Mas Valley Jewe
- 3 VIDEO Pla Same Road
- 4 'SNL' Takes Women
- 5 VIDEO Ha Near San Di

3. Security

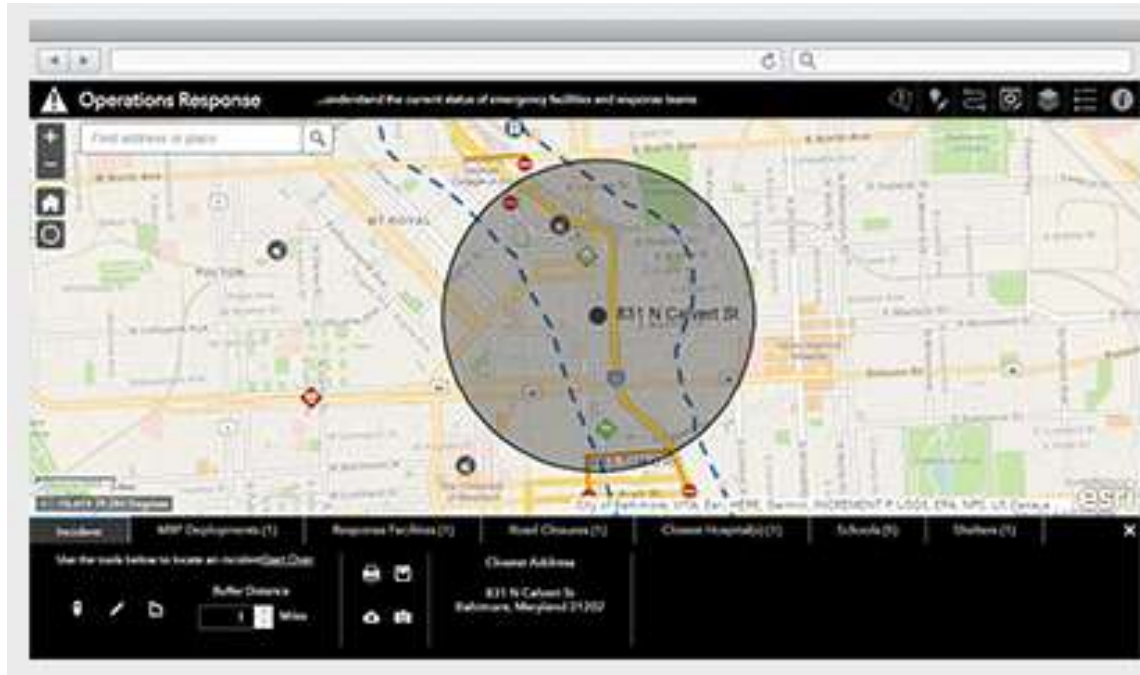
Hosted Feature Layer Views

- Internal Editing
- Public Viewing of LIVE Data

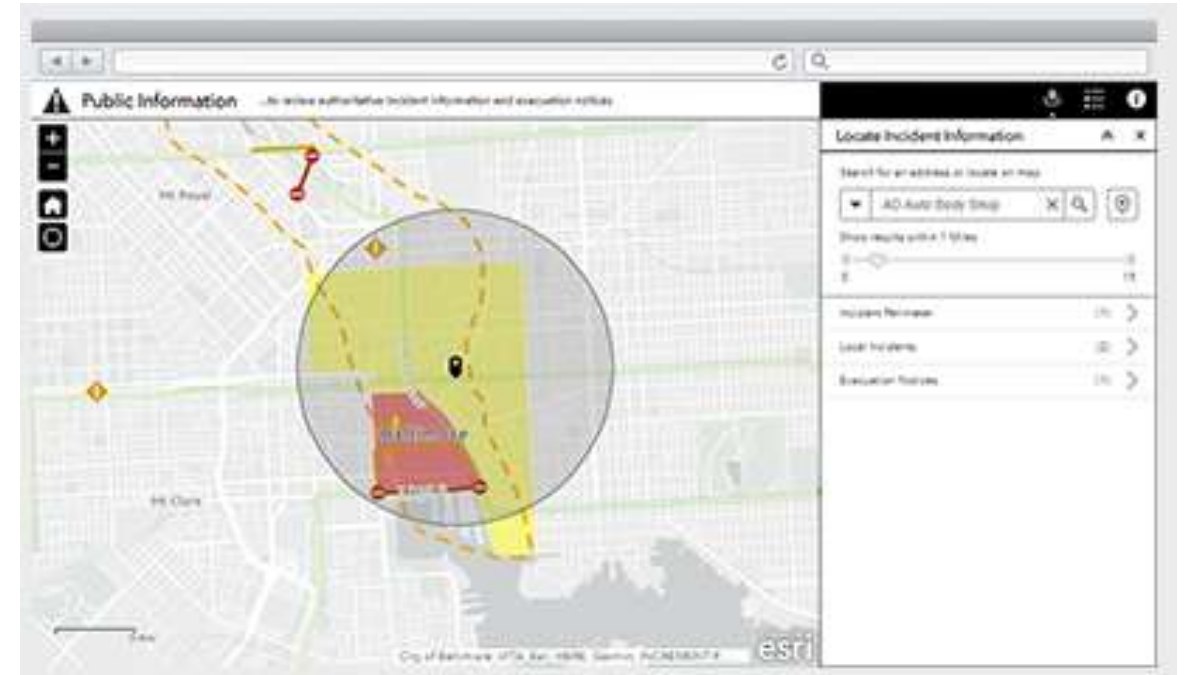


Blog: [Getting Started with Hosted Feature Layer Views](#)

3. Security



Internal Editing Feature Layers
[Operations Response](#) Solution



Live & Filtered Public Feature Layer Views
[Public Information Map](#) Solution

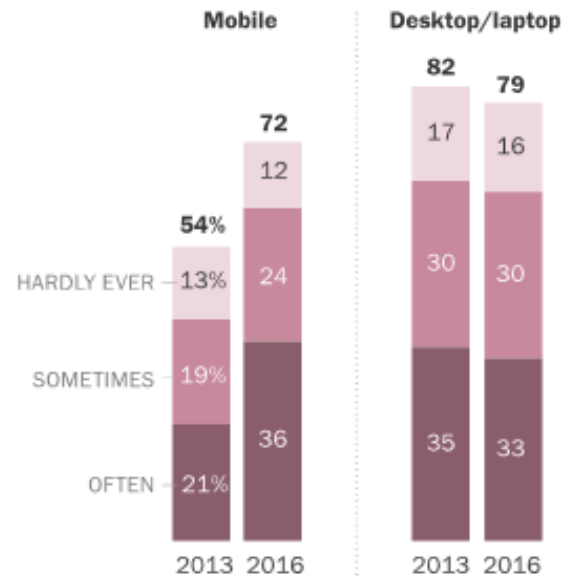
4. Smartphones - Mobile Responsive

+70% of public are reading the news on their mobile devices!

Your maps need to work on mobile in order to be effective.

Rapid growth since 2013 in portion using mobile to get news; desktop/laptop usage holds steady

% of U.S. adults who ever get news on ...



Among people who get news on both, more prefer mobile

66% get news from both mobile and desktop/laptop

Of those ...



56%
Prefer mobile



42%
Prefer desktop/laptop

Source: Survey conducted Jan. 12-Feb. 8, 2016:
"The Modern News Consumer"

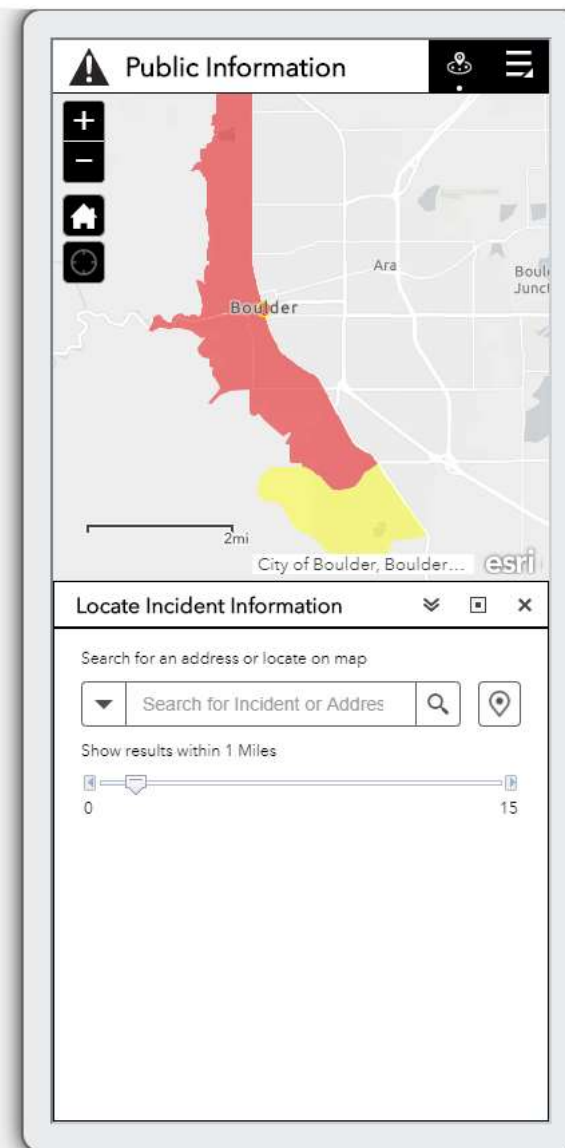
PEW RESEARCH CENTER

Width 375 Px Height 812 Px

iPhone X
 iPhone 8 Plus / iPhone 7 Plus / 6s Plus / 6 Plus
 iPhone 8 / iPhone 7 / 6s / 6
 iPhone SE / 5 / 5C / 5S
 iPhone 4s / 4
 LG G5 / G4 / G3
 Huawei Mate 9
 Lenovo Z2 Pro
 Xiaomi Mi 5
 HTC 10
 Samsung Galaxy S8 / Samsung Galaxy S7, S7 edge
 Samsung Galaxy Note 4
 Google Nexus 10
 Google Nexus 6
 Google Nexus 5
 iPad Pro
 iPad 3 / 4 / iPad mini 2 / Surface Pro 3

Scan QR code to view application on your mobile device

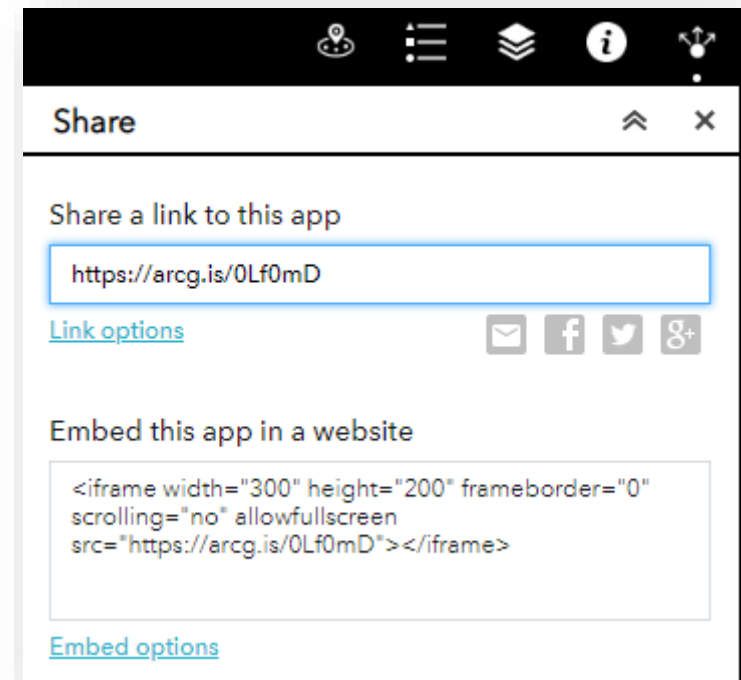
Launch | < Configure | Saved



iPhone X 375 x 812

5. Shareable

- Share them via alert messages
- Embed in emergency management websites
- Share via Social Media
- Use at Public Meetings
- Double check all the layers, web maps, and apps are shared publicly!



Use Living Atlas subscriber content in public maps and apps

Mapping

March 13, 2019



Bern Szukalski

The [Living Atlas of the World](https://www.esri.com/arcgis-blog/products/arcgis-living-atlas/mapping/living-atlas-subscriber-content-public-apps/) is a collection of authoritative maps, data, imagery, tools, and apps authored and published by Esri and partners. It also includes contributions from ArcGIS users worldwide. It is a curated subset of ArcGIS Online items Esri, and the ArcGIS community.

Types of Living Atlas content

Much of the content found in the Living Atlas is available publicly, with no restrictions. Some content is not publicly available by default, and falls into two categories:

Subscriber content is the collection of layers published by Esri that requires an organizational subscription account to access. These are layers such as Landsat 8 imagery, NAIP imagery, landscape analysis layers, and historical maps. Subscriber content is provided as part of your organizational subscription and does not consume any credits.

<https://www.esri.com/arcgis-blog/products/arcgis-living-atlas/mapping/living-atlas-subscriber-content-public-apps/>

The screenshot displays the ArcGIS Living Atlas configuration interface. The top navigation bar includes 'Theme', 'Map', 'Widget', and 'Attribute' (highlighted with a red arrow). The 'Attribute' tab is active, showing the 'Branding' section with a warning icon and the 'Subscriber content access' section. In the 'Subscriber content access' section, the 'Map layers' list includes 'USA Weather Warnings and Watches' (checked with a red arrow). The 'App state' section has a checked checkbox for 'Keeps map extent and layers visibility while leaving the app'. The 'Extra data source' and 'Subscriber content access' sections have right-pointing arrows. The bottom bar includes 'Launch', 'Previews', and 'Save' buttons.

5. Shareable

LOS ANGELES FIRE DEPARTMENT

HAPPENING NOW

FIRE STATIONS

RED FLAG

SAFETY



FIRE PREVENTION

FIRESTATLA

JOIN

FAQS

ABOUT

NEWS

SADDLERIDGE BRUSH FIRE

Thursday, October 10, 2019

LAFD Spokesperson: Margaret Stewart



County of Los Angeles, Esri, HERE, Garmin, METI/NASA, USGS, Bureau of Land Management, EP...

Evacuation Zones [View Full Size Map](#)

CATEGORIES

Central-Bureau

South-Bureau

Valley-Bureau

West-Bureau

FOLLOW LAFD

@LAFD

Citywide

@LAFDwest

West Bureau

@LAFDvalley

Valley Bureau

@LAFDsouth

South Bureau

@LAFDcentral

Central Bureau

@LAFDchief

Chief Terraces

@LAFDtalk

LAFD conversation

@LAFDairops

LAFD Air Operations

 LAFD @LAFD

An interactive map of the Mandatory Evacuation Zone for the still-active #PalisadesFire can be found at:
lafd.org/news/pacific-p...

An evacuation center is now open at:

Pacific Palisades Recreation Center
851 Alma Real Dr
Pacific Palisades, CA 90272



LA City Fire Department embeds incident maps right into their “NEWS” websites and also links to them in their social media posts.

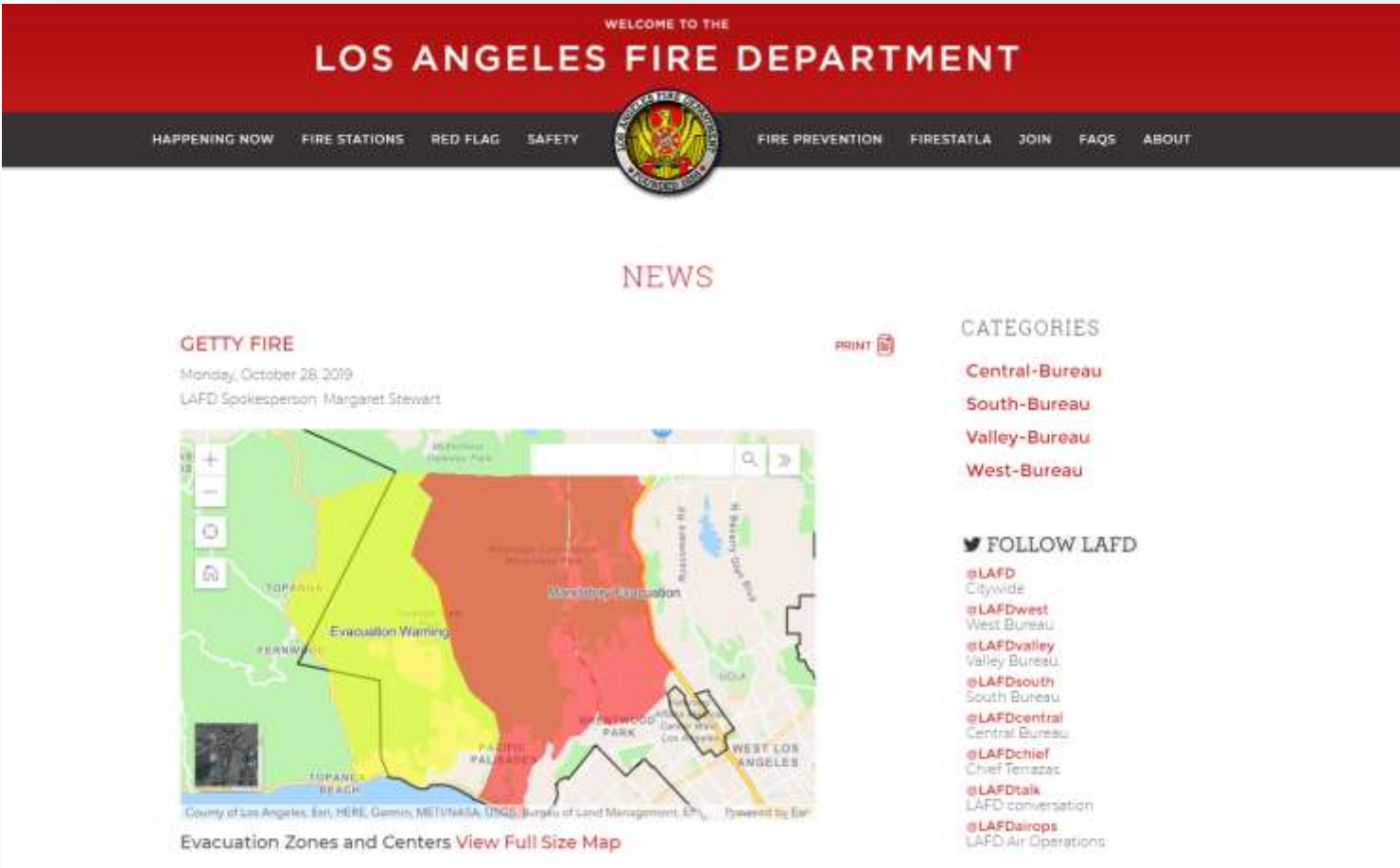
 **NAPSG**
Foundation

napsgfoundation.org | @napsgfoundation

 **InSPIRE**

61

5. Shareable



Works on mobile,
even embedded!

5. Shareable

LA City Fire Department also shares their maps with the local news!

YouTube

Search



BREAKING NEWS

EXTENDING WEST FROM 405 FREEWAY TO TEMESCAL CANYON RD. AND

abc7.com

6:24 55°

LIVE: Brush fire erupts in Sepulveda Pass, threatens homes | ABC7

2,394 watching now • Started streaming 2 hours ago

abc7

ABC7

60K subscribers

SUBSCRIBE

 **NAPSG**
Foundation

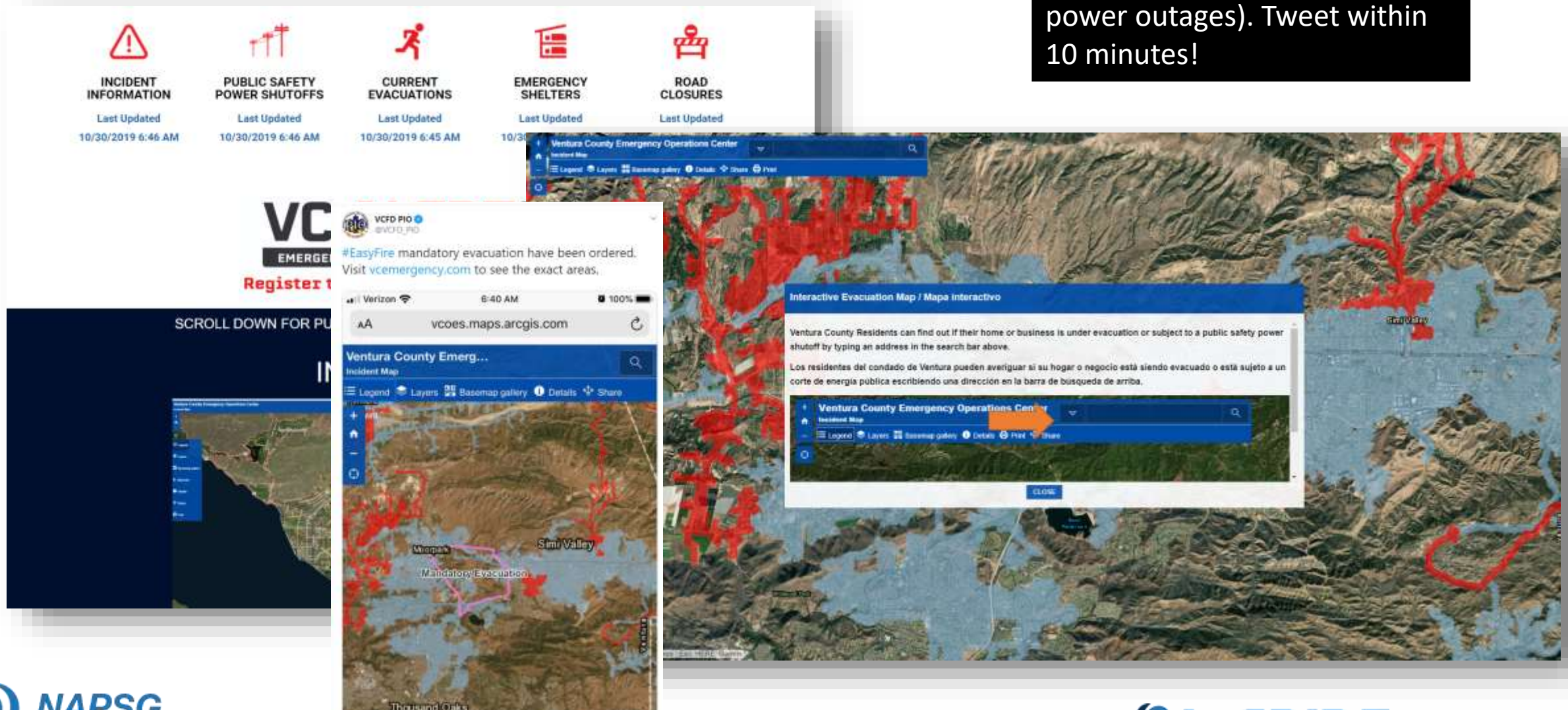
napsgfoundation.org | [@napsgfoundation](https://twitter.com/napsgfoundation)

 **INSPIRE**

63

5. Shareable

2019 Easy Fire: Ventura County had an evacuation map ready before the fire started (for power outages). Tweet within 10 minutes!



5. Shareable

KINCADE FIRE

Interactive Map: Kincade Fire evacuation zones, fire perimeter

by: KRON4 Staff
Posted: Oct 27, 2019 / 09:38 AM PDT / Updated: Oct 28, 2019 / 09:47 AM PDT

<https://www.kron4.com/kincade-fire/interactive-map-kincade-fire-evacuation-zones-fire-perimeter/>

2019 Kincade Fire

- Transitioned from a power outage map to a fire public information map
- Sonoma County Public Information Map
- More than 8 Million Views

- 1 Interactive Map: Kincade Fire evacuation zones, fire perimeter
- 2 2 new California fires burn homes, send residents fleeing
- 3 Man caught on camera abusing small dog in Redwood City arrested
- 4 Family owned market in San Rafael estimates PG&E shutoff losses at more than \$200,000
- 5 Evacuation warnings lifted in parts of Sonoma, Napa counties



5. Shareable

[Home](#) / [Know Your Zone](#)

Know Your Zone

In order to know when to evacuate for hurricane surge flooding, you must KNOW YOUR ZONE!

The greatest killer of people during hurricanes is storm surge - the dome of water pushed ashore by powerful hurricane winds. Entire buildings can be moved, and can cause more damage than the winds of a hurricane itself. Florida is extremely vulnerable to surge flooding because of its coastal and low-lying geography.

To stay safe from surge flooding, if you live in a zone that has been ordered to evacuate, get out. The best way to be prepared for a hurricane storm surge is to know your evacuation zone and plan your destination and travel routes ahead of time.

[Know Your Zone](#) - search by address to determine if you are in a designated evacuation zone.

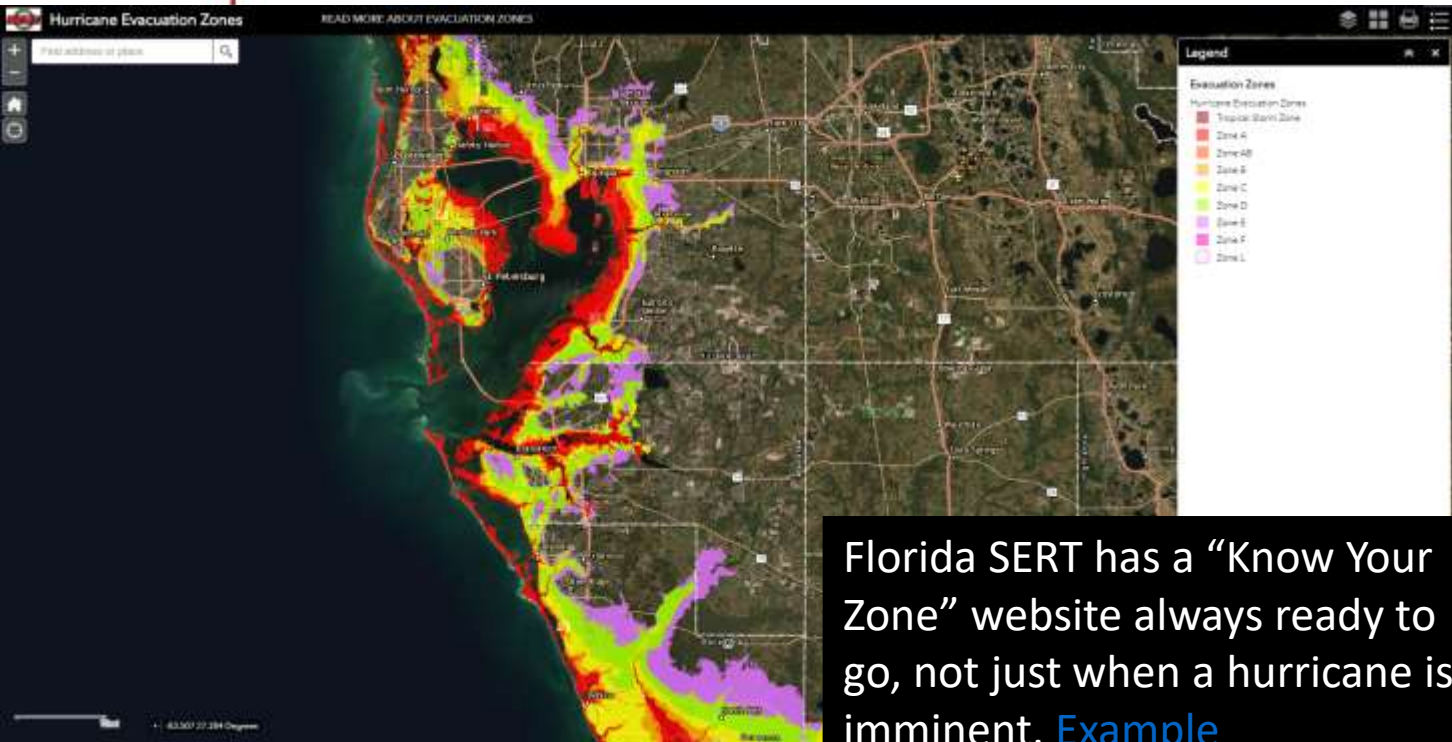
[Maps](#) - access a map for those counties with designated evacuation zones.

Counties WITH Designated Evacuation Zones

For each county that has designated evacuation zones, please refer to these specific resources.

- | | |
|---------------------------|--------------------------|
| Bay | Bradford |
| Brevard | Broward |
| Charlotte | Citrus |
| Clay | Collier |
| DeSoto | Duval |

[Disaster Preparedness Maps](#)
[Flood Zone Maps](#)
[Know Your Zone](#)



Florida SERT has a “Know Your Zone” website always ready to go, not just when a hurricane is imminent. [Example](#)

5. Shareable

The screenshot displays the Southland Emergency Management website. The header includes the logo and navigation links: Home, Useful Stuff, Get ready, Hazards, Your Community, About Us, and Contact Us. The main content area is divided into two columns. The left column, titled 'Current Status:', shows 'No incidents.' and provides instructions on how to use the map. The right column features a large map titled 'Information & Emergency Situation Map' with various red markers and a search bar. Below the map, there are social media links for Facebook and a 'Report It' button. A footer section contains a 'GET READY TO' banner and a link to the 'How to use our web Information & Emergency Situation Map' page.

Current Status:

No incidents.

This is the perfect time to make sure you are prepared for an emergency.

Explore the map to the right for information on Tsunami Zones, Show Levels, Fault lines and more.

SPRING INTO SUMMER

This Sunday is the beginning of DAYLIGHT SAVINGS!

Don't forget to put your clocks forward an hour before you go to bed... while you're at it, change your smoke alarm batteries and check your emergency supplies. It might be time to replace some items and update your kits.

#GetReady #EmergencyPreparedness #SpringIntoSummer #DaylightSav... [See More](#)

<https://getready.govt.nz/involved/shakeout/sign-up/>

GET READY TO

Information & Emergency Situation Map

948,009 267 4,739,423 161 Meters

Notices Facebook Report It

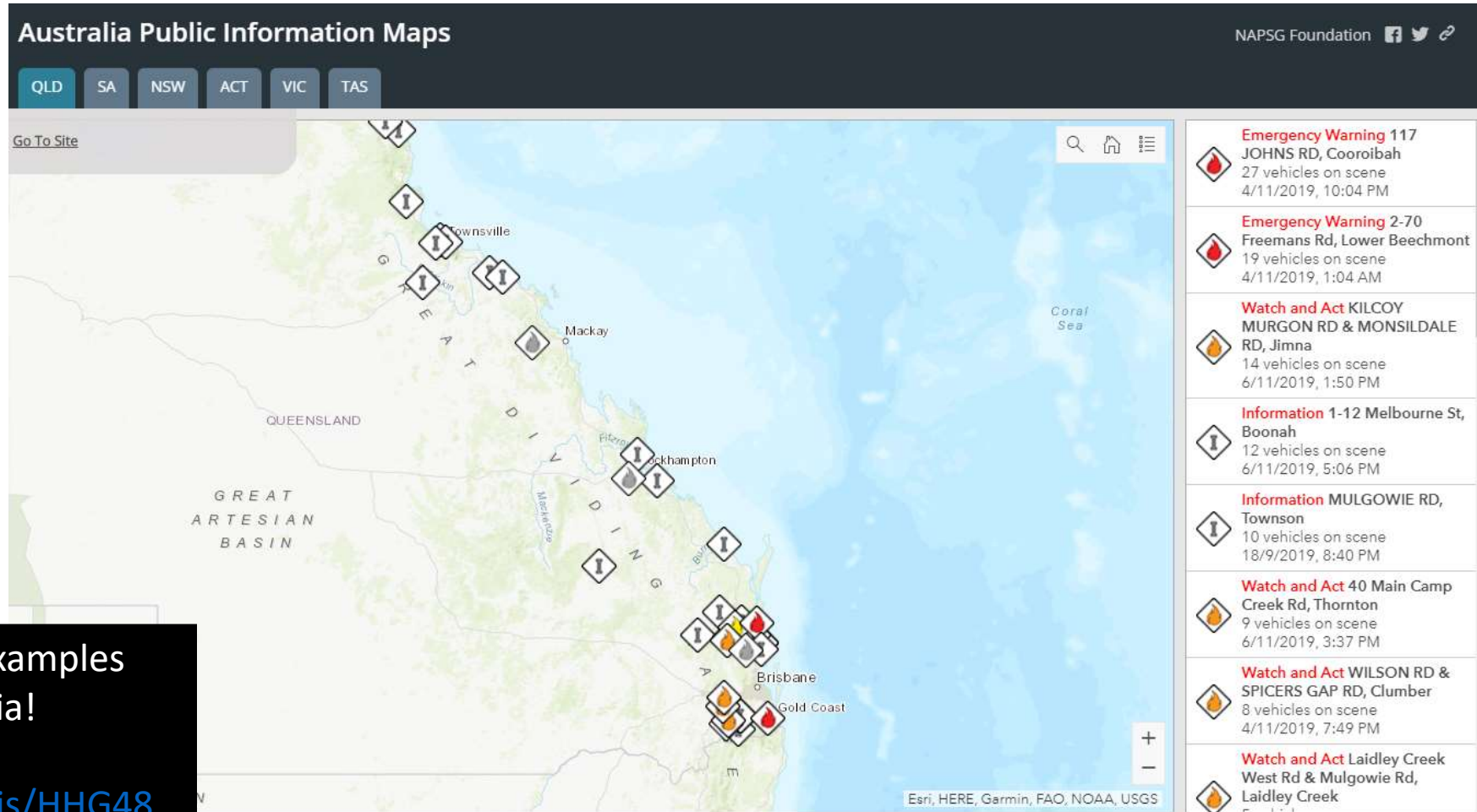
How to use our web Information & Emergency Situation Map
IMPORTANT MAPS FOR YOUR INFORMATION:

Check out our Tsunami Map for Southland [here](#)
Check out our Flood Map [here](#)

- Southland Civil Defence in NZ
- Map embedded on website 24/7
- Allows for a “Report It” function
- Process in place for editing map behind the scenes

[See Example](#)

5. Shareable



Some nice examples
from Australia!

<https://arcgis/HHG48>

Test, Test, Test

- Send to at least 4 people of different backgrounds for feedback.
- Watch them use it, recording timings
- Ask them to answer questions
 - Where is the fire/flood/tornado?
 - Do you know if you need to evacuate based on your location?
 - Where is your nearest shelter?
 - How would you get to the nearest shelter?

Technical Best Practices

1. Simplicity
2. Scalability
3. Security
4. Smartphone
5. Shareable

Technical staff - Do you have a geospatial game plan?

Type Of Info	Link / URL	High Demand Ready?	Easy To Understand?	Training / SOP Ready?	Archived and Ready For Next Incident
Evacuation Notices					
Road Status	Link				
Shelters	Link				
Wildfire Perimeter	Link				

Operational Best Practices

Who does what and when? Geospatial Game Plan

Operational Best Practices

1. Design the Information Product
2. Build A Team
3. Build A Game Plan

**You will need to repeat this process for different hazard types or phases of disaster (e.g. Response vs Recovery).*

1. Design the Information Product

- Define your audience
 - Language
 - Demographics
 - Environment
 - Connectivity
- Identify the real-world problem
 - Providing accurate and up to date fire-related information to the public.
- Envision your solution
 - A one-stop shop map that answers key questions related to fire incidents.

1. Design the Information Product

Audience

- Language
- Demographics
- Environment



1. Design the Information Product

Real-World Problem – Satisfy Core Information Needs for the Public

- Am I Safe Here?
- Where Can I Go?
- How Do I Get There?

2. Build A Team

Who needs to be a part of your public information map workflow?

- GIS Specialist
 - Are they on-call staff?
 - 24/7 coverage during disasters vs train a watch officer
 - Interagency cadre?
- Public Information Officer
- Liaisons:
 - Evacuation Notices: Incident Management Team GIS, Law Enforcement
 - Shelters: Mass Care, Red Cross
 - Road Closures: Law Enforcement, Public Works, Department of Transportation

3. Build A Game Plan

- Who does what, when?
- Approval Process?
- Executive Oversight?

Hands-on Session

Public Information Geospatial Game Plan

Operations Response

- **Audience:** Emergency Management Planning and Operations Staff, County Sheriff
- **Problem:** Your County Emergency Management Agency is planning a training exercise and wants to make use of “Web GIS.” Typically, they have you print out a new wall map each operational period and the status of facilities (e.g. shelters) are maintained in spreadsheets.

This time they want to coordinate planning and operations across multiple locations, with everyone having the most up to date information on a live map. For example, they want to be able update the status of evacuation zones and shelters without requiring GIS expertise.

- **Solution:** Operations Response App

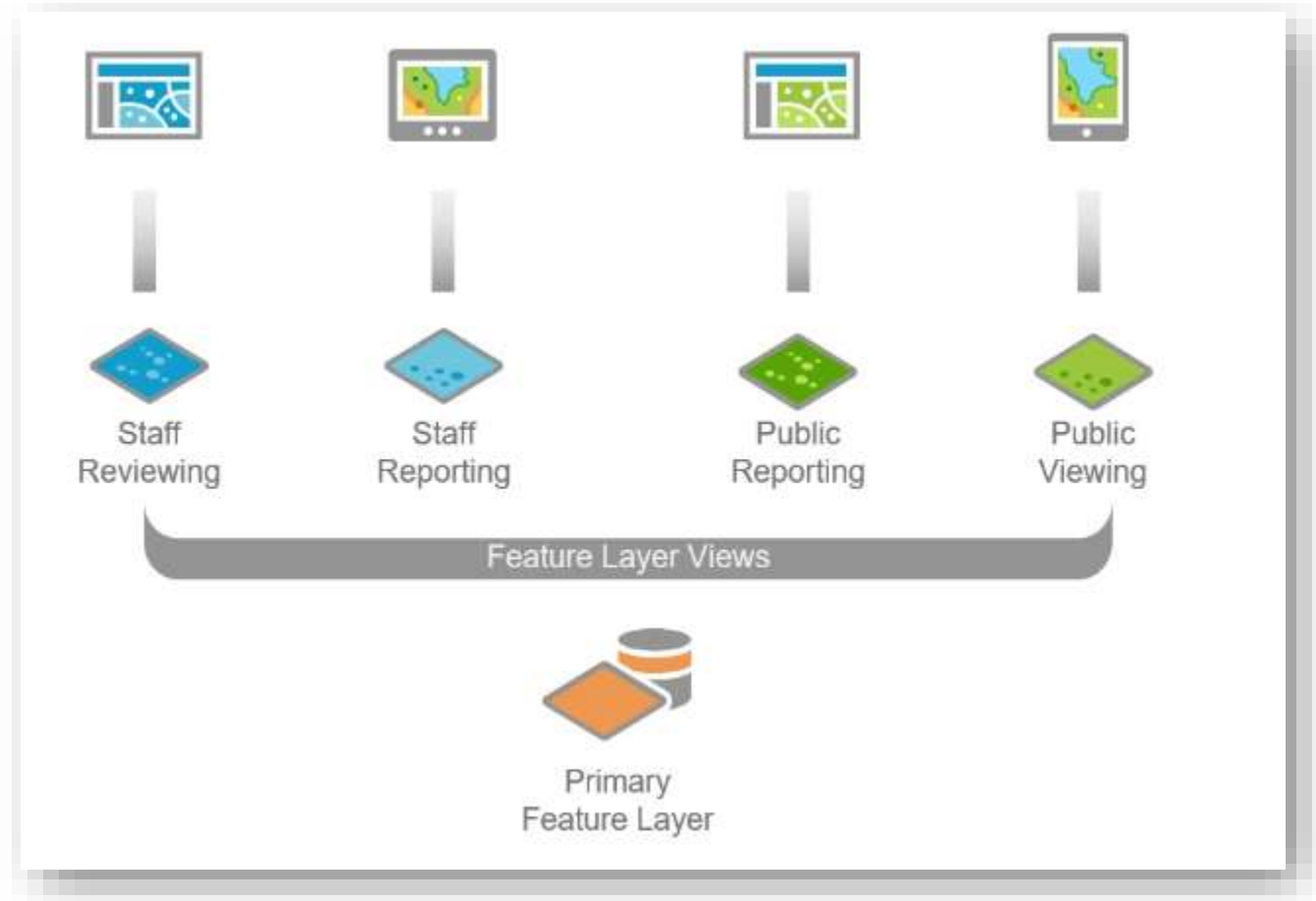
Public Information

- **Audience:** The Public
- **Problem:** The Public needs situational awareness as much as emergency managers and first responders. They want answers to questions like:
 - Do I need to evacuate?
 - Where can I go for more information or protection?
 - How do I get there / are there any road closures?
- **Solution:** Public Information Web Mapping Application

Technical Game Plan

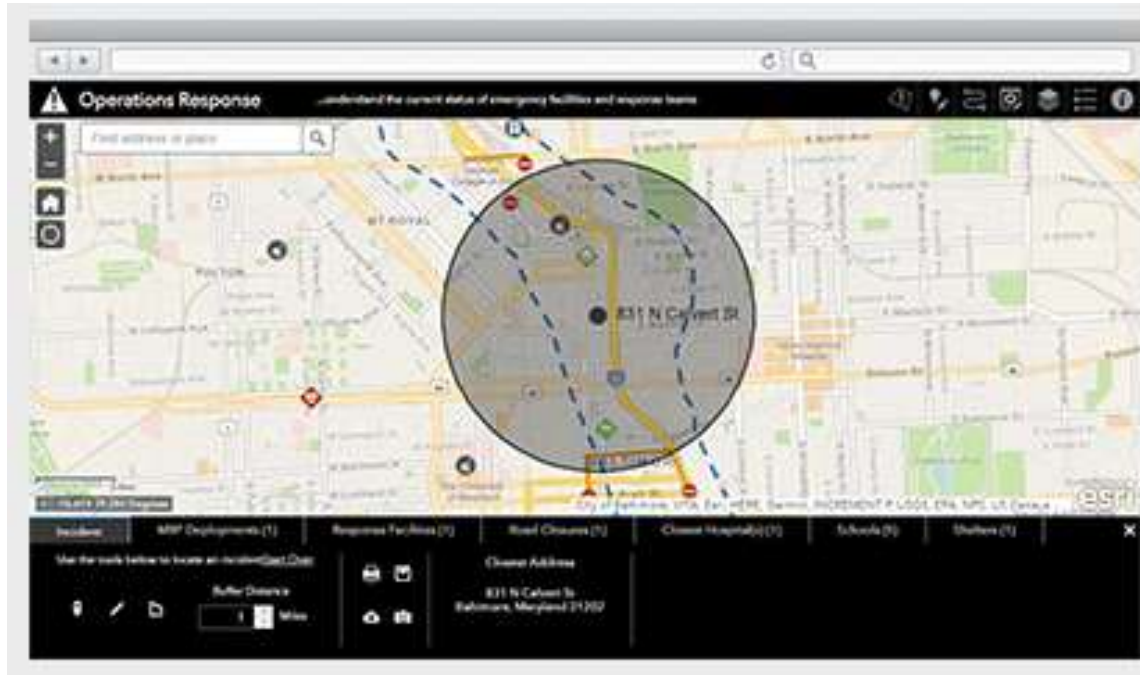
Hosted Feature Layer Views

- Internal Editing
- Public Viewing of LIVE Data

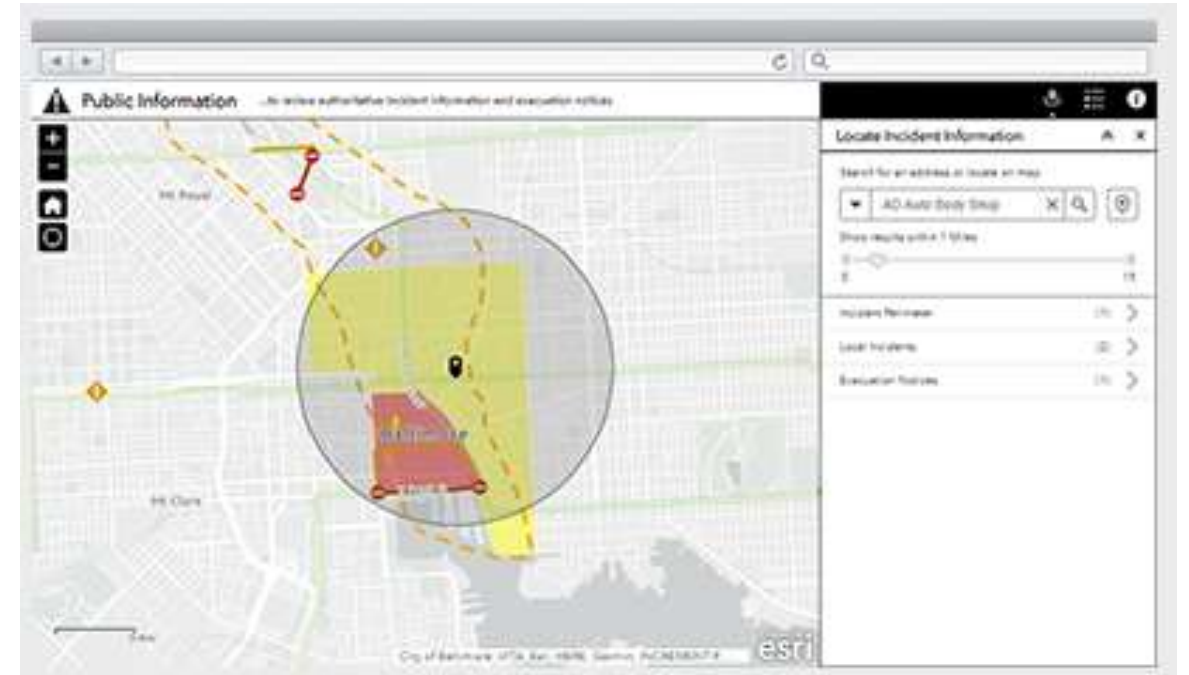


Blog: [Getting Started with Hosted Feature Layer Views](#)

Technical Game Plan

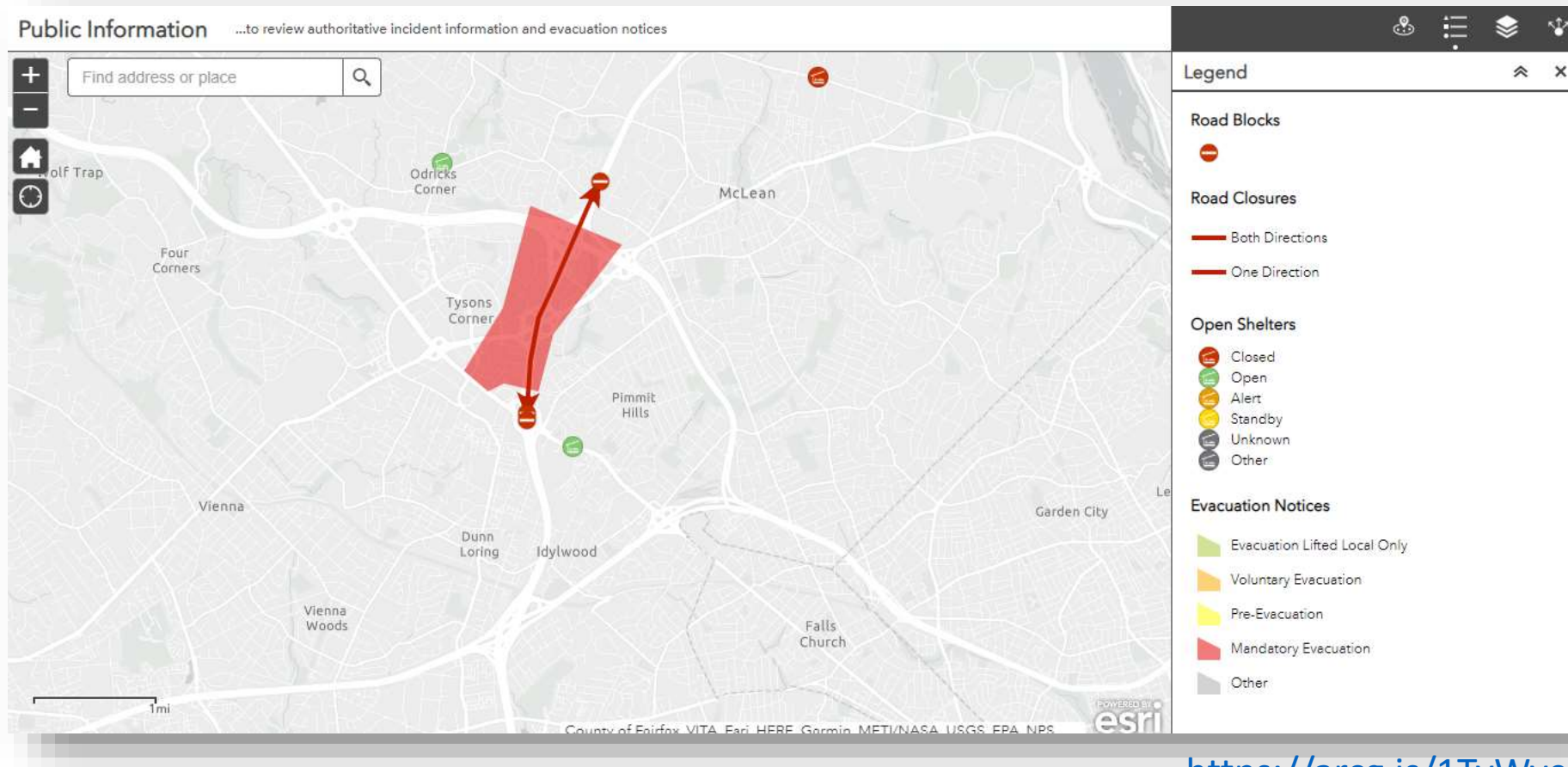


Internal Editing Feature Layers



Live & Filtered Public Feature Layer Views

Demo: Operations Response and Public Information Map



Public Information Map Game Plan

Lifeline	Core Info Need	Public	First Responders	Emergency Managers	Operational Game Plan	Technical Game Plan
	Evacuation Status	Am I safe here?	What areas do we need to evacuate? How many buildings / people in each area?	What areas have already been evacuated?	County Sherriffs designate initial evacuation zones based on communication with Fire and observations in the field. Emergency Managers use that information to plan for shelter and vulnerable population need (which is automatically calculated from the areas).	The Master Feature Layer can be edited from web apps or Collector for ArcGIS (offline). The Hosted Feature Layer View is embedded in the Public Information Map.
	Shelter Status	Where can I go to be safe?	Where do I take / direct evacuees?	Where are the evacuees? Do we have enough room?	Mass Care Lead and Red Cross will update the status of shelters.	The Master Feature Layer can be edited from web apps or Collector for ArcGIS (offline). The Hosted Feature Layer View, filtered for status = open, is embedded in the Public Information Map.
	Road Status	How can I get there?	How do I get to those in need?	What is the status of transportation?	Public Works Lead will update the status of roads verbally over the radio. The GIS Specialist will update the layer.	The Master Feature Layer can be edited from web apps or Collector for ArcGIS (offline). The Hosted Feature Layer View is embedded in the Public Information Map. 



Operational Game Plan

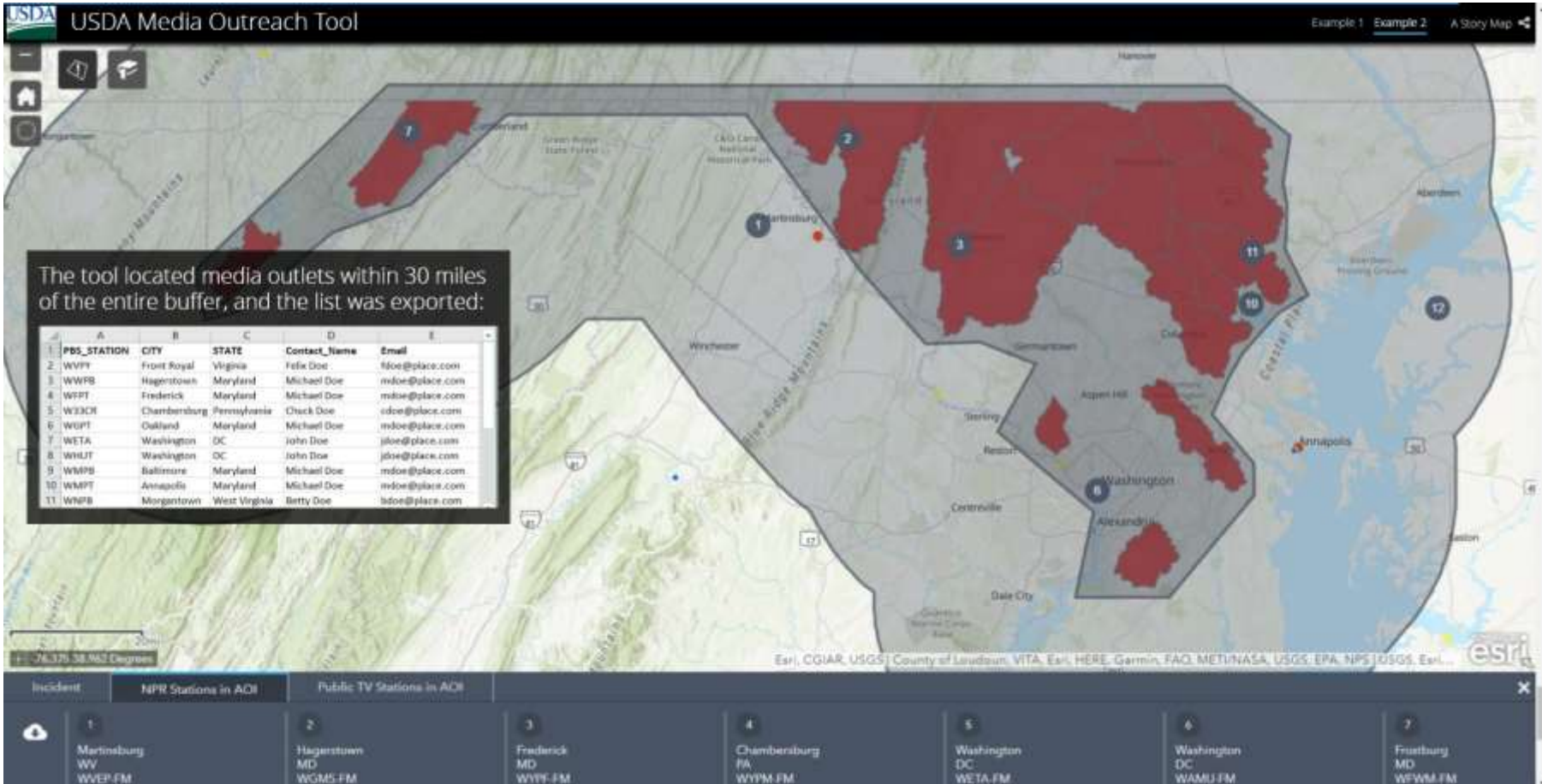
Lifeline	Core Information Need	Public	First Responders	Emergency Managers	Operational Game Plan
	Evacuation Status	Am I safe here?	What areas need to be evacuated?	What areas have been evacuated? Where do people need assistance?	Sherriff's Office hand-draws evacuation zones and GIS Specialist updates the layer using pre-designated zones. Alerts are shared via WEA and social media with link to Public Information Map.
	Shelter Status	Where can I go to be safe?	Where do I take evacuees?	Where are the evacuees? What are their needs?	Mass Care lead changes the status of shelters and edits attribute information (e.g., number of people, capacity, etc.) as needed.
	Road Status	How can I get there?	How do I get to those in need?	What is the status of transportation systems?	Public Works provides internal feed of road status, GIS Specialist updates the layer.

Exercise: Geospatial Game Plan

- Fill out your worksheet the best you can.
- If you don't have a clear answer for any one of these boxes, you have some homework to do!
- For Discussion: What boxes are missing from your worksheet?

Case Study: USDA Media Tool

USDA Media Tools



I Have A Game Plan – Now What?

Amplify Your Message!

Use Social Media Tools

- Twitter
- Facebook
- Instagram???



Use Alerting Systems

- Embed links to the live map in alerts.



**Mariposa County Sheriff's Office**

Monday October 7th, 2019 :: 05:52 p.m. PDT



Alert

Briceburg Fire Mandatory Evacuations

A Mandatory Evacuation Order has been issued for the following areas: Both sides of Highway 140 from the Octagon to Colorado Rd. This includes the Bug Hostel area and all of Buffalo Gulch Road.

A Red Cross Evacuation Center has been established at the New Life Christian Church located at 5089 Cole Rd.

Instructions: Open live map <https://arcg.is/mSKK8>

Address/Location
[Mariposa County Sheriff's Office](#)
5099 Old Hwy N
Mariposa, CA 95338

Contact

TEXT-A-TIP - Text TIP MARIPOSASO
followed by your message, to **888777**

[Submit an anonymous web tip](#)

Alert Details

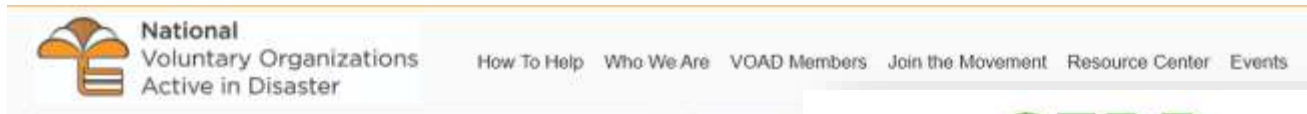
Severity:
Severe - Significant threat to life or property

Urgency:
Expected - Responsive action SHOULD be taken soon (within next hour)

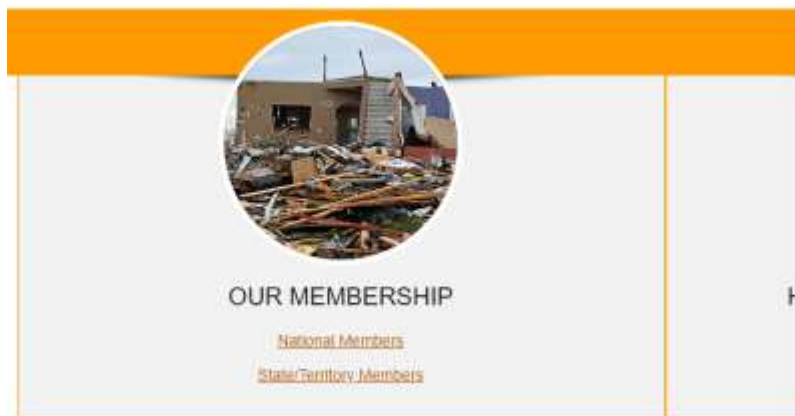
Certainty:
Observed - Determined to have occurred or to be ongoing

Category:
Fire, explosion and smoke

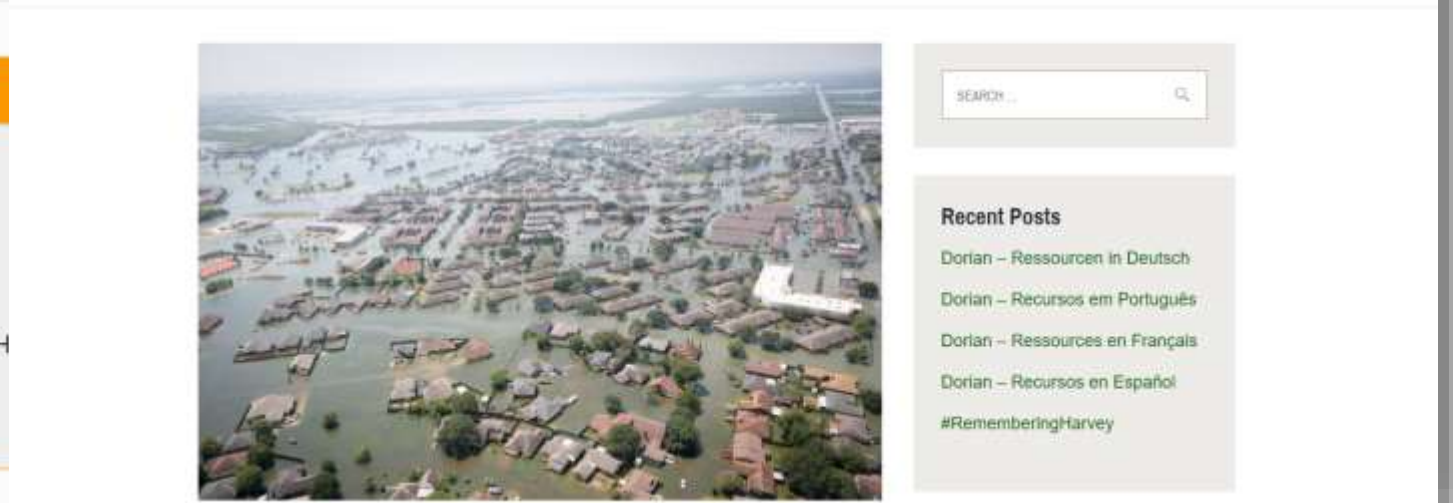
Partner with Volunteer Social Media Experts



<https://cedrdigitalcorps.org/>



<https://www.nvoad.org/>



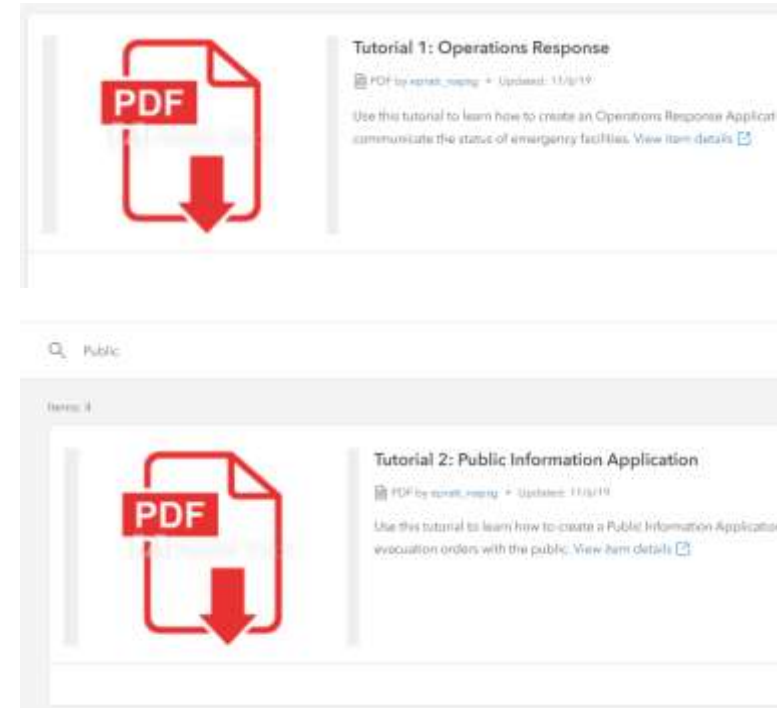
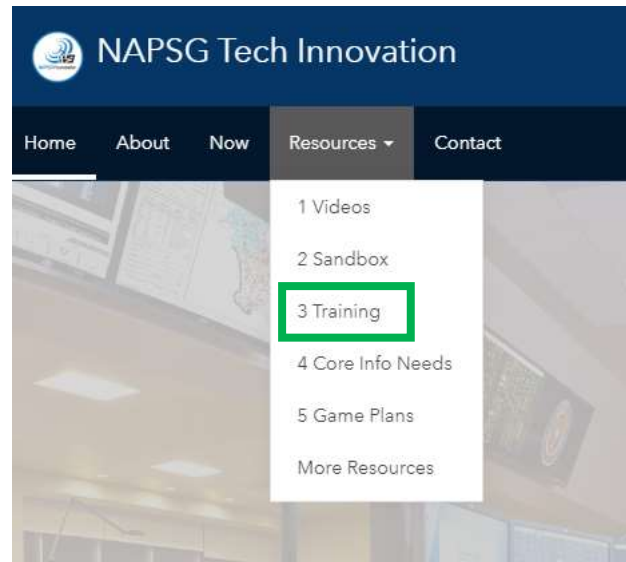
Public Information Maps

- Always present
- Always ready
- Always appreciated



Coming Soon!

<https://techinnovation-napsg.hub.arcgis.com/>



Thank You!



Paul Doherty, NAPSG Foundation

Email: pdoherty@publicsafetygis.org