GEOGRAPHIC INFORMATION SYSTEMS SUBCOMMITTEE

GISS Best Practices for Dashboard, Webapp, and Webmap Creation ICS - 1402

April 2024

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This Document contains information relative to the Incident Command System (ICS) component of the National Incident Management System (NIMS). This is the same Incident Command System developed by FIRESCOPE. Additional information and documentation can be obtained from the following source:

Cal OES FIRESCOPE
Document Control
23300 Castle Street
Riverside, CA 92518
(951) 782-4147
Fax: (951) 782-4239

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INTRODUCTION

The following is a guide to be posted on the FIRESCOPE GIS Subcommittee Website. It is to be refreshed annually with new links. It contains pertinent and relevant information related to the work of a GISS using ArcGIS Online on an incident. The intent of this document is to provide tips, templates, and information helpful to GISS on assignments. It may also be used to discover things a GISS might not know about dashboards and webmaps that can make the job easier, more efficient, and more effective.

Website Proposal

PDF and/or Microsoft Word Document

This document is intended as reference for Planning Sections on incidents. More specifically, SITL and GISS personnel. [D] refers to Dashboard tips, [W] refers to webmaps

General Tips

- Identify who will be the intended audience for the webmaps and dashboards early on in the incident
- [D] Minimalism on stats and graphs can be beneficial due to differences in screen viewing sizes
- It is important to focus on the full incident life cycle of Initial Attack through Extended Attack
    - IRWIN ID: auto generated on incident dispatch.
    - Wildland PrePlan data:
- [D] Statistics should not be filtered or tied to map extent
- Utilizing and meticulously maintaining IRWIN ID on all queries is highly preferred, rather than fire name
- [D] Identify null values and zeroes throughout your data. When a query returns no data, you can override the default text label with wording similar to “Currently, no dozer line miles in Progress”
- Dashboards statistics and displays are only as good as the data being collected, so keep that in mind when displaying completion percentages

Sharing Requirements

- Collaborate with Plans personnel to identify sharing permissions for each webmap and Dashboard
- Webmaps/apps/dashboards should be categorized and saved to a group created by the GISS at the start of an incident (e.g. Calf Fire CA-MMU-004325)
    - Helps keep items organized
    - Permissions control on who is able to view/edit data or maps
- QR codes can be created and dispersed to appropriate personnel for viewing access on mobile devices

Webmaps

Authoritative Data Layers, map layers that can enhance general situational awareness for Operational personnel

- NWS Hazards, Warnings
- Veg Treatment layers

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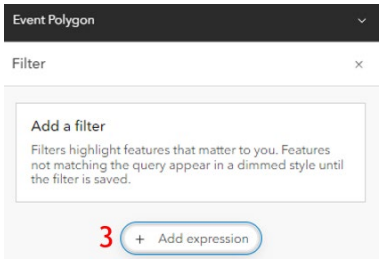
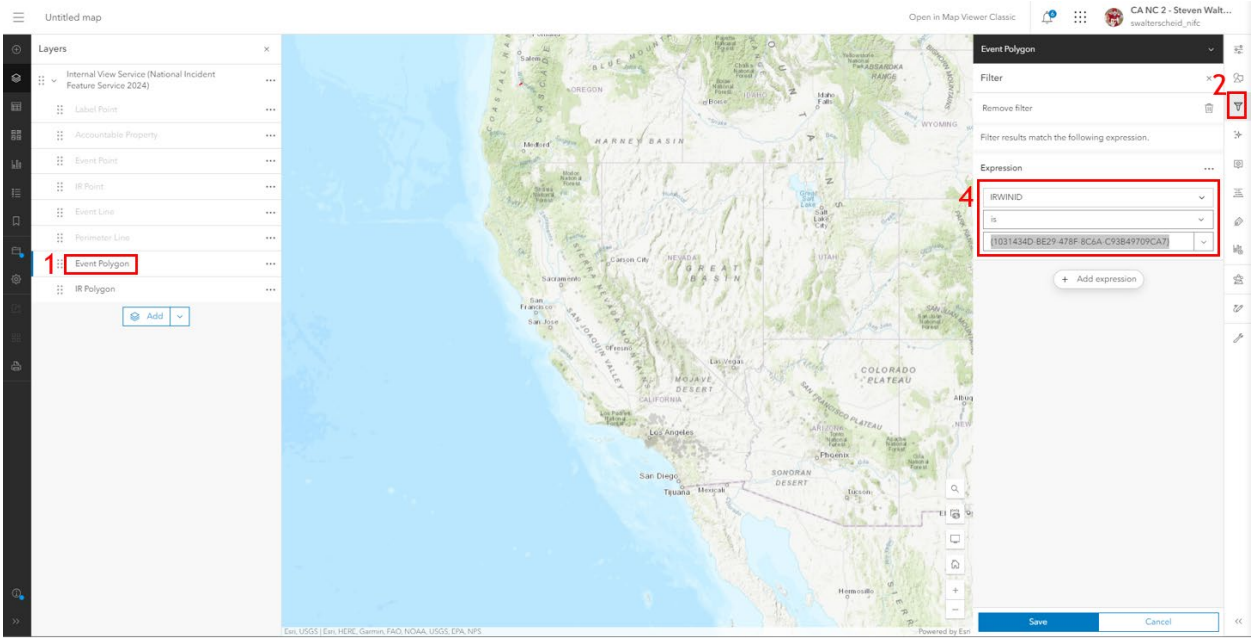
- [BLM Treatments for California]
- [USFS Treatments]
- [NPS Treatments]
- [CALFIRE Treatments]
- [Catch All] (Federal only, but might not be as updated as the individual agencies)

Best Practices

- [D] Source data layers, not webmaps
  - Allows GISS' to 'Save as' when an IMT leaves a fire, and the user won't lose the tweaks made throughout the assignment.
  - It is best to change the owner of the data/maps/apps/the AGOL Group with the incoming team, or at the end of a fire, to the home unit.
- [W] 2023 view layer is [here]
  - This will allow non GISS' to see webmaps. Users will need a NIFC account, but just view permissions. If the user uses GISS edit, or mobile edit, not all NIFC personnel can view.
  - This can be used for all data incident-related data (query to the fire):
    - 1) Select the layer to query (this should be done on each individual layer)
    - 2) Pick the filter option under the properties
    - 3) Select the *Add expression* button
    - 4) Put in the expression using the IRWIN ID (fires can have the same name, so do not use fire name)





Dashboards

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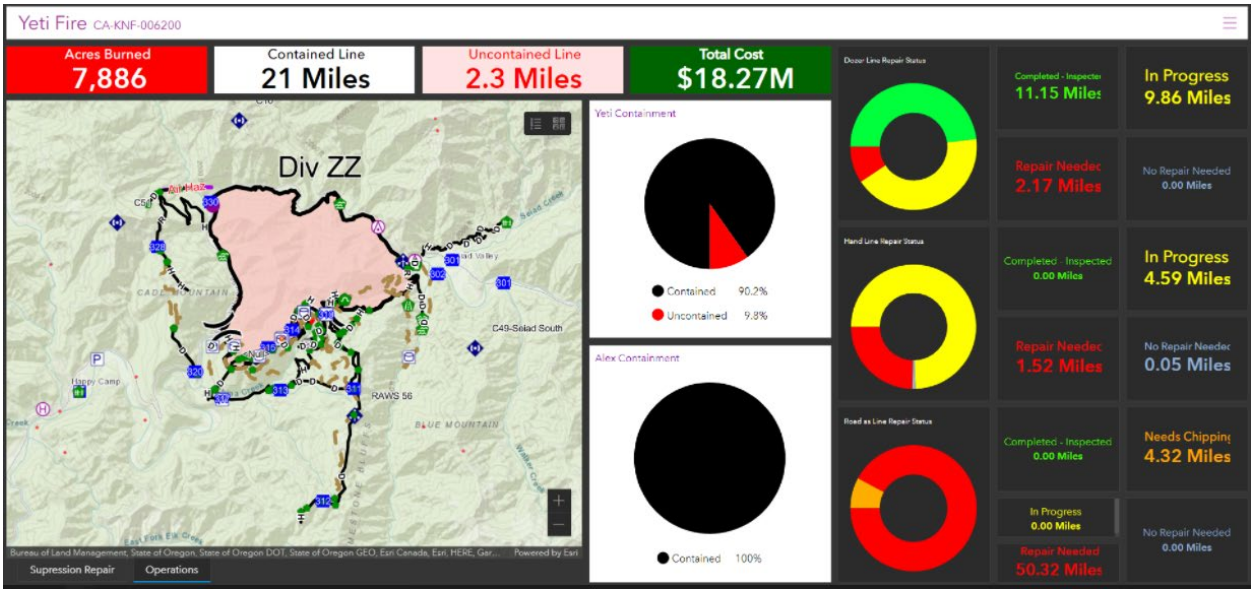
Template download: here (Login with NIFC AGOL credentials)

Ops (Audience is Command & General Staff) also can be used at EOC/DOC



- Fire Name & Incident Number, clear & concise Title
- Perimeter map (Ops template copied from NIFC)
    - Recommended map layers
        - NIFC View Service for data like points and lines. (this data changes every calendar year)
        - WFIGS (these are filtered to publicly viewable feature services)
        - NIFS Public Perimeters (this link will work every year)
        - Heat Detections
            - IR Data (MODIS, VIIRS) (publicly available)
            - FIRIS
                - This is currently downloadable only using an EGP account.
- Total Acres
- Contained and Uncontained line (miles)
    - Percentage Gauge
- 209 Info (must manually be put in to be up to date), but can use the WFIGS feature service from above
    - Personnel #
    - Cost
    - Start Date, Cause
    - Percent Contained
    - Injuries
    - Weather
- Fire containment figures
    - Handline total miles
    - Dozerline total miles

- Road as completed line total miles

Frequently Asked Questions

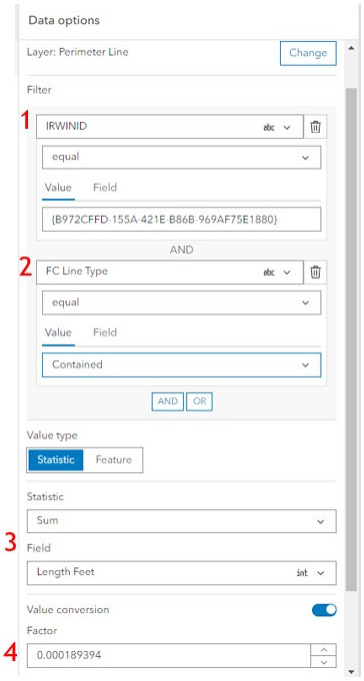
- Q: How to handle refresh rates for cooperators?
  - Currently the only way to view new updates is to hit manually refresh or use this workflow the webpage (it's tedious...).
- Q: Is it better to create one dashboard for multiple sections/ user-types? Or should multiple focused dashboards be created? (E.g. Ops, Plans, Supp Repair)
  - This will be highly incident and Plans staff dependent. Arguments can be made for both options, but scope of desired products and screen-real estate are priorities.
- Q: Should I set the data-source dashboard graphs and charts to the webmap or stand-alone layer?
  - You can do either but standalone keeps you from having to redo your query/pathing each time you add a new webmap to the main frame.
  -

Suppression Repair

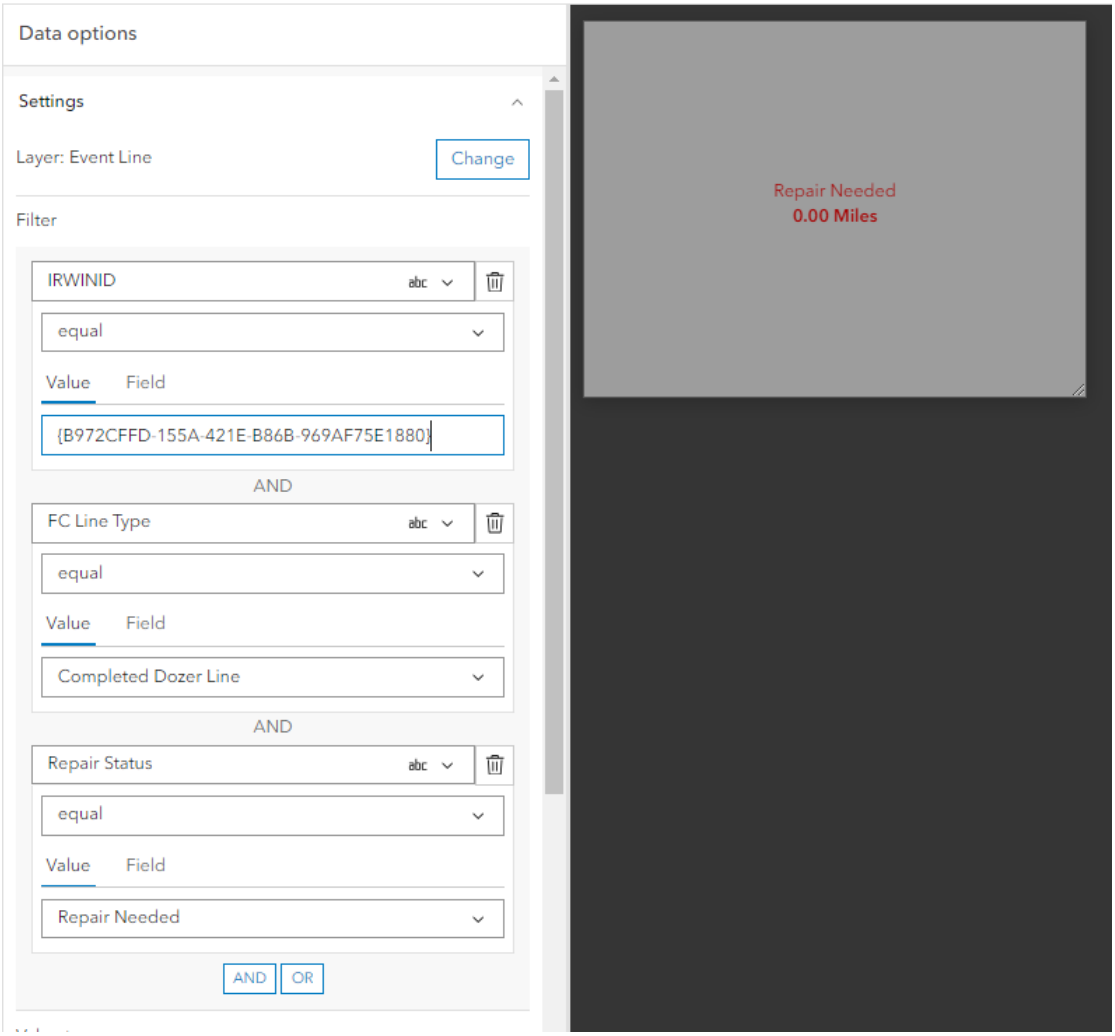
Best Practices

Data Displays

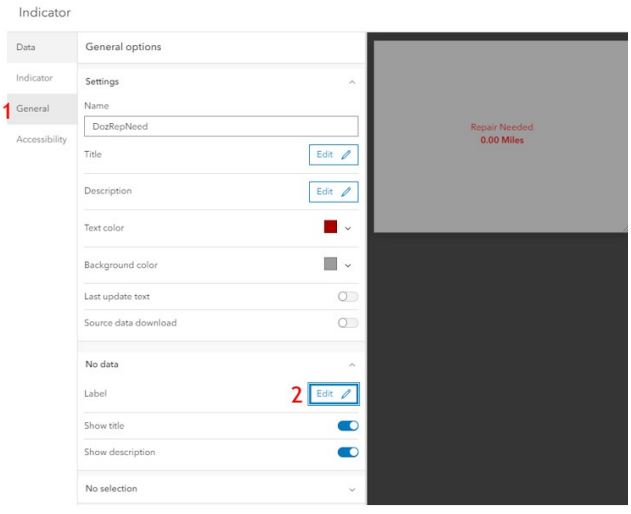
- Dozerline, road as line, handline
  - Graphs with percentages complete and miles (NIFS uses a *feet* field)
    - To convert to miles - must use 'Factor Conversion' {.00089393939 = 1/5280}

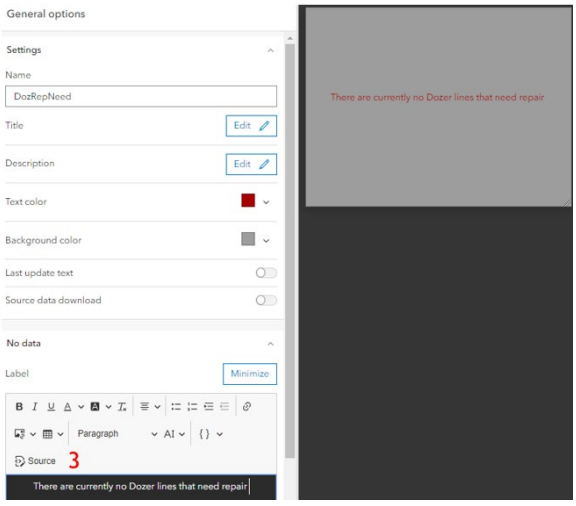


- Point Repair Status, Line Repair Status
  - No repair, inspected, repair needed, in progress
  - Separated by feature class line type



- It will say Null if there is no data, users can set default 'no data text' here:





- *Optional Fields*
    - Accountable Property (Locations and numbers)
        - In field, At Base, Unknown
    - Points/Lines Completed, Points/Lines Remaining
    - Specific hazards (tree) can be created
        - Uses the feature type of event point and repair status to display, but is the same type of workflow