Tonto Fire Mapping

- 2024 Field Maps App Updates
- 2024 Tonto IA GIS Products Overview
- Tonto IA Field Map Demo
- What GIS Staff Can Offer
- Other Products/Services
  - InFORM (Mapping)
  - Avenza
  - Dashboards
  - Tonto GIS SharePoint

Tonto GIS Staff
Spring 2024

ArcGIS® Field Maps

AVENZA MAPS

Field Maps Application

- **Collector Classic and Collector for ArcGIS**
  - **RETIRED - DO NOT USE!**
  - **No longer available to Download in App Stores**

- **Field Maps is the App to use for 2024 Fire Season**
  - Incident Management Teams
  - Make sure Field Maps is updated to Latest Version
  - No Major app updates

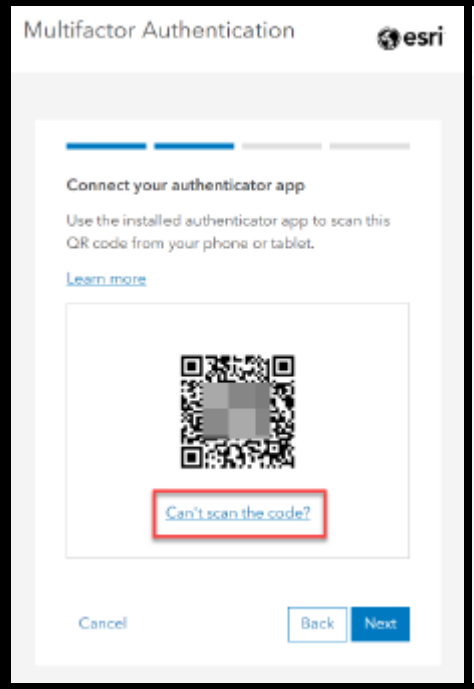
  - ***NEW*** – Multifactor Authentication Login…

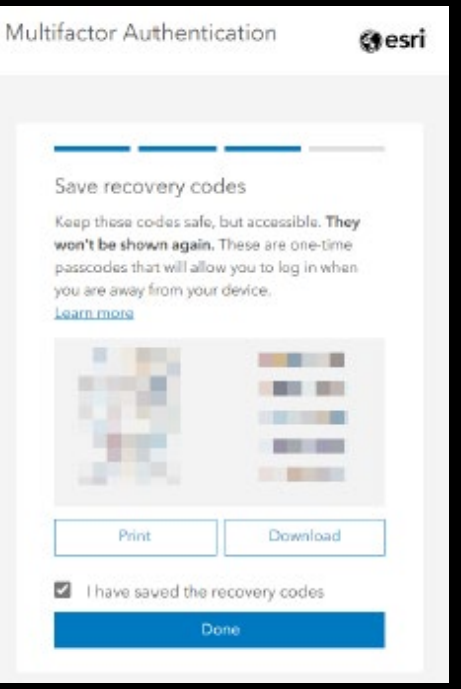
Multi-Factor Authentication (MFA)

New Requirement for NIFC Account Login – **How to Guide**

- First time login will open set up instructions
- QR Code that connects NIFC Account with Authenticator App – Take screenshot
- Recovery Codes – One-time use codes
  - Take screenshot
  - Can download 10 at a time
- Optional Security Keys – Fingerprint, Face ID
- Any issues contact Tonto GIS Staff or wildfireresponse@firenet.gov

Microsoft Authenticator

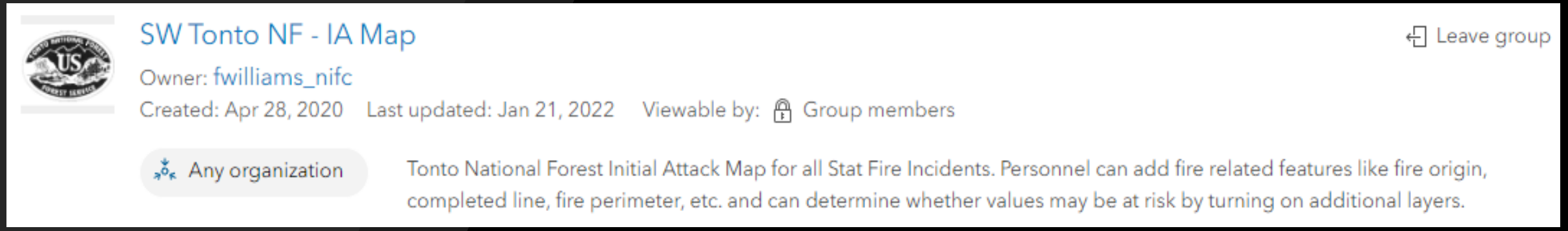




SW Tonto NF - IA Map Group

- **Have NIFC Account and be able to Sign into Field Maps**
  - Need a NIFC account: Must have a Gov or Fire Agency email and fill out the **Account Request Form**
    - Admins will respond quickly, usually within a few hours

- **Become a member of "SW Tonto NF – IA Map" Group**
  - Send email to one of the Group managers (Tonto GIS Staff) with the following information:
    - Name, NIFC Username, and Indicate if user is Tonto Staff or Non-Tonto Staff (Severity Resources)
      - Non-Tonto Staff may be removed from the Group and lose access after the Fire Season. This helps us manage the group more effectively.



Maps

2024 Tonto NF IA Field Map
- Tied to National Dataset
- Includes: Fire Event Features, Tonto Resource info, etc.

BASIC 2024 Tonto NF IA Field Map
- Tied to National Dataset
- Includes: Fire Event Features

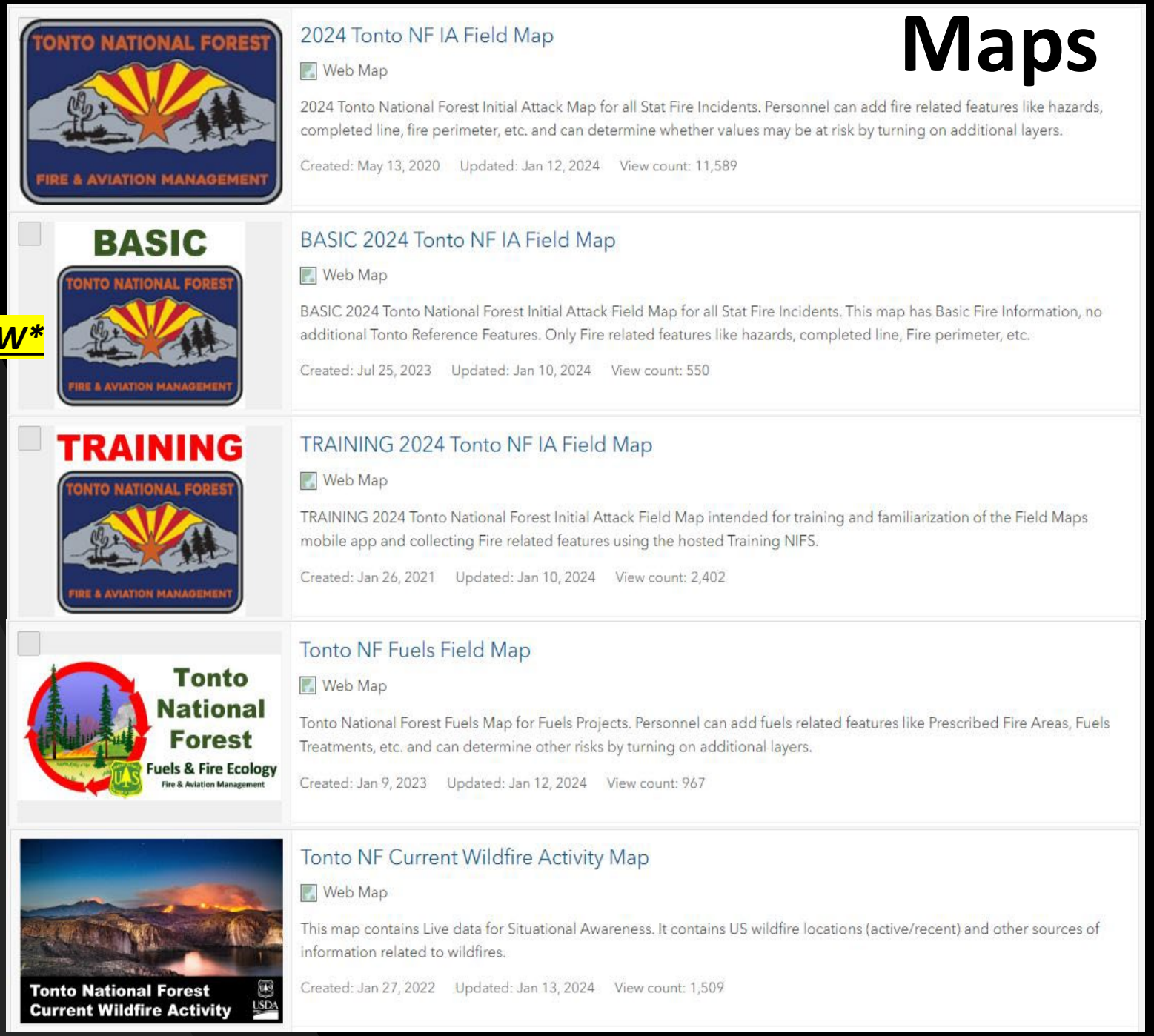
NEW

TRAINING 2024 Tonto NF IA Field Map
- Tied to Training version of the Dataset
- Includes: Training Fire Event Features

Tonto NF Fuels Field Map
- Includes: Fuels Projects (Operational and Planning), Resource info, etc.

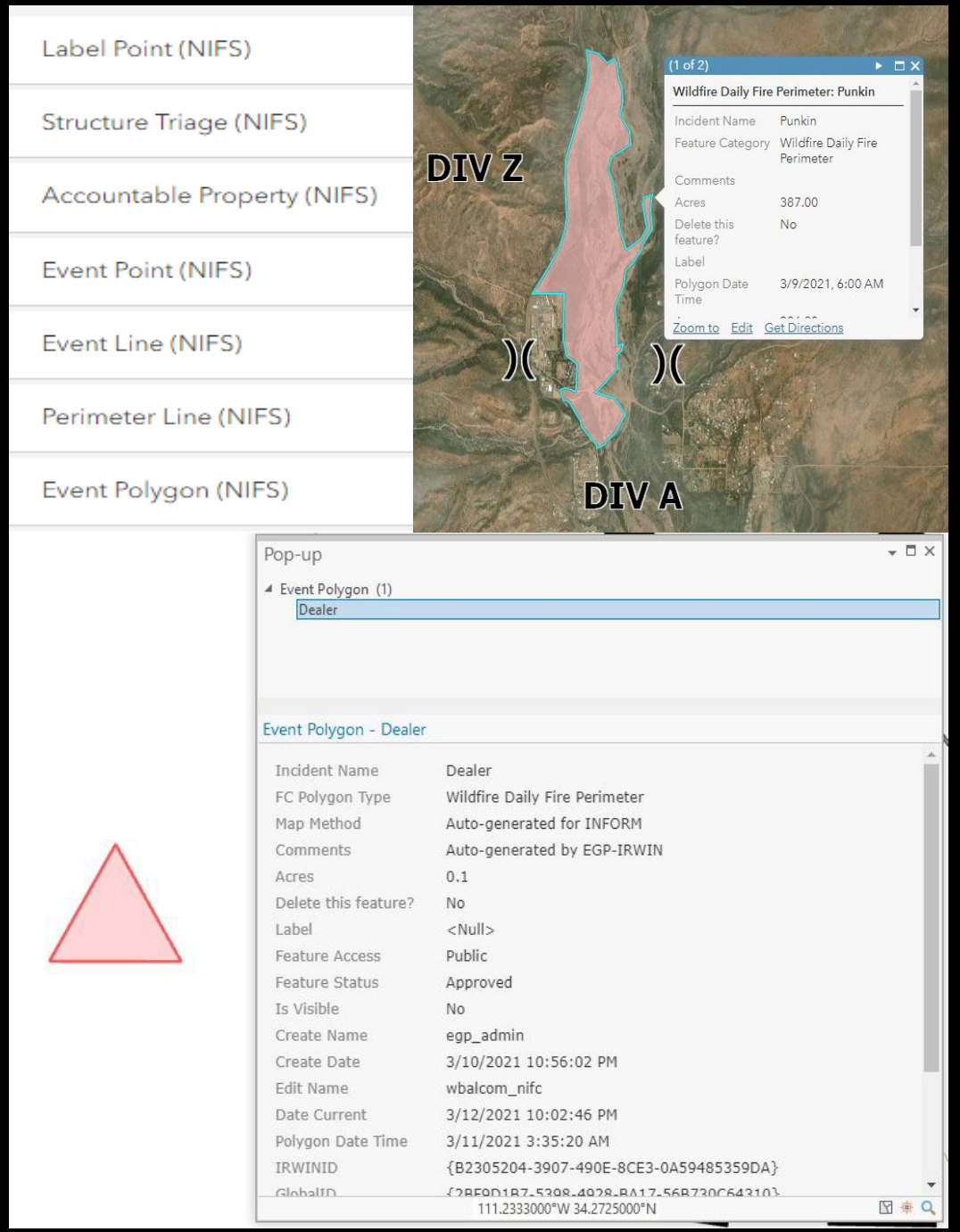
Tonto NF Current Wildfire Activity Map
- Situational Awareness Map
- Includes: Live/Dynamic Layers
- Read only and Only viewable Online

[Link to Briefing Guide]



National Data Layers
NIFS/Event Layers

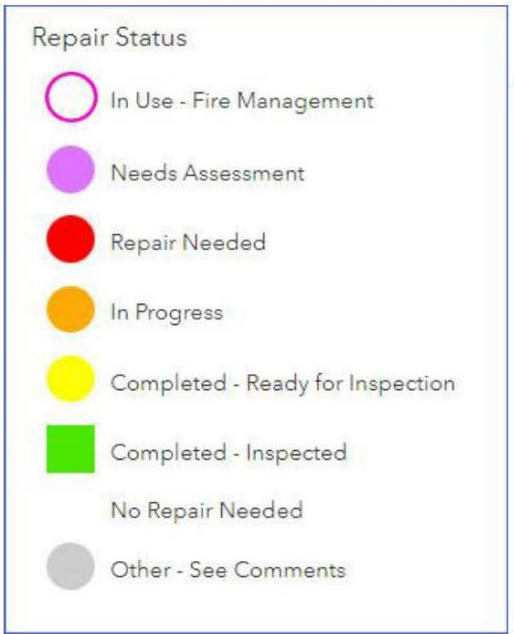
- Used for National Incident Specific Information
  - Drop Points, Divisions, Hand Line, etc.
  - Data is archived every year
- Fire Perimeter
  - Edit Auto-Generated Triangle
  - Create New Perimeter
- Deleting mistakes
  - Tonto IA Field Map and IMT Incidents – Can't Delete in the field (Can Delete if on an offline map and haven't synced yet)
  - Delete this feature? / You can use the comments field
- Tracking
  - If the feature is edited, the program will attach the editor's username and the date/time it was edited

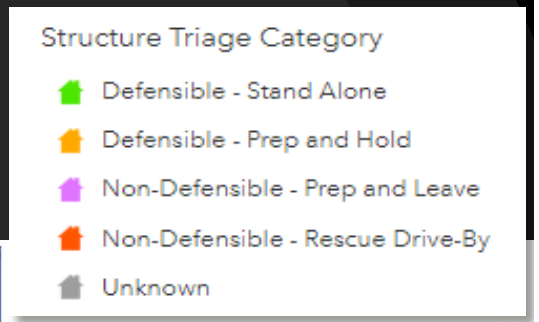


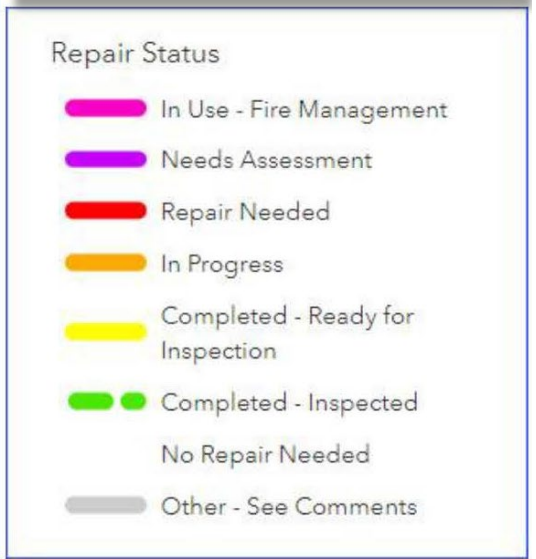
2024 ICS Symbol Updates

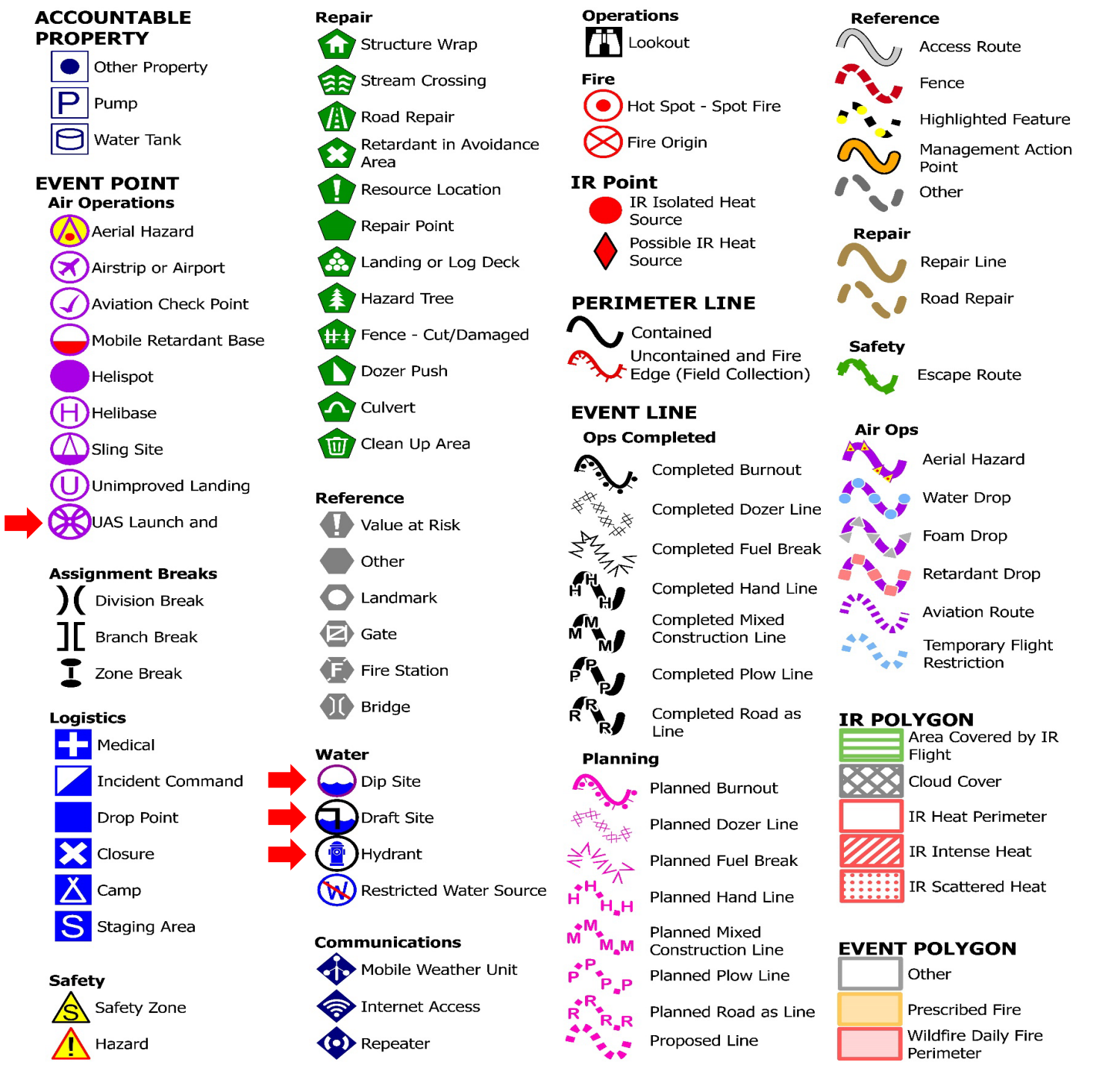
National Data Layers (NIFS/Event Layers)

No Major Changes









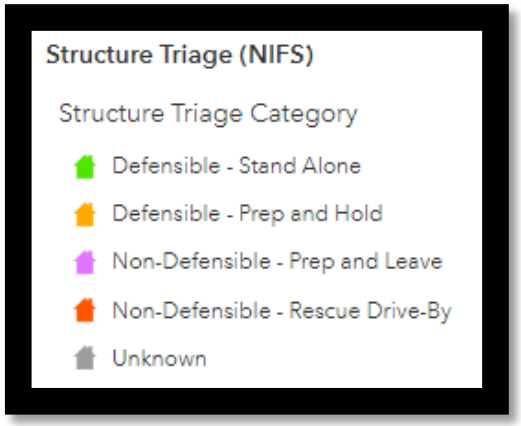
Structure Triage

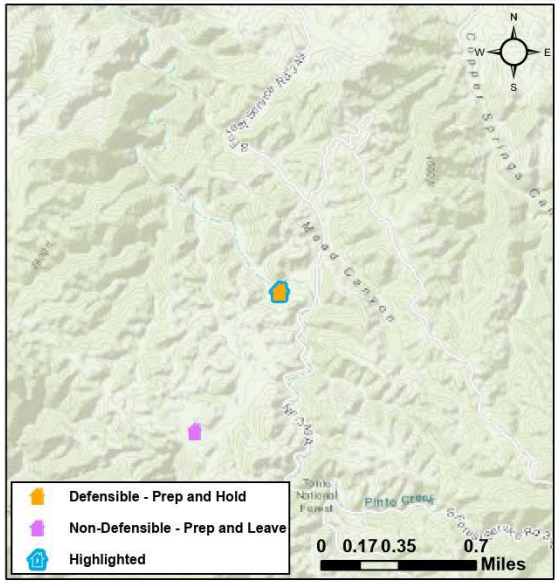
- Data can be collected/edited anytime
- National Data Layer
- Data is rolled over every year
- Fill out as many fields as you can
- Survey 123 Application can be used
- Photos: If possible, Limit the number of Photos to 2 or 3.
  More Photos = Increase File Sizes

Telegraph Fire (Structure Report Test) **AZ-TNF-1255**

Location: McSpadden Ranch ,
Coordinates (DDM): 33°20.488'N, 110°56.314'W

Triage Category: Defensible, Prep and Hold
FIRESCOPE Triage Category:
Structure Number: (007)
Collected Date/Time: 6/7/2021 7:33:00 PM
Collected By: Andrea McKenna
Inspector's Position: ENGB
Type of Structure: Residential
Primary Structures: 1
Is the building Occupied?: Yes
Outbuildings: 5
Fuel Surrounding Structure: Shrub or timber
Defensible Space: 30 ft treated
Roof Material: Noncombustible or not applicable
Siding Material: Wood or open sided
Electrical Power: Yes
Gas to Structure: Unknown
Hazards:
Access to Site: T3/4 Engine
Describe Access: Ranch off the 349 Rd around 2 miles slow ingress/egress windy road
Comm With ICP: Yes
Water Source: No reliable water source nearby
Safety Zone Present:
Mitigation Time *(in hours):* 1
Mitigation Description: minimal mitigation needed, limbing up a couple trees around propane tanks
Resources Needed to Protect Structure: type 3/4 engine
FIRESCOPE Tactics:
Notes: no ground fuels present, a few trees touching the structure

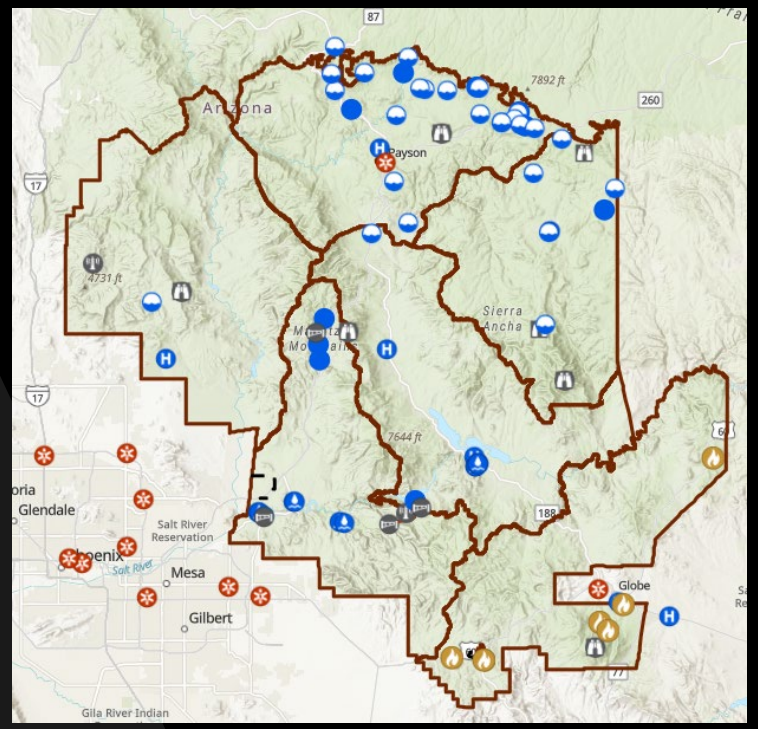




Tonto Fire Reference Features

- Use for more Internal Permanent Fire Features on the Tonto - Dip Sites, Helispots, Water Sources, Medical LZs, Values at Risk, etc.

- Field Users do not have edit access for 2024.
  - Avoid confusion with the National Data Layers
  - To add in features to Tonto Fire Reference Features:
    - Collect Data in National Data Layers and GIS staff will duplicate when necessary
    - Work with GIS Staff



Tonto Values at Risk

Medical Helispots

Tonto Fire Reference Points

- Helibase
- Helispot
- Aerial Dip Site
- Gate
- Medical
- Lookout
- Repeater
- Hazard
- Water Source
- Restricted Water Source
- Other

Tonto Fire Reference Line

- Completed Fuel Break / Fire Line
- Highlighted Feature
- Closed Access Road
- Restricted Access Road
- Other

Tonto Fire Reference Area

- Restricted Area
- Other

Fire Prevention Signs Data Layer

- Full Edit Access. Fill out as much information as possible
- Can be used for Fire Restriction Sign Status
- Can add Photos: Limit number of Photos if possible

Tonto Fire Prevention Sign

- No Restriction Sign Placed
- Restriction Sign Placed
- Not Applicable
- No Value Entered

- Revision Date
- Edit Name
- Sign Name
- Sign Number
- Ranger District
- General Area
- Township
- Range
- Section
- First QuarterSection
- Second Quarter Section
- Latitude
- Longitude
- Road Number
- Road Name
- Road Surface
- Right Of Way
- Sign Size
- SignInstallDate
- Present Condition
- Direction Sign Facing
- Poster 1
- Poster 2
- Poster 3
- Poster 4
- Poster Other
- Fire Restriction Sign Status
- Fire Restriction Sign Size
- Notes

Tonto National Forest - Mesa Ranger District
Prevention Sign Inventory

Sign Name: Ballantine Trail Head

Sign Number:

General Area:

Legal: Township 5N, Range 8E, Section 23

Latitude: 33° 45.866' N

Longitude: 111° 29.605' W

Road Number:

Road Name: Beeline

Road Surface:

Right of Way:

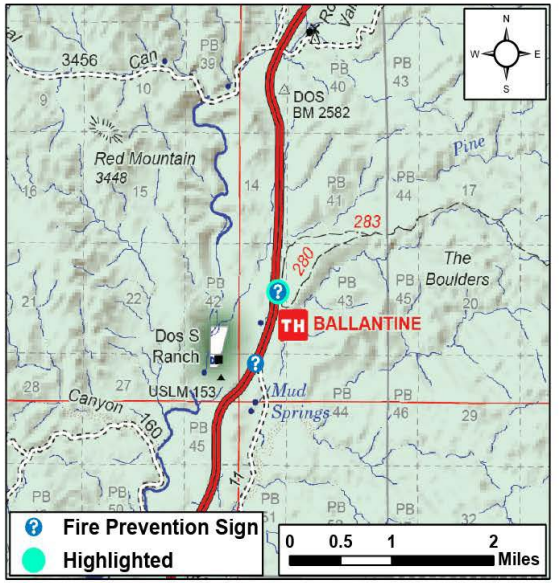
Sign Size:

Sign Install Date:

Present Condition: 1=New
1-5 Scale - 1=New to 5=Replace

Direction Sign Facing: West

Posters:



Fire Restriction Sign Status: Not Placed

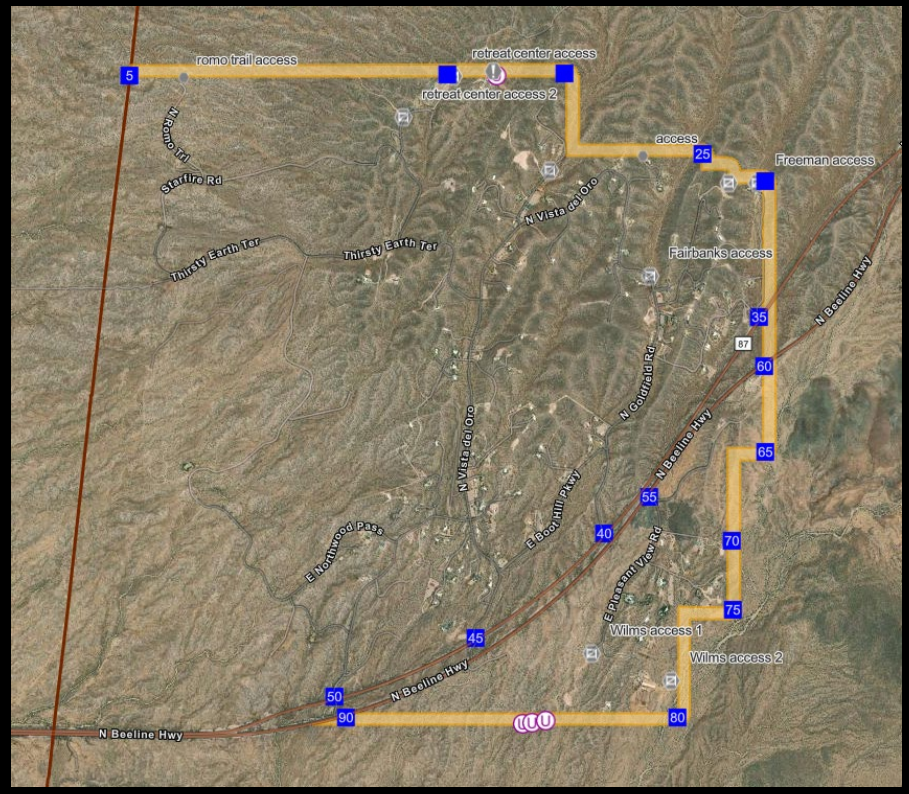
Fire Restriction Sign Size:

Notes:

Edited By: Tonto SZ GIS
Revision Date: 3/28/2022

Tonto Fuels Project Data Layers

- Used for Active and Planned Fuels Projects
- Fuels Monitoring Sites
  - Site Inspection Survey 123 Connection
- On going Development



Tonto National Forest
Fuels & Fire Ecology
Fire & Aviation Management

Tonto NF Fuels Field Map

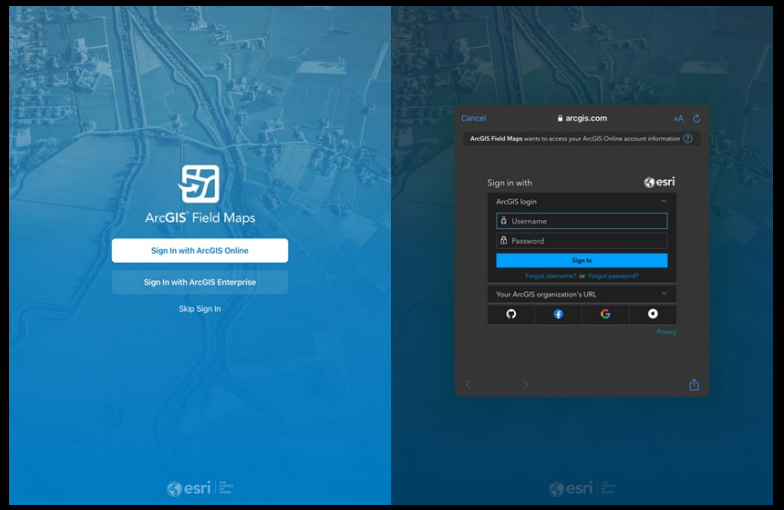
Web Map

Tonto National Forest Fuels Map for Fuels Projects. Personnel can add fuels related features like Prescribed Fire Areas, Fuels Treatments, etc. and can determine other risks by turning on additional layers.

Created: Jan 9, 2023 Updated: Mar 31, 2023 View count: 255

bdugan_nifc

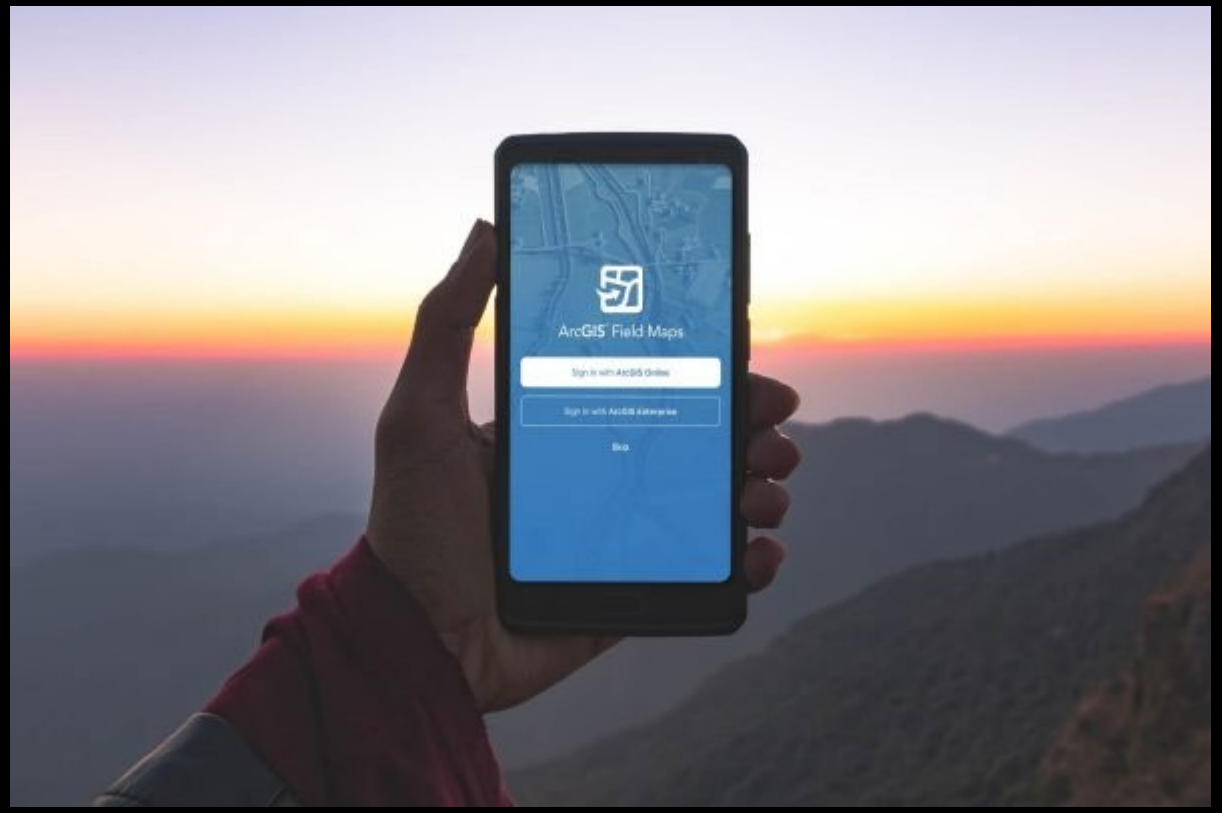
Set up and Collect Features Online Demo



- Settings: Collection Settings, Units, etc.

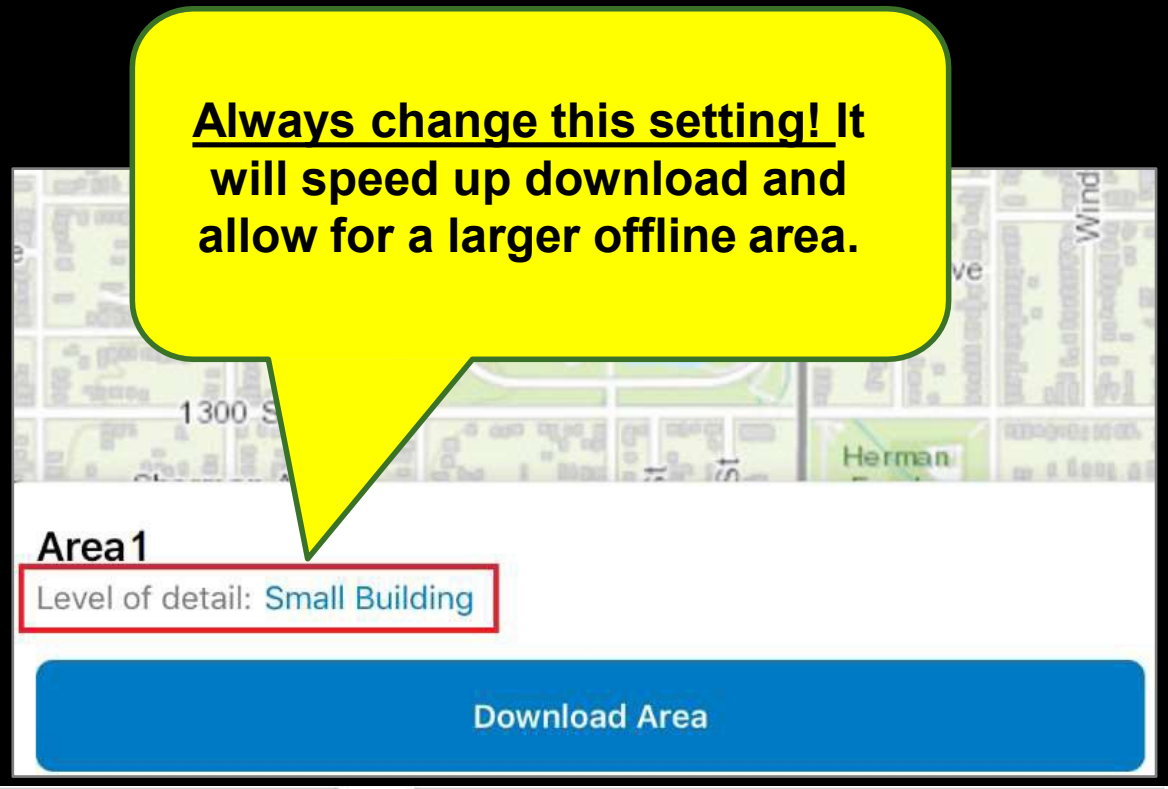
- Overview of Map
  - Overflow Menus
  - Data Layers
  - Map Functions
  - Collecting Data

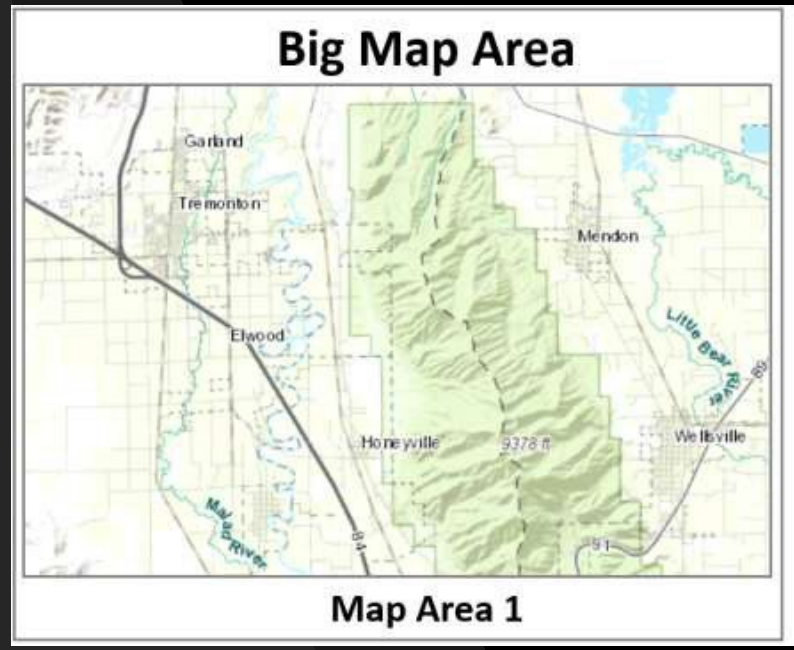
- Online vs Offline - Syncing

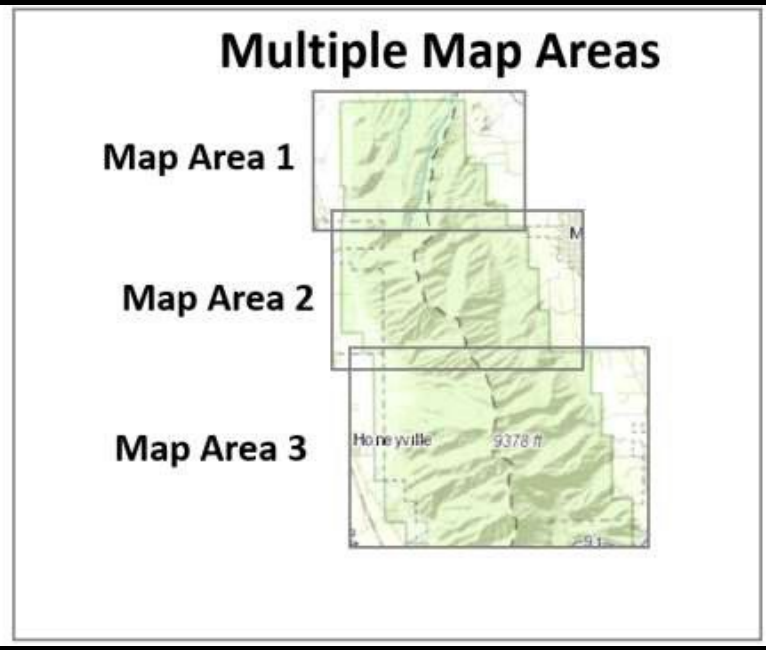


Going Offline
Downloading Offline Work Area

- Download at Streets or Neighborhood Detail
  - Any Smaller the File Size is too large and will give errors
- Can Download Multiple Areas
- Streets Detail for District
  - Around 1 GB – File Size
  - 10-20 min – Download Time (Depending on Network Speeds)
- Create Offline Area Before Going into the Field







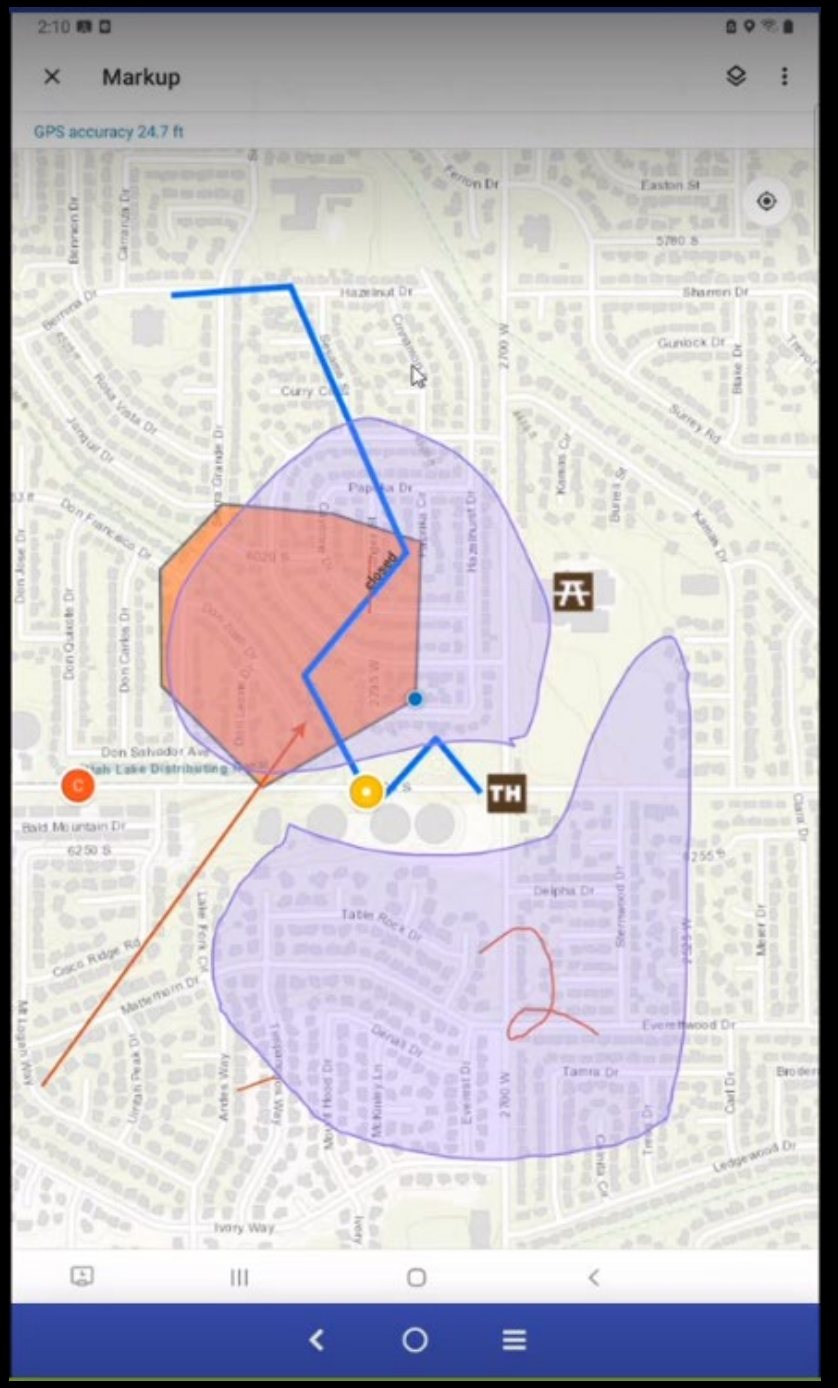
Set up and Collect Features Offline Demo

Syncing

- Sync before you go out into field
- Sync when you get back from field
- Don’t let data sit on device
- ‘Last one in, Wins’

Field Maps: Markup Tool

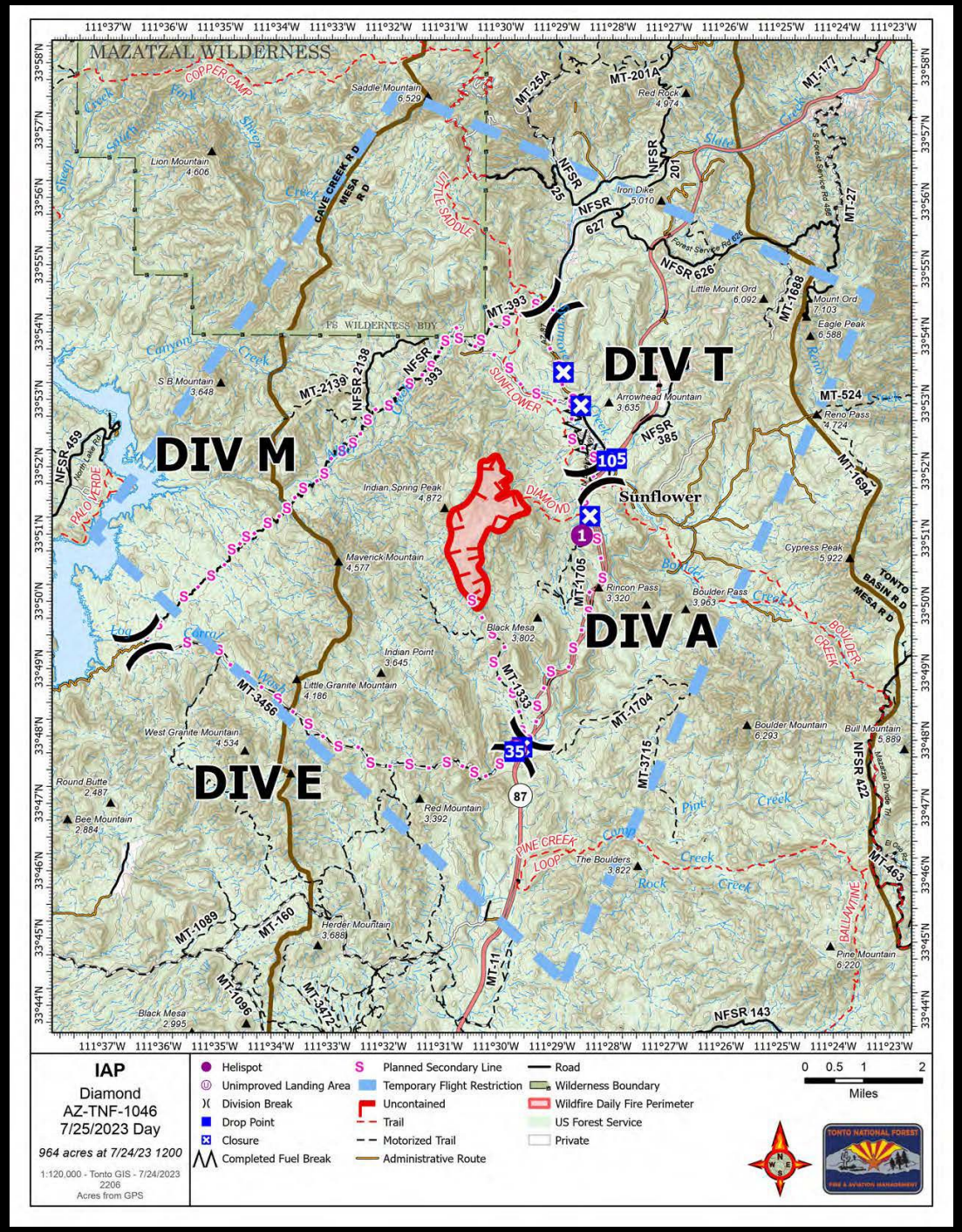
- Capture Sketches and notes on a map
- Markup is saved as a layer <u>on your device</u>
- You can use markup for your own information, similar to drawing on a paper map
- You can share it to communicate with others by screenshot or through Bluetooth/Airdrop
- **<u>Temporary Layer – Not Needed for Data Collection</u>**



What GIS Can Offer

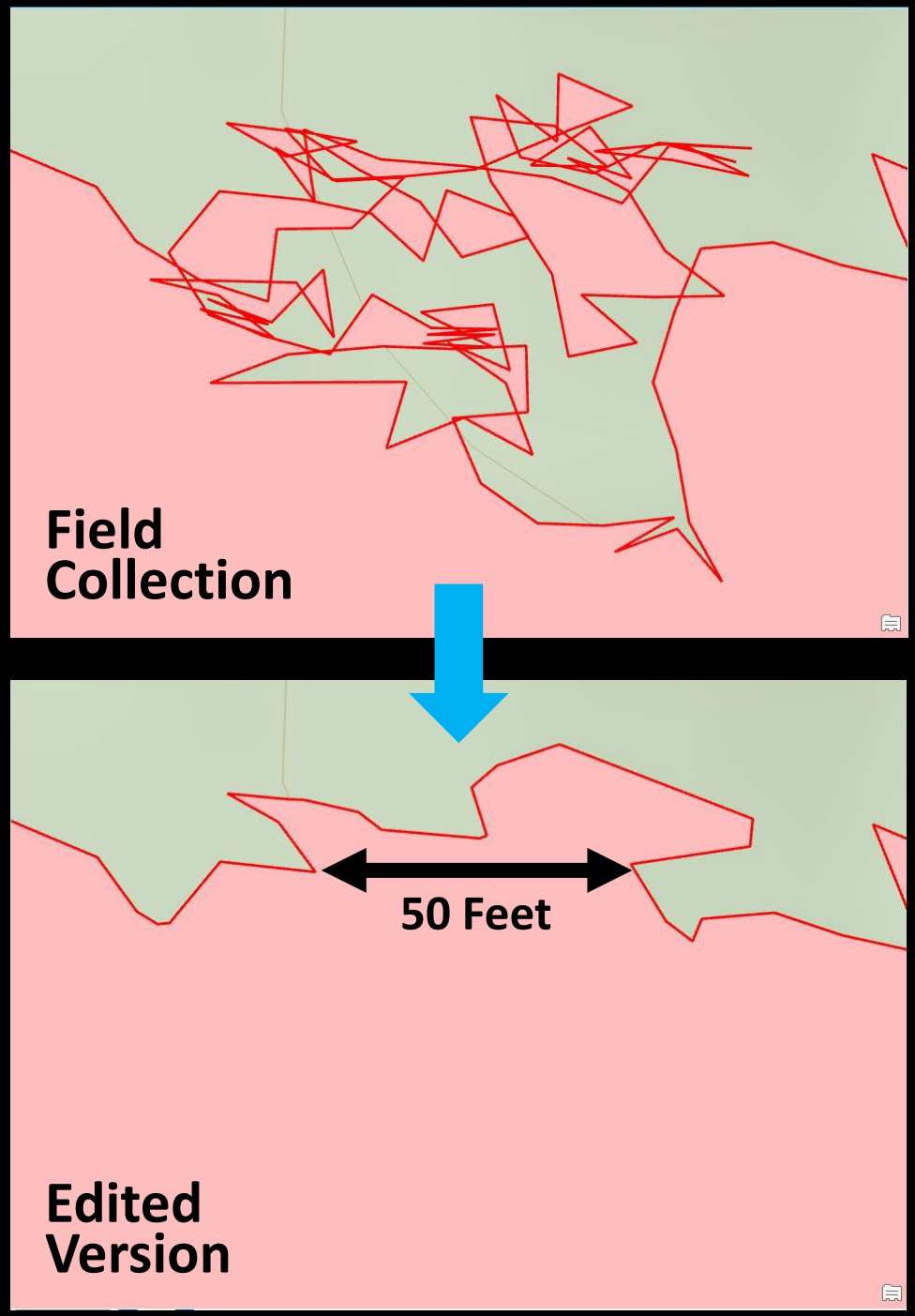
GIS Staff Can Help with:

- Editing Data
- Creating Incident Maps
  - Common Types: Operations, PIO, IAP
- Technical Assistance
  - Field Maps
  - Avenza
  - InFORM (Mapping Functions)
  - GIS Desktop Products (ArcPro)
- Etc.



Fire Perimeter Editing by GIS Staff

- You may see a GIS Specialist Name as the Last edit - 2 reasons:
  - If a new feature is collected. There is a unique code (IRWIN ID) that needs to be attached to the data fields of the new feature. GIS staff has to enter that code into the system so everything ties together.
  - Slight geometery editing: Smoothing Line, GPS “Spider Webs”



InFORM – GIS

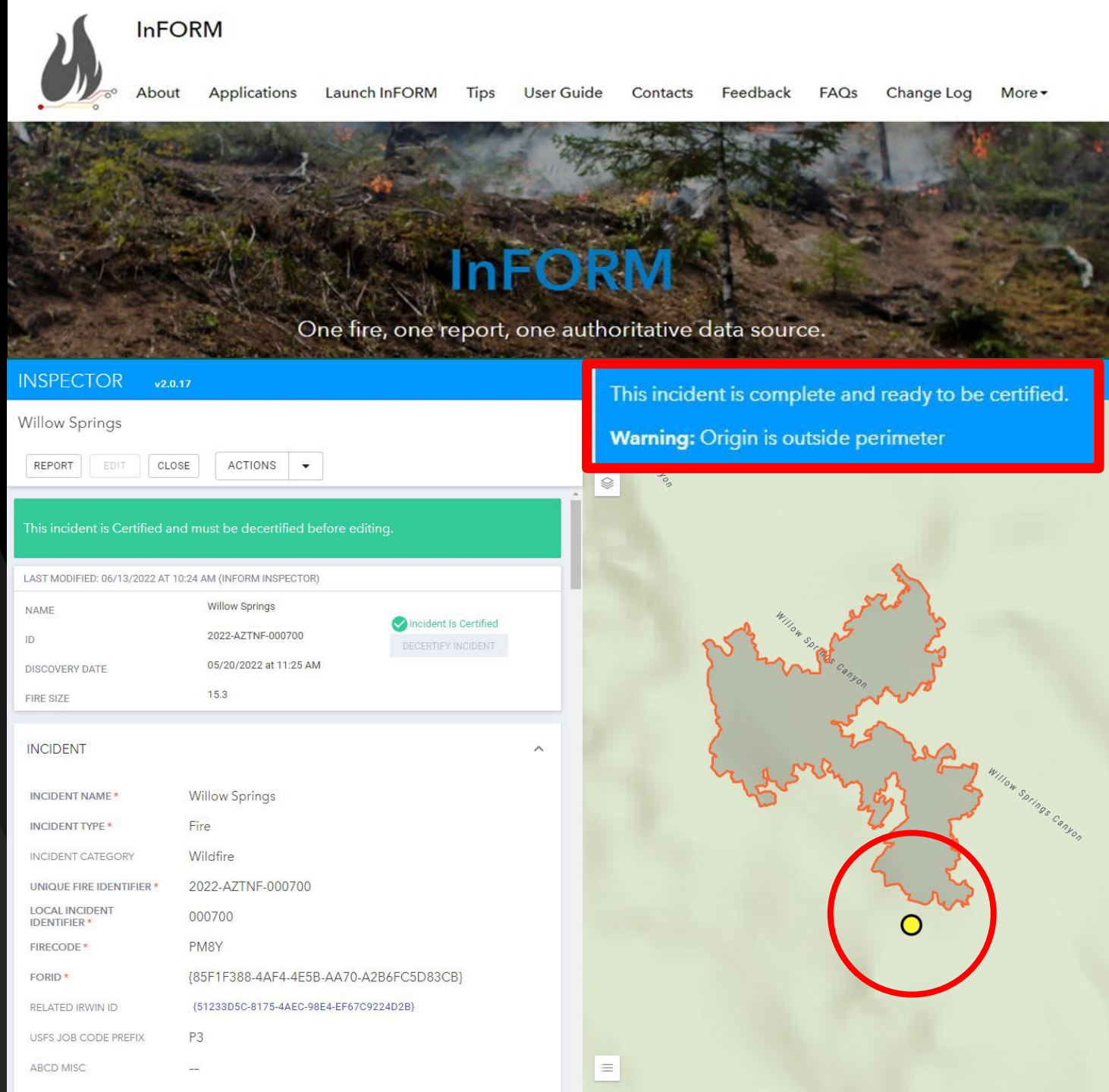
Adding Perimeters for Certification
- **Perimeter from NIFS Via IA Field Map**
- Uploading a zip file of all shapefile files
- Hand Sketch – Work with GIS staff, if needed

Fires over 10 Acres Require a Perimeter,
Under 10 Acres do not Require a Perimeter

Annual Reporting – Staff is including any Fire perimeter collected and Certified

Perimeters Feed a LOT of Public Facing Sites
- InciWeb, Weather sites, etc.

Point Outside of Polygon Issue
- Best way to update Point location is through Dispatch. Filtered into other systems.
- Point Location can be edited in InFORM
- GIS will work with FMOs at end of season

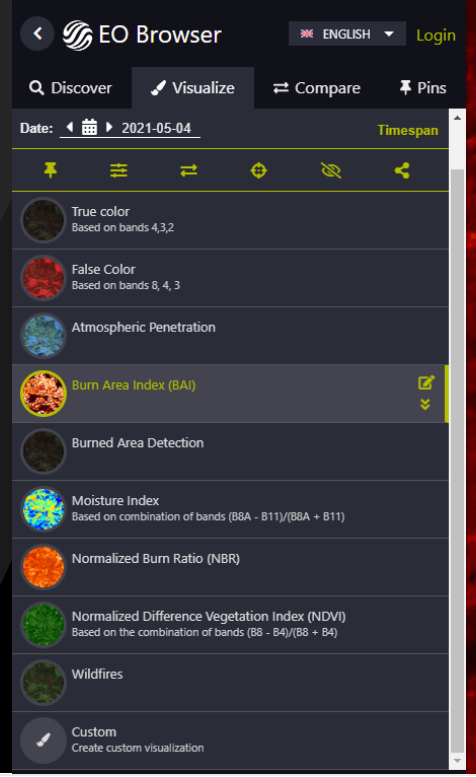


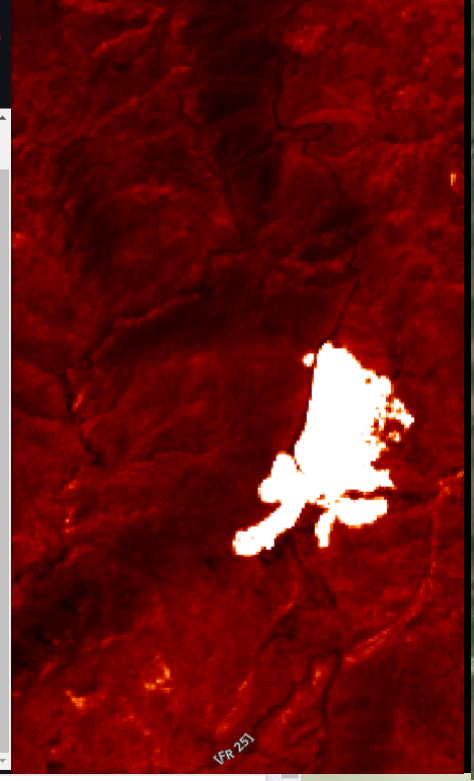
Data Can be Obtained from Other Locations

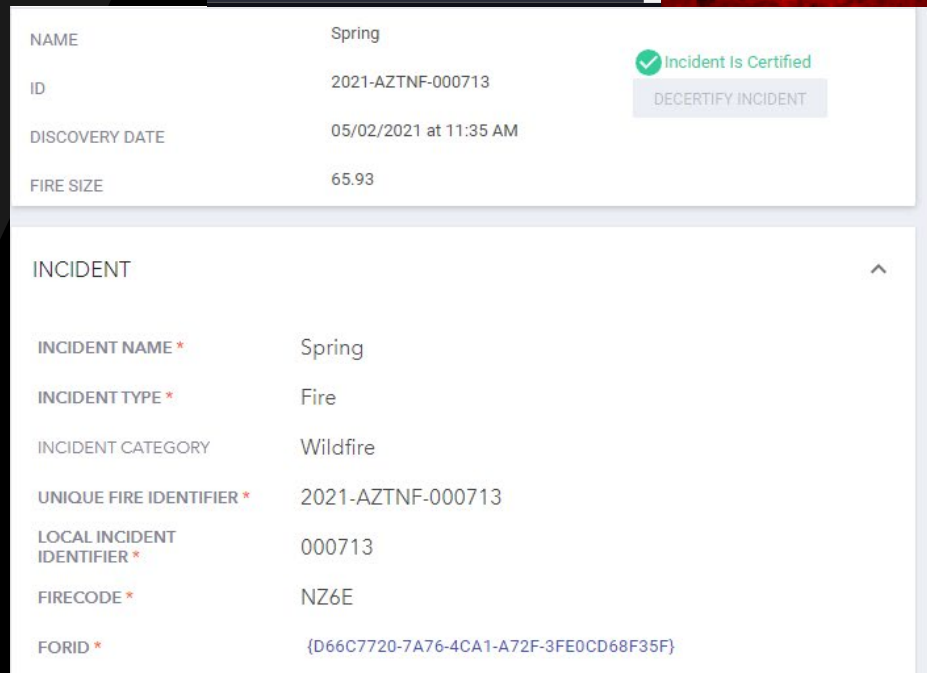
- If you cannot collect the Perimeter there are other ways

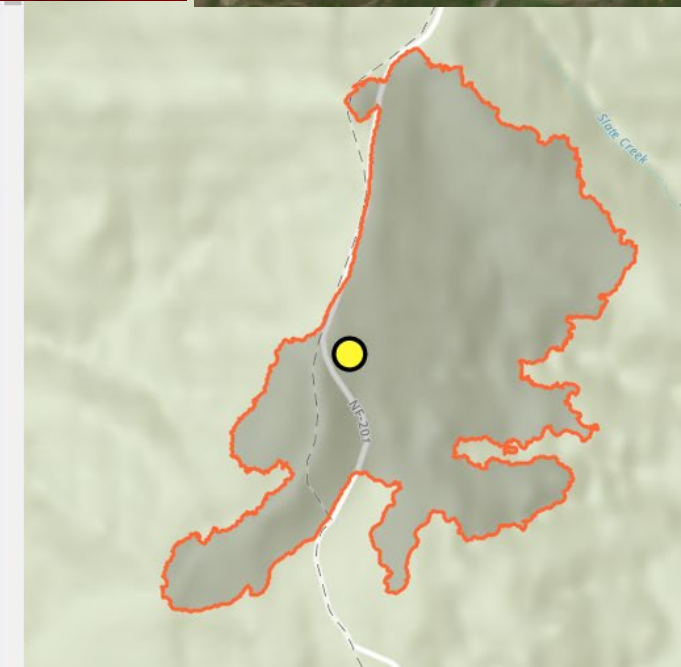
- Imagery Data
  - Sentinel Satellite Data

- Some Limitations
  - Time: Once a week
  - Correct Conditions
  - Needs to be 10+ Acres



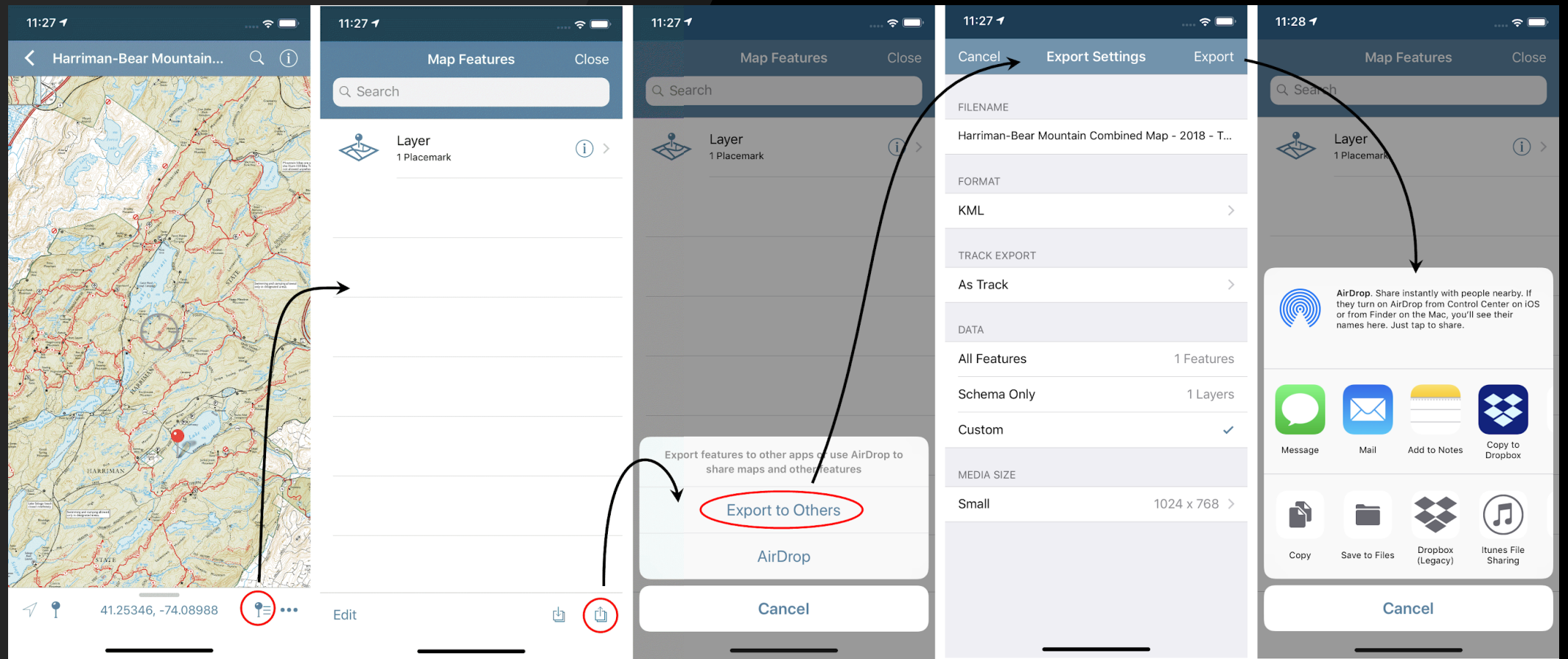






Data can be Exported From Avenza

- Data can be Exported from Avenza Maps (How to Video)
  - Shapefile, KML, etc.
- Does take some Data Conversions but can be easily entered and updated to be available for systems like InFORM reporting



AVENZA MAPS

Avenza

New FS Pro License Code - 3/1/24

[FS SharePoint Site for Avenza Info]

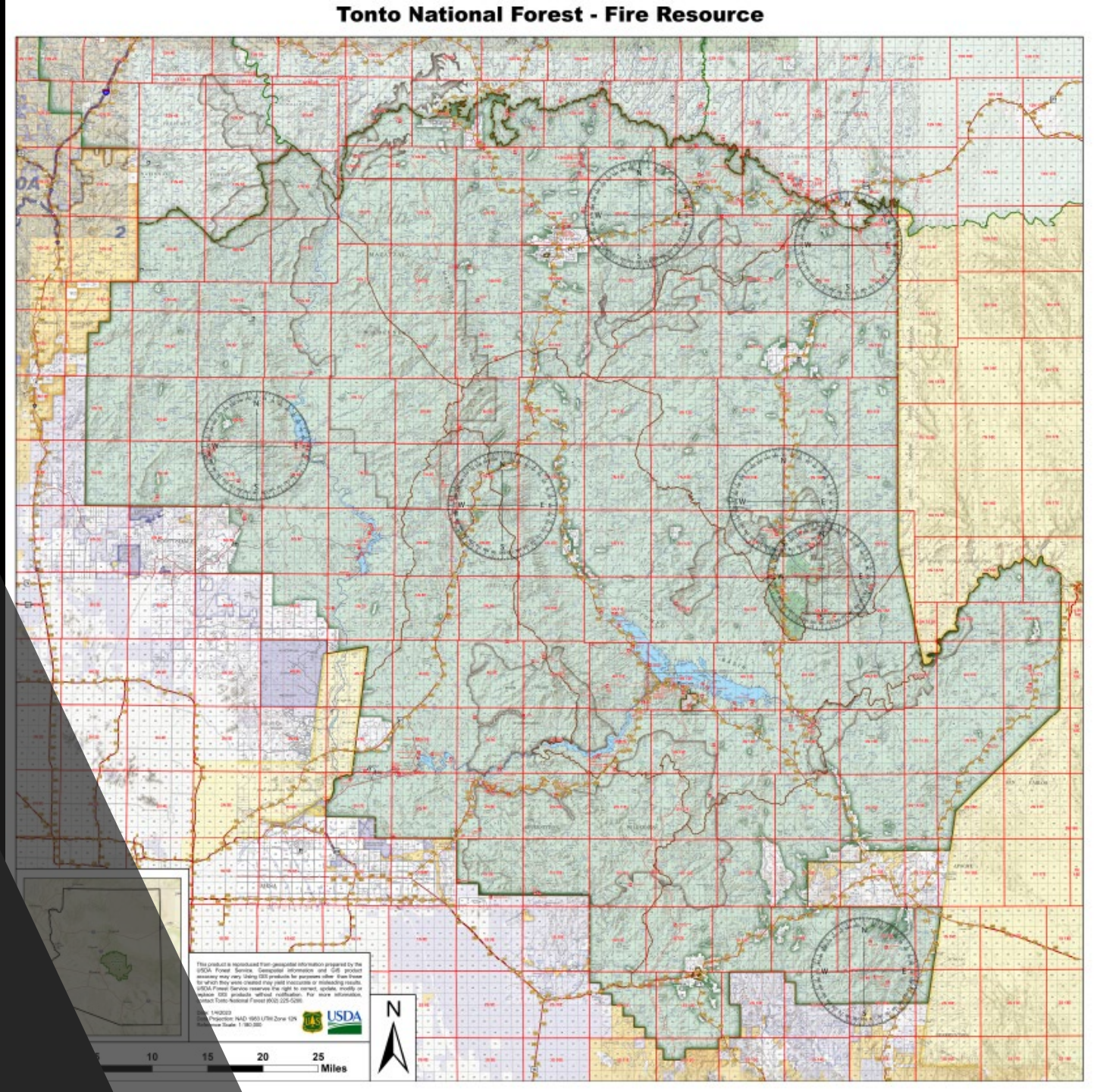
- Need to be on FS Network

Avenza Map Product Websites

- [Incident Specific Map Site]
- [Tonto General Fire Map Site]
- [Tonto Fuels Map Site]

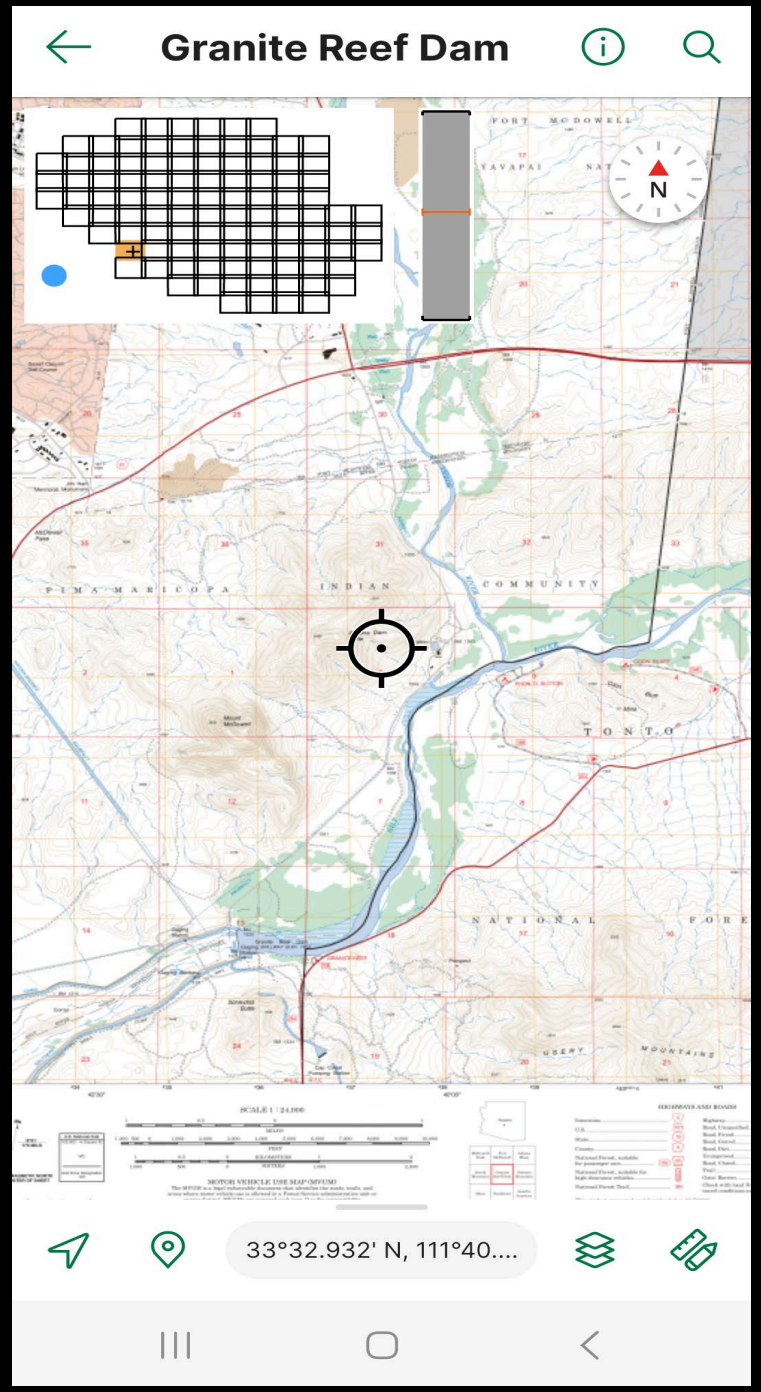
How to Guides

- [FS Topo Bulk Download QR]
- [Tonto General Fire Maps QR]

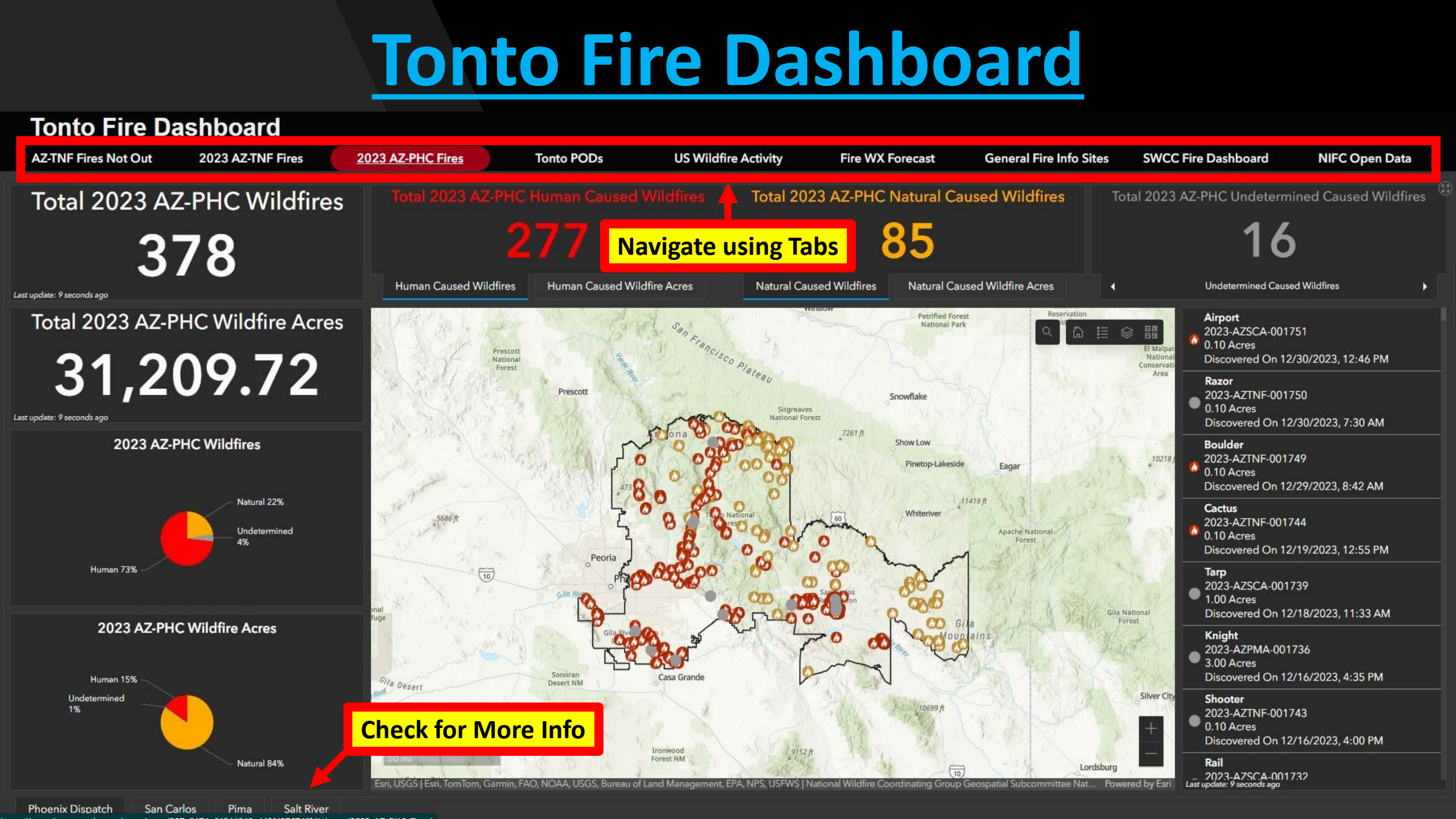


Avenza – Bulk Load

- PDF How to Document with QR that will download all 24k FS Topo Quads that cover the Forest into a Map Collection
- This Bulk Load will download 102 FSTopo maps into a Collection roughly 5 GB in size
- The download process may take up to 1 hour to complete depending on network speeds
- Second page of document has QRs for Topo Quads by individual Districts that are smaller file sizes



Tonto Fire Dashboard



Tonto GIS SharePoint Site

Tonto National Forest GIS Program | Private group

Home | GIS Software | GIS Training and Tools | GIS Data Locations | Mobile/Web GIS | Avenza and PDF Maps | Fire GIS | Recycle bin | Edit

Following | 1 member

Avenza and PDF Maps

Navigate using Tabs

Avenza

Mobile map app that allows you to download maps for offline use on your smartphone or tablet.
Use the built-in GPS in your mobile device to locate yourself on any map and collect data.

- Avenza Maps Support

Forest Service Avenza SharePoint with Pro Subscription Information

Tonto Fire GIS

Tonto Fire GIS Products have been updated for 2024

- NEW - Multi-Factor Authentication (MFA) for NIFC Org Accounts
  - Set up guide
- Tonto Fire GIS Field Maps:
  - 2024 Tonto NF IA Field Map - Used for Suppression Incidents
  - BASIC 2024 Tonto NF IA Field Map *New* - Used for Suppression Incidents
    - Includes only National Data Layers. Can be utilized anywhere.
    - Either Tonto IA or BASIC Tonto IA can be utilized for Incidents. Includes National Data Layers in Both.
  - Tonto NF Fuels Field Map - Used for Fuels Treatments and Prescribed Fires
  - TRAINING 2024 Tonto NF IA Field Map - Used for Training

Tonto IA Field Map Access:

- Download Field Maps Mobile App on Device
- Have a NIFC ArcGIS Online (AGOL) Account and be able to sign into Field Maps
  - To Request a NIFC AGOL Account, Fill out this New Account Request Form
- Become a member of the "SW Tonto NF - IA Map" ArcGIS Online Group
  - Send email to one of the Group managers (Brian Dugan, Frank Williams, or Christina

Quick Links

- NIFC ArcGIS Online
- NIFC Open Data
- NWCG Standards for Geospatial Operations (GeoOps)
- National BAER Forest Service SharePoint
- Field Maps Resource Advisor Training (Video)

Printable Tonto Specific Documents

- Tonto General Fire PDF Maps QR Code

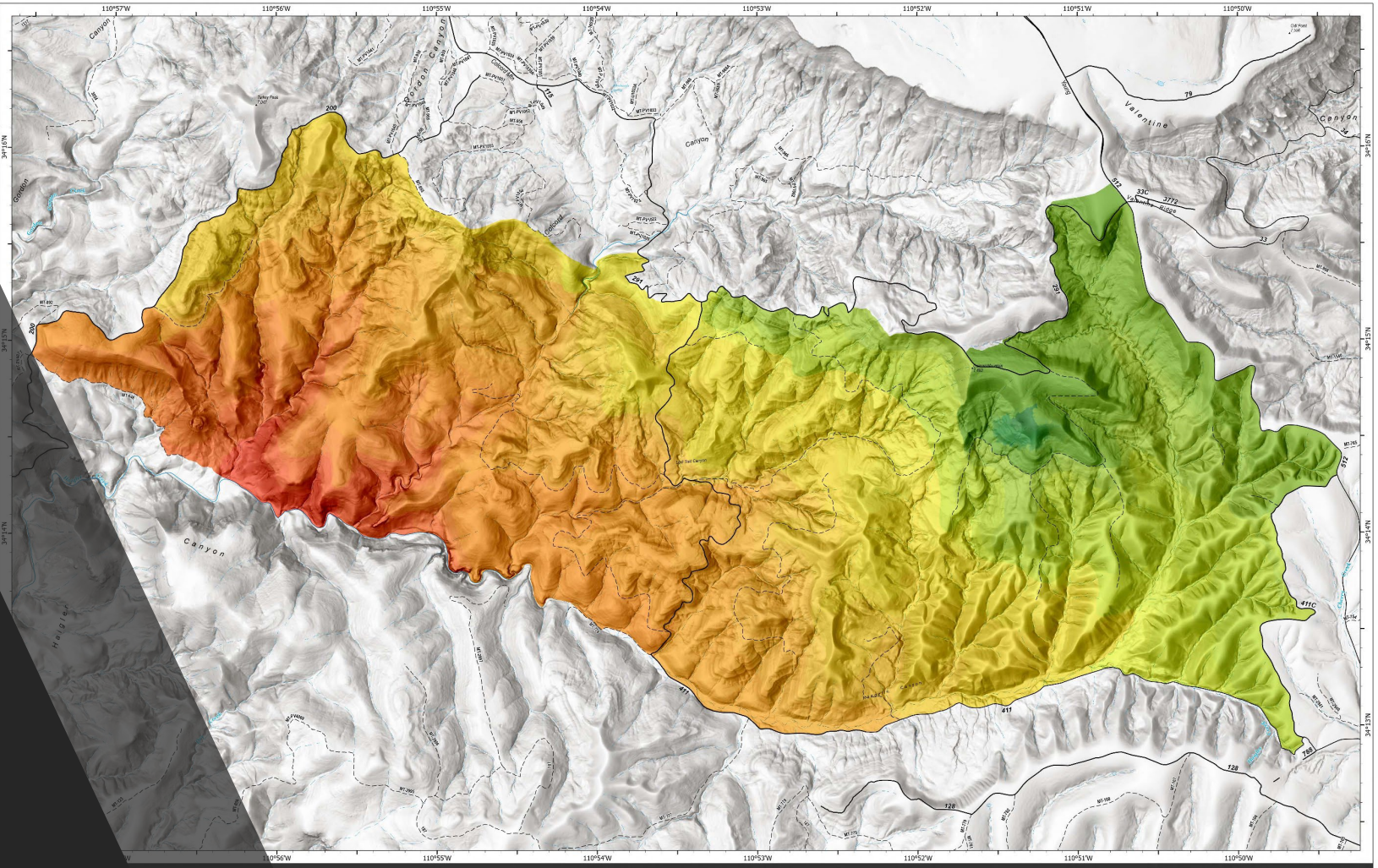
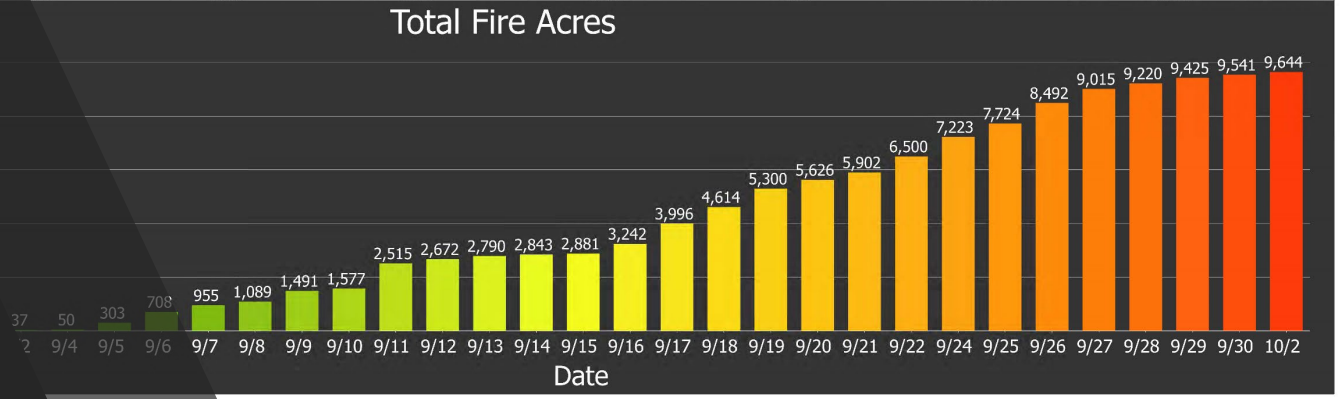
Reminders

- **Log in to Field Maps with NIFC Org account <u>BEFORE</u> going into the field to set up MFA**
- Technology is always changing, so bear with us
- Ultimately, Perimeters from IA Field Map can be certified in InFORM and then will be entered for end of year reporting
- Data is tied to National Databases
- If on Team Fire, Use the Team's Field Map
- Any issues - Contact GIS staff
  - Edits can be done easily and quickly on our end

FEEDBACK

- What Works?
- What Doesn't Work?
- Ideas for Future?

QUESTIONS?

PROGRESSION
Valentine Fire
AZ-TNF-1315
10/3/2023
9,644 acres at 10/2/2023 @ 2000

Date	Total Acres	Change
8/19	7 Acres	+7 Acres
8/21	11 Acres	+4 Acres
/30	26 Acres	+15 Acres
31	35 Acres	+9 Acres
	37 Acres	+2 Acres
	50 Acres	+13 Acres
	303 Acres	+253 Acres
	708 Acres	+405 Acres
	955 Acres	+247 Acres
	89 Acres	+134 Acres
	Acres	+402 Acres
	Acres	+86 Acres
	res	+938 Acres
	es	+157 Acres
		+118 Acres
		+53 Acres
		+38 Acres
		+361 Acres
		754 Acres
		8 Acres
		Acres
		Acres
		res
		es