Federal GIS Conference 2014

February 10–11, 2014 | Washington DC

Operations Dashboard for ArcGIS

Joe Bayles

Agenda

Overview of Operations Dashboard

Building a Dashboard

Using a Dashboard

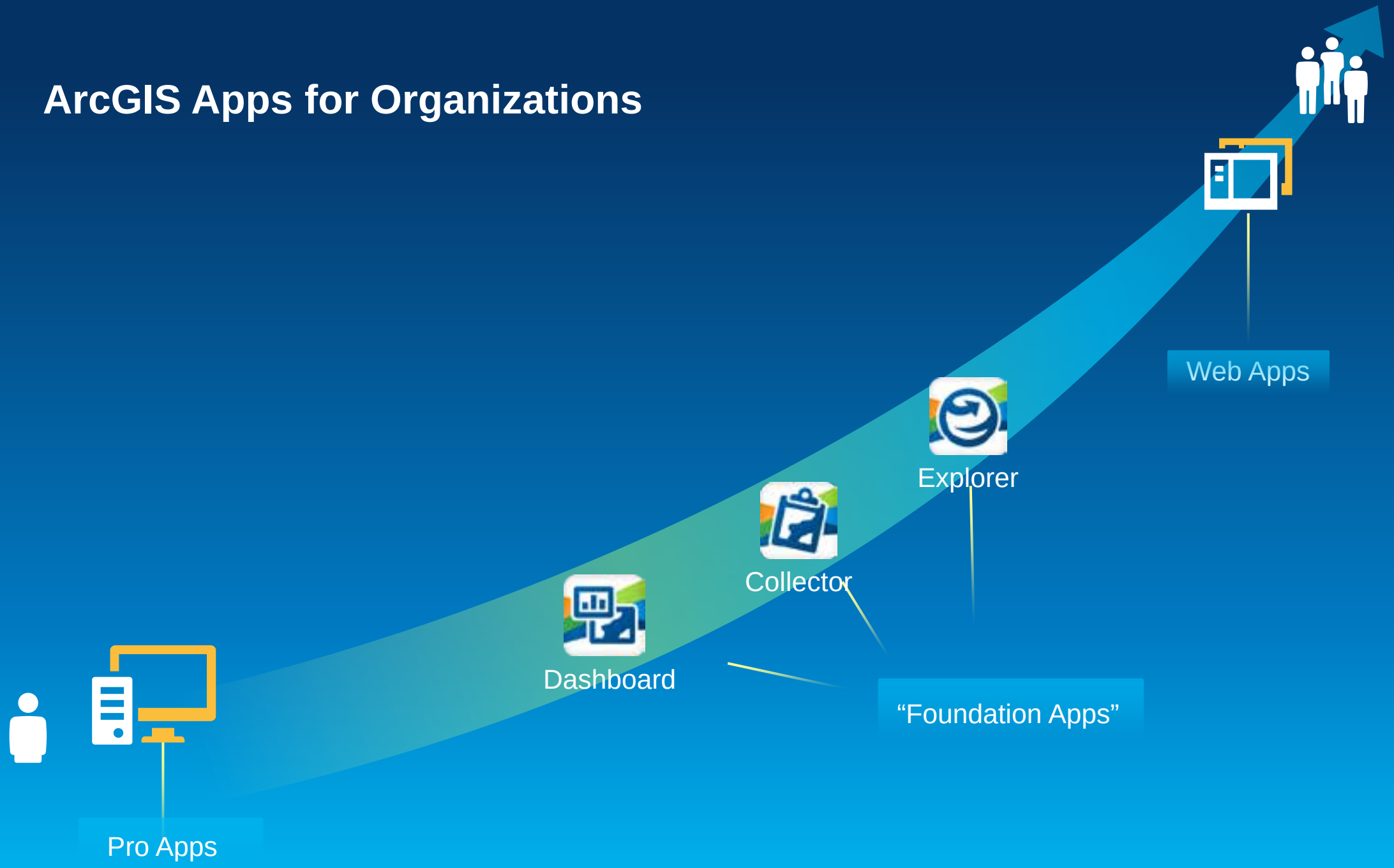
What's Next for Operations Dashboard

Questions

Esri Strategy toward mobility

- **Extend the reach of Web GIS**
- **Platform agnostic**
- **Native apps/Web apps**
- **Developer Toolkits for partners**

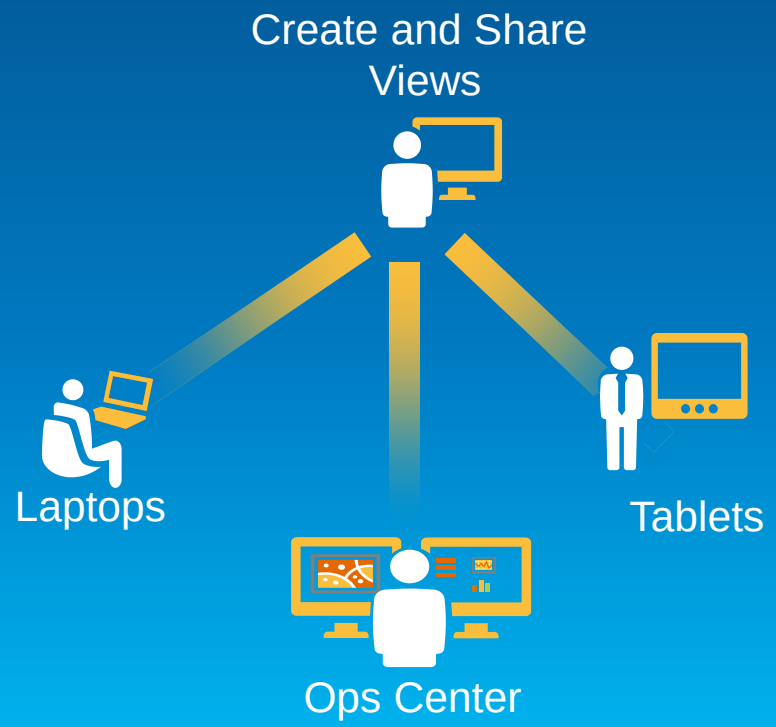
ArcGIS Apps for Organizations



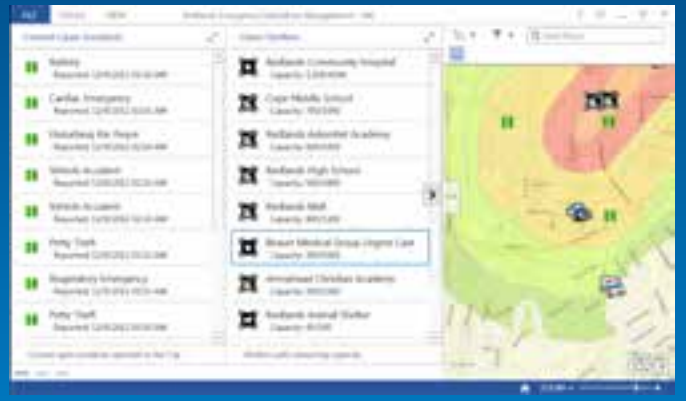
Operations Dashboard for ArcGIS

- Configurable view of the data and resources you manage
  - Geographic view
  - Statistical view
- Designed to work with dynamic/static data
- Designed for specific types of use:
  - Unattended use
  - Attended use
  - Video walls
  - Touch screen tablets

- Customer adoption
  - Monitor planned and unplanned events
  - Summary view of capital projects



Operations Dashboard for ArcGIS



- Monitor, track, and respond to operations and events
- Connect to Dynamic or Static data
- Manage multiple views
- Laptops and touch screen devices
- Available with:
  - ArcGIS Online Subscriptions
  - Portal for ArcGIS 10.2
  - http://www.esri.com/software/arcgis/arcgisonline/apps/operations-dashboard
- Extensible using:
  - ArcGIS Runtime SDK for Windows Presentation Format (WPF)

Creating and Using Operations Views

Components

- Widgets
- Map Tools
- Feature Actions
- Data Sources

Role Based

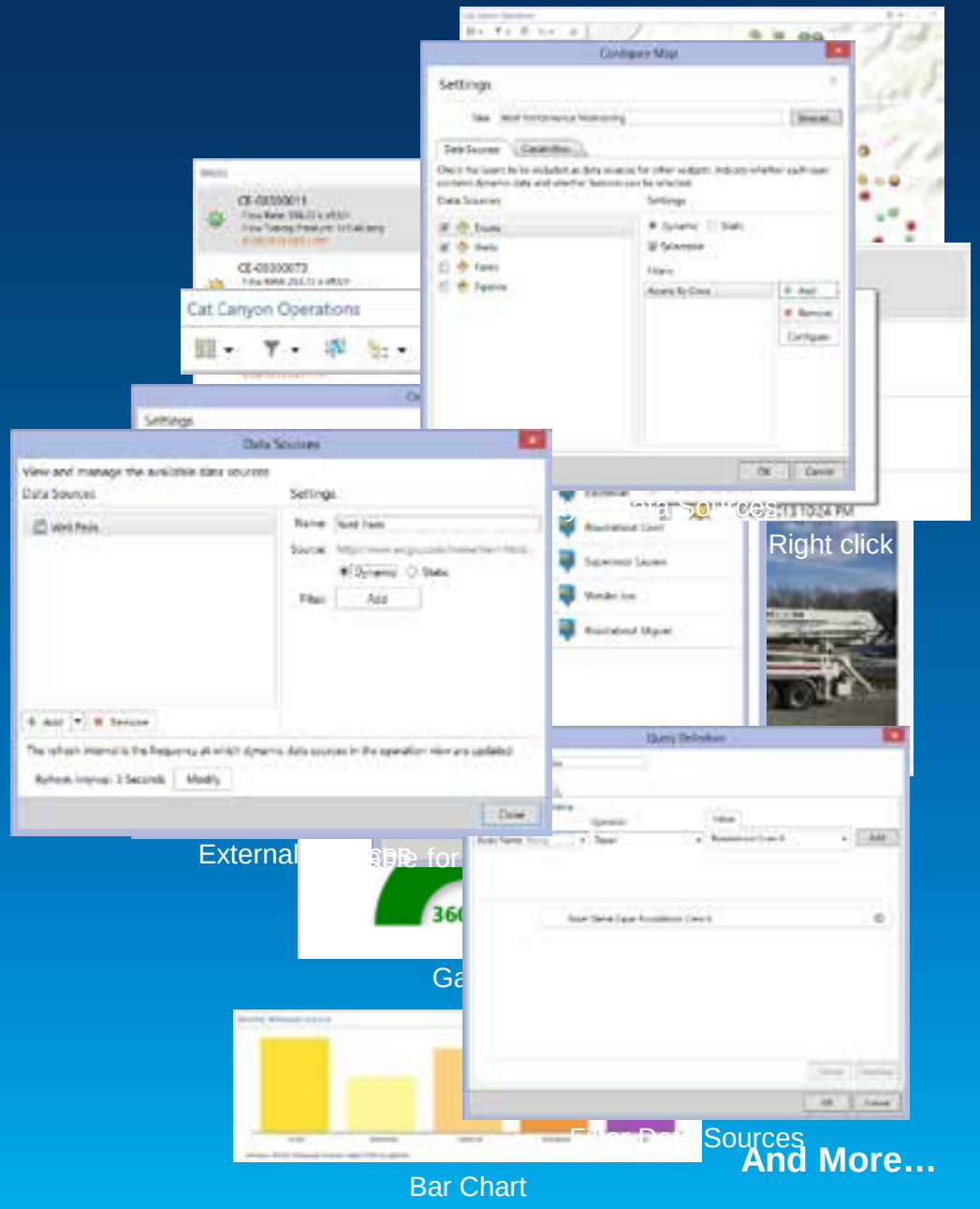
- Widgets are dynamic, interactive
- Maps provide spatial context

Two Types

- Single Monitor
- Multiple Monitor

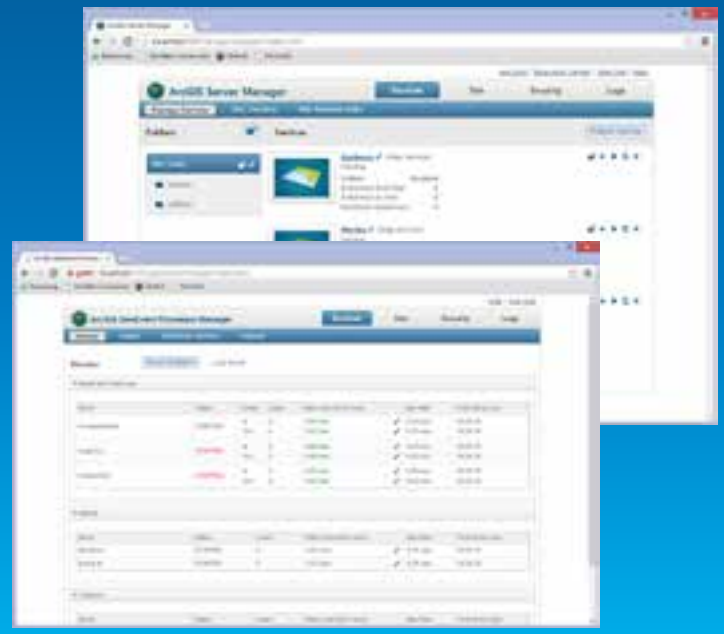
Operation Views

- 2 types of views:
  - Single Monitor
  - Multiple Monitor
- View contains:
  - Widgets
  - Map Tools
  - Feature Actions
  - Data Sources



ArcGIS Server – GeoEvent Processor Extension

- Optional Extension to ArcGIS Server (Standard and Advanced)
- Media is included with the ArcGIS for Server media
  - Stand alone setup
- Works with Portal for ArcGIS and ArcGIS Online subscriptions
- Includes an SDK:
  - Write your own connectors
  - Write your own processors



Geo Event Processing

Receive Real-Time Data

Input Connectors

Process and Analyze Data

Processors and Filters

Output features and alerts

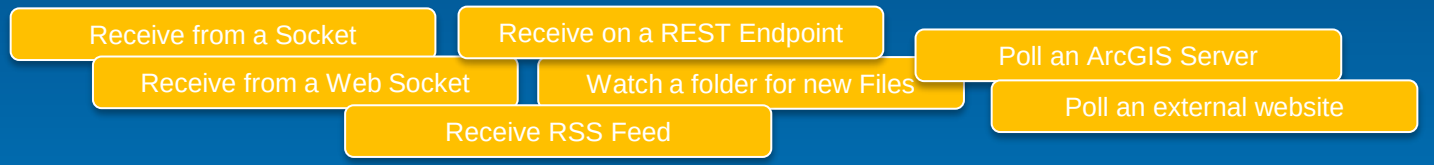
Output Connectors

Real-Time data + ArcGIS Server Geo Event Processing = Real-time ArcGIS

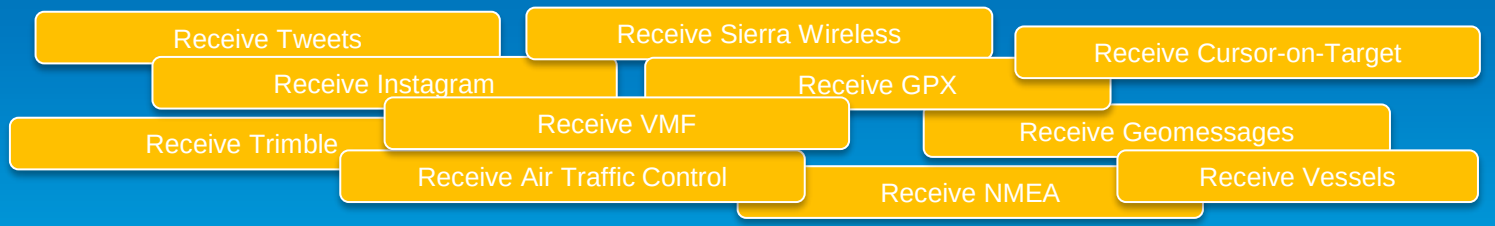
Receive Real-time data

Integrate real-time data sources using Input Connectors

- Input Connectors receive real-time data from a stream and create "**GeoEvents**"
- GeoEvent Processor includes the following default input connectors…



- Downloadable Input Connectors from Esri…

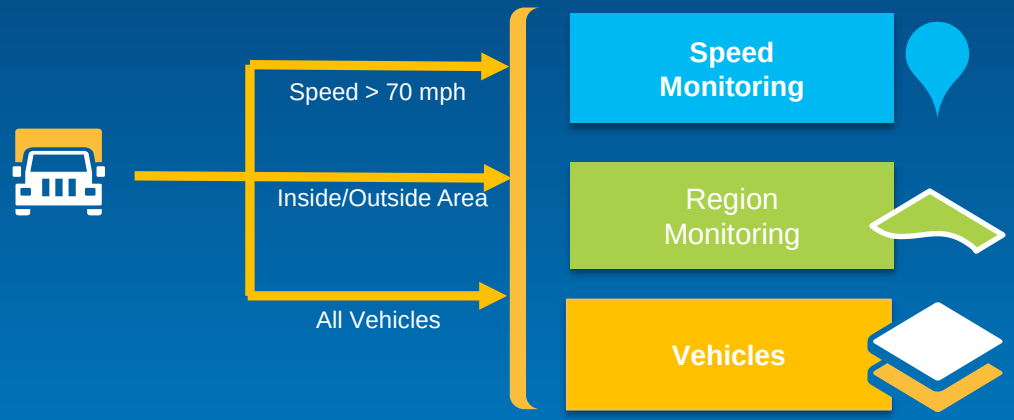


Write your own Input Connector using the GeoEvents SDK…

Processing, Filters and Analysis

Filter and process real-time data using a Processor

- Filters eliminate GeoEvents based upon attribute, spatial or logical conditions

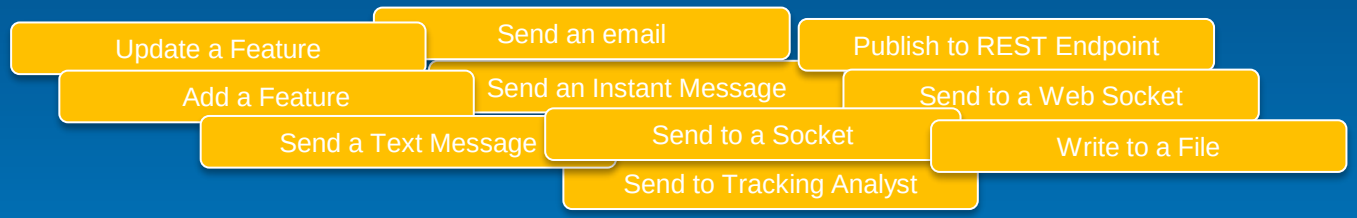


- Process GeoEvents
  - Modify an event (enrich, reduce fields)
  - Calculate new fields (field calculator, geo tagger)
  - Derive new events (field mapper, incident detector)

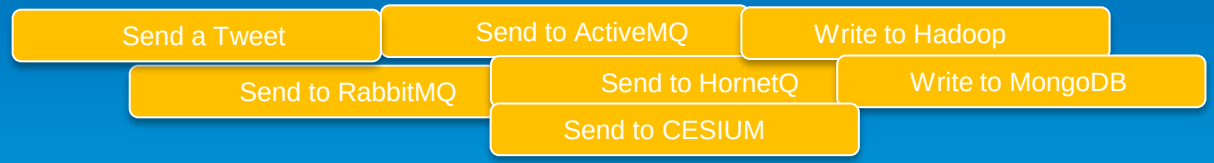
Output Features and Alerts

Operationalize real-time streams as data, services and/or events

- Output connectors operationalize GeoEvents by creating **features** and/or **alerts**
- GeoEvent Processor includes the following default output connectors…



- Downloadable Output Connectors from Esri…

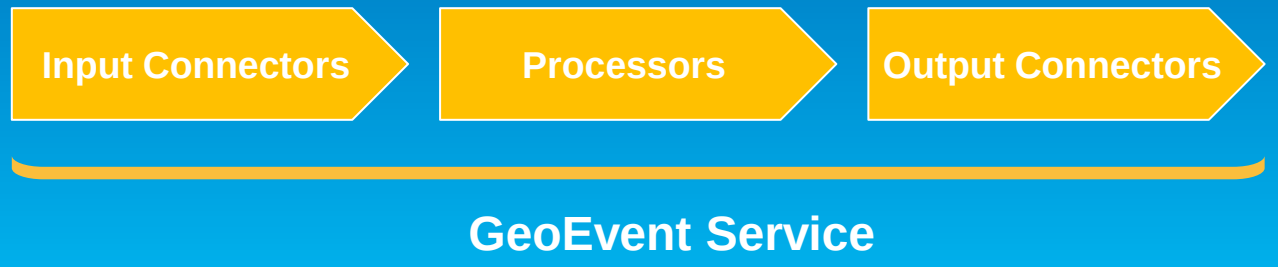


Write your own Output Connector using the GeoEvents SDK…

GeoEvent Services

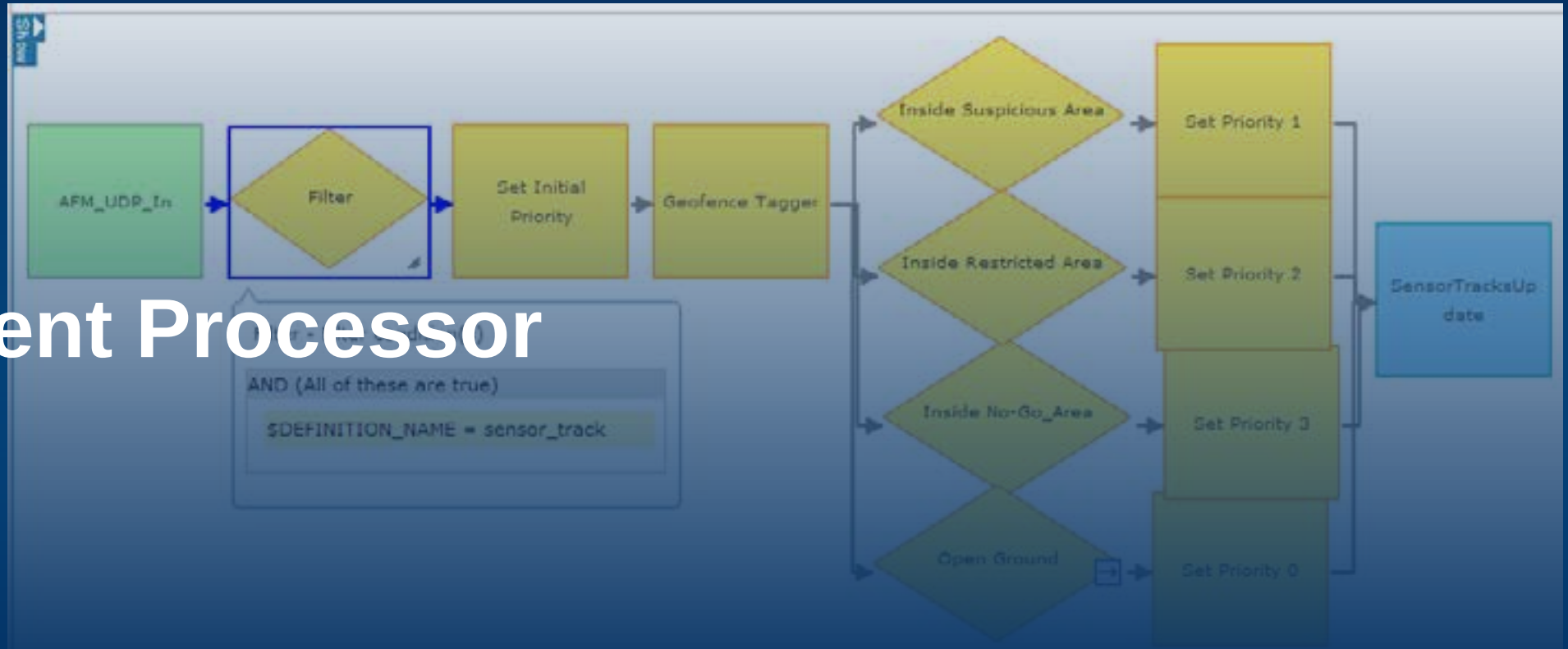
- Connect Inputs, Processors and Outputs to make features come to life
- Configure the flow of GeoEvents
  - Filtering and processing steps to perform
  - What inputs to apply them to
  - What outputs to send results to

- Use GeoEvent definitions to specify the structure of GeoEvents
  - Mapping of fields between inputs, filters, processors and outputs



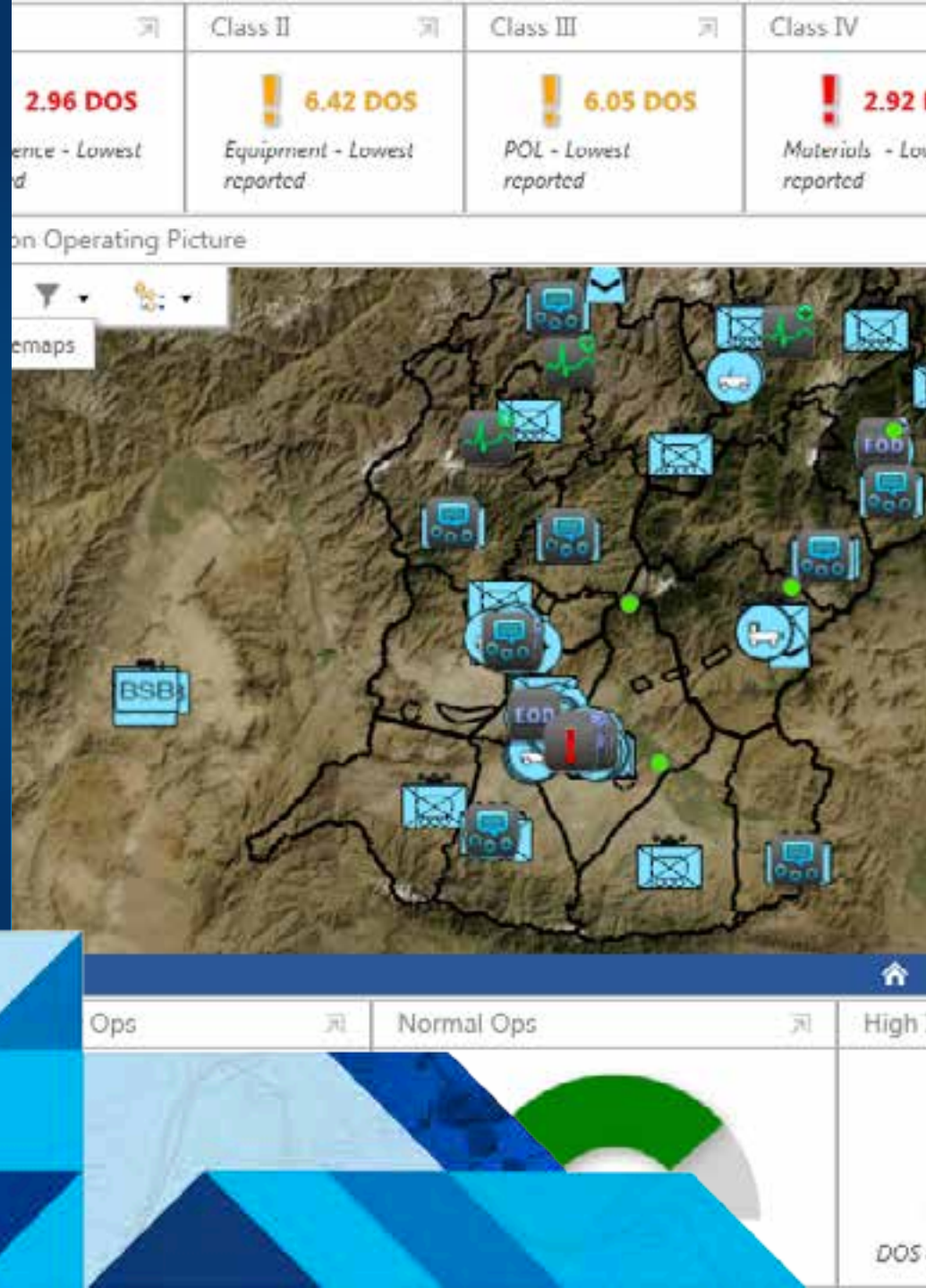
Demonstration

GeoEvent Processor

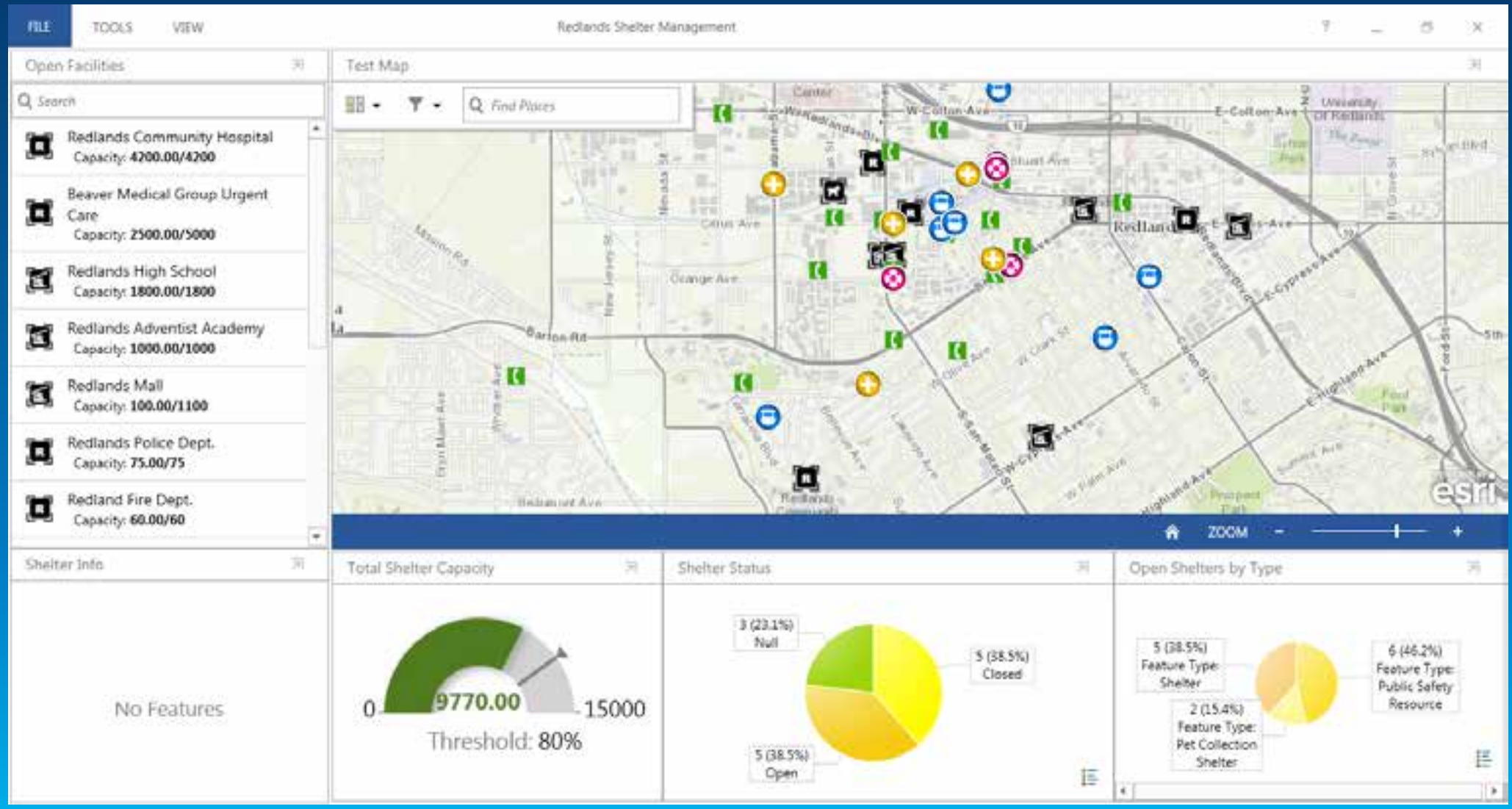


Demonstration

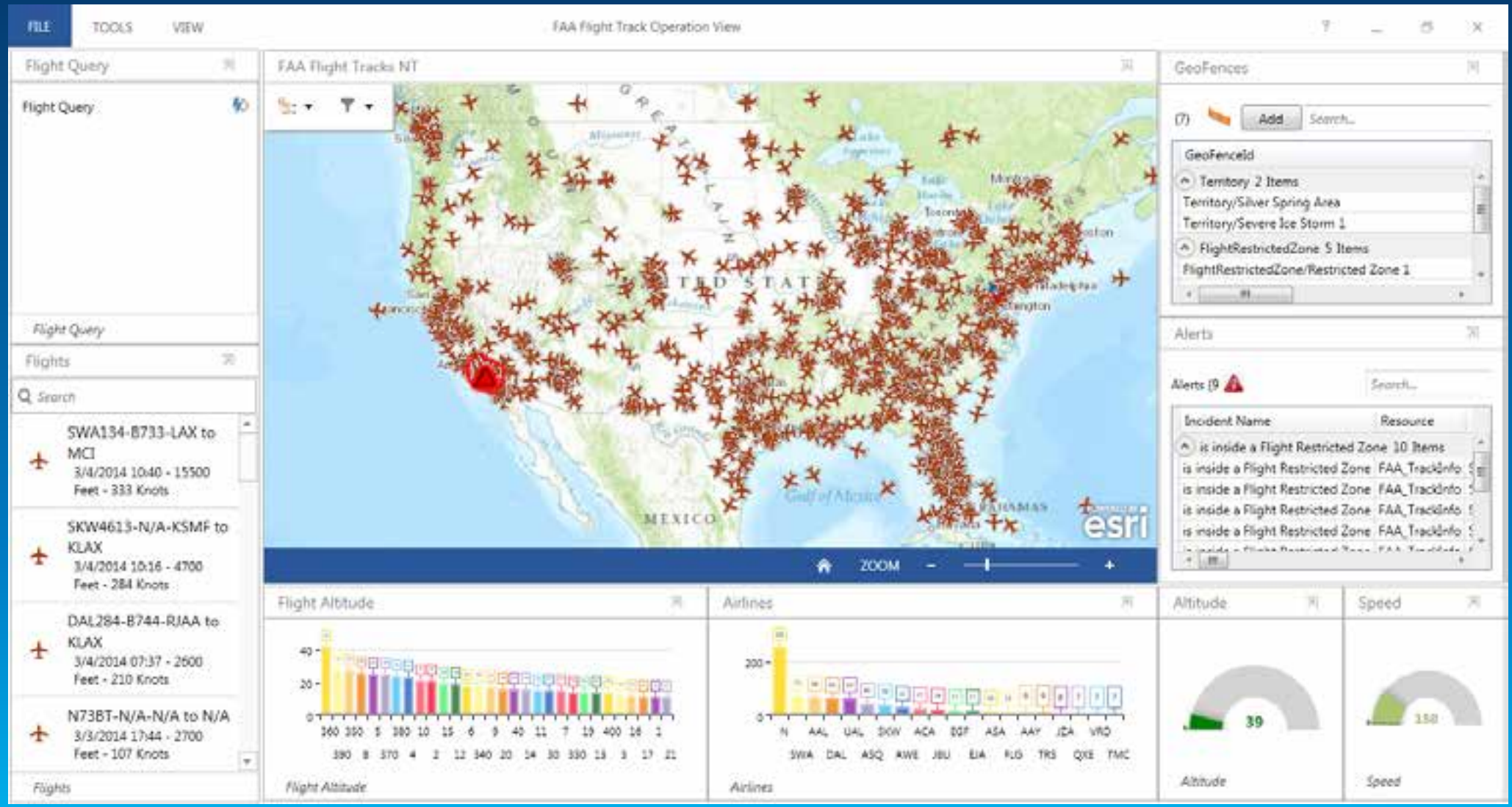
Use Cases



Shelter Management

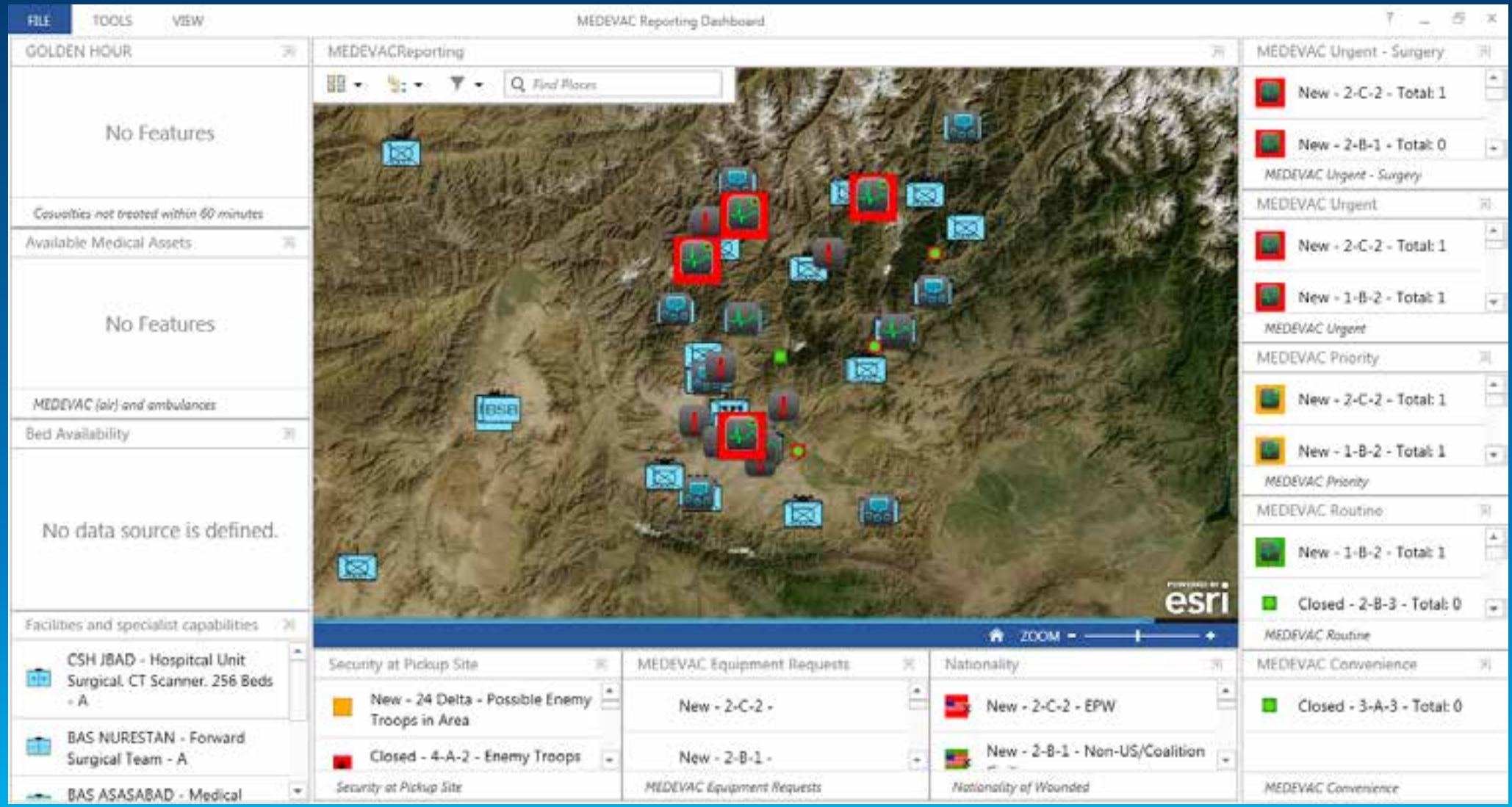


Flight Operations



Security Operations

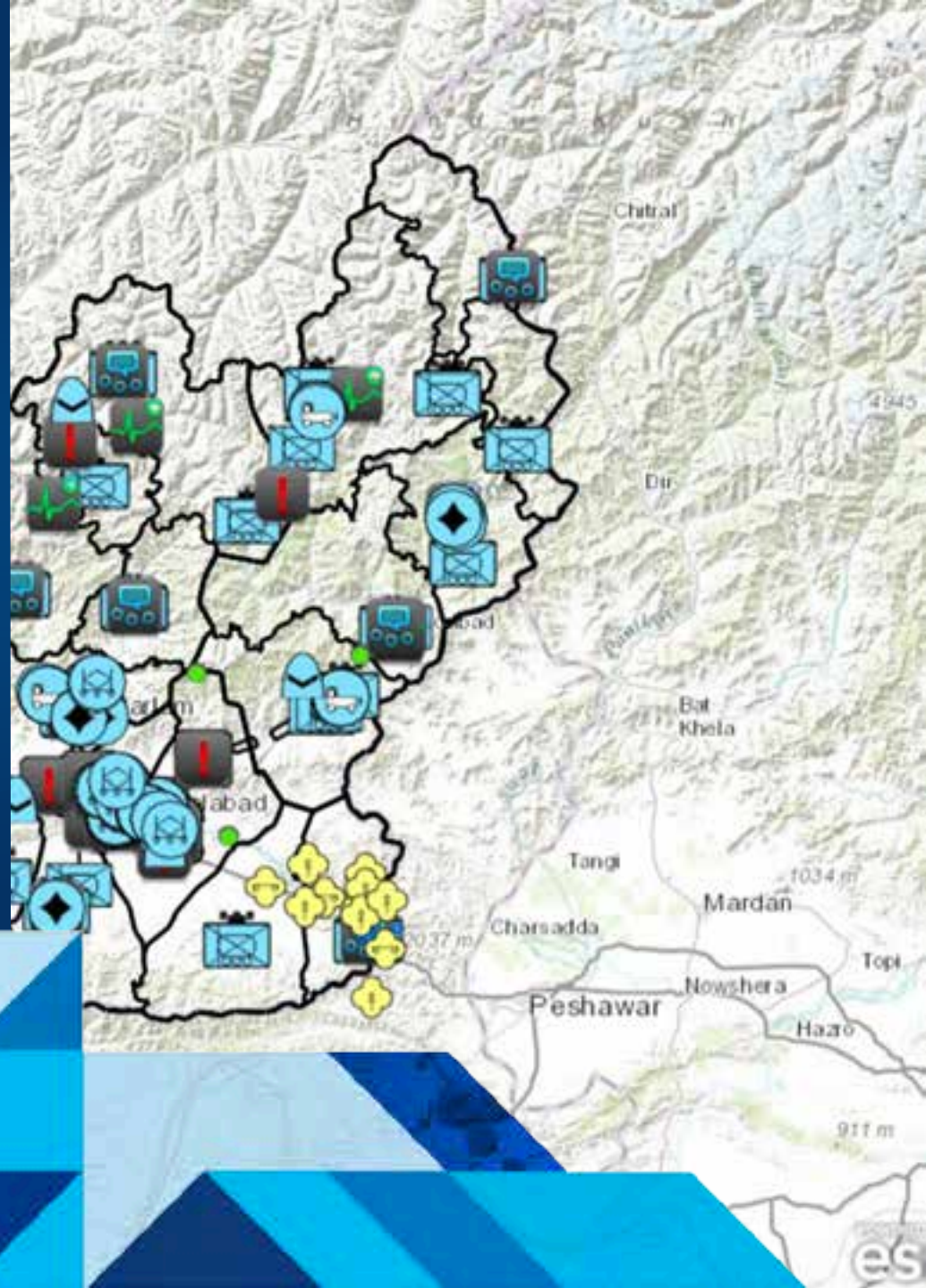
Medical Evacuation



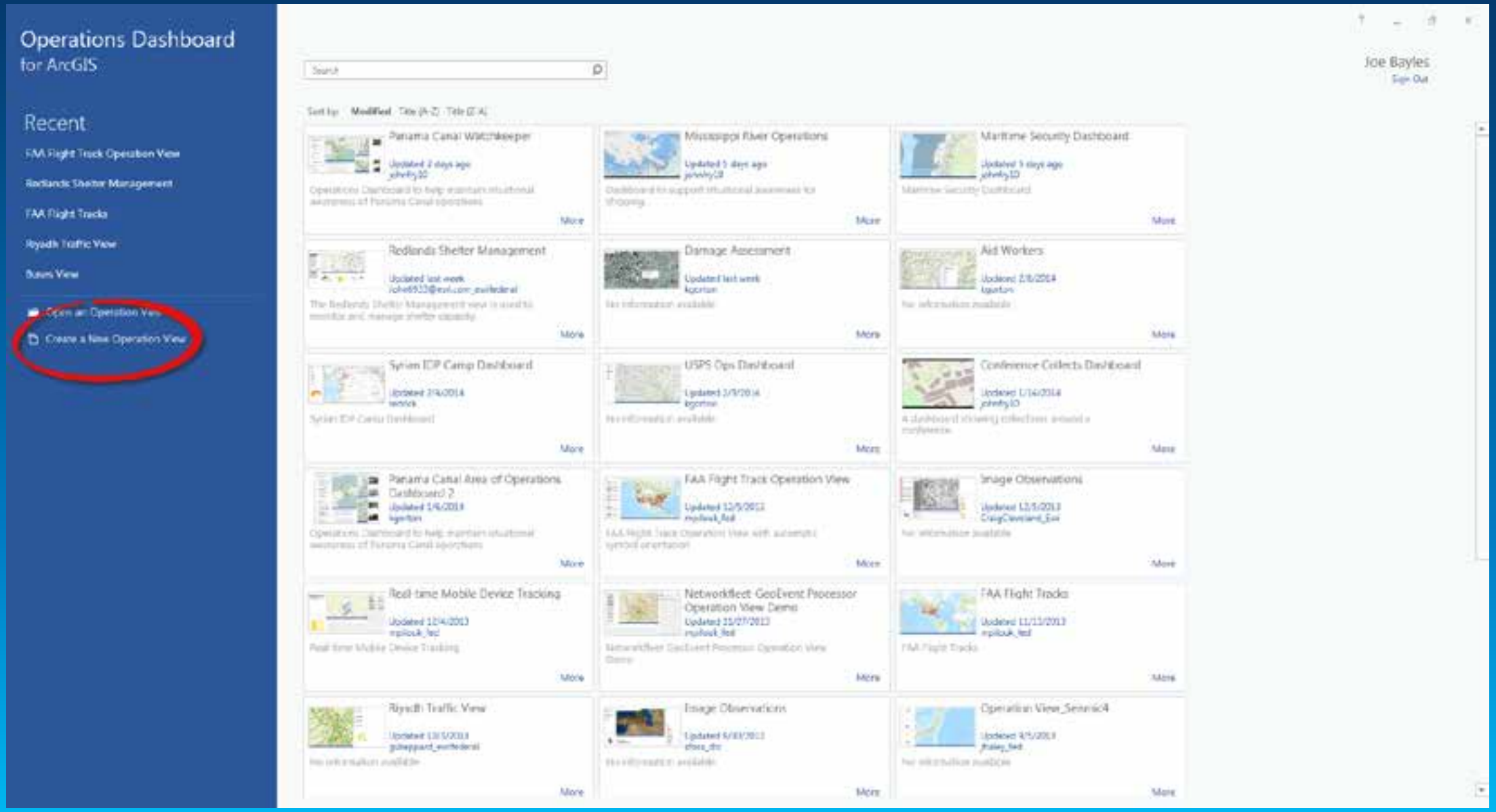
Logistics Operations

Demonstration

Creating a new Operations View

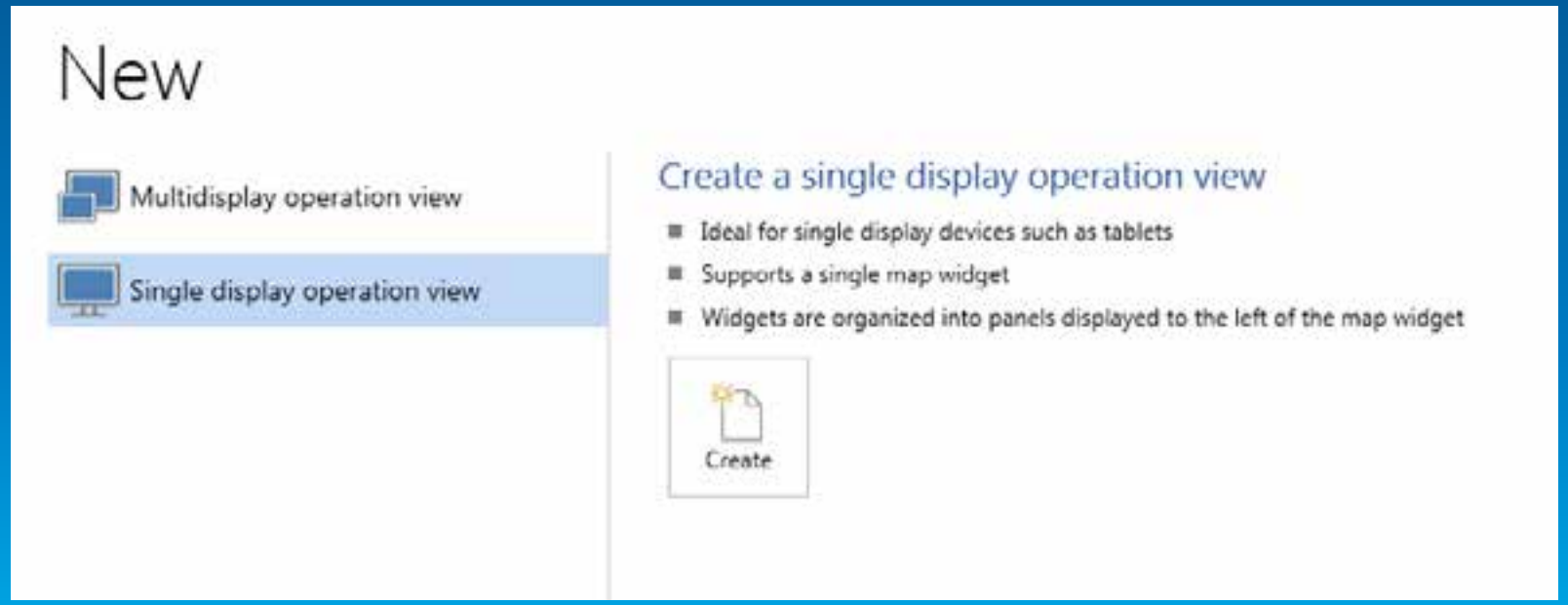


From the Home Screen



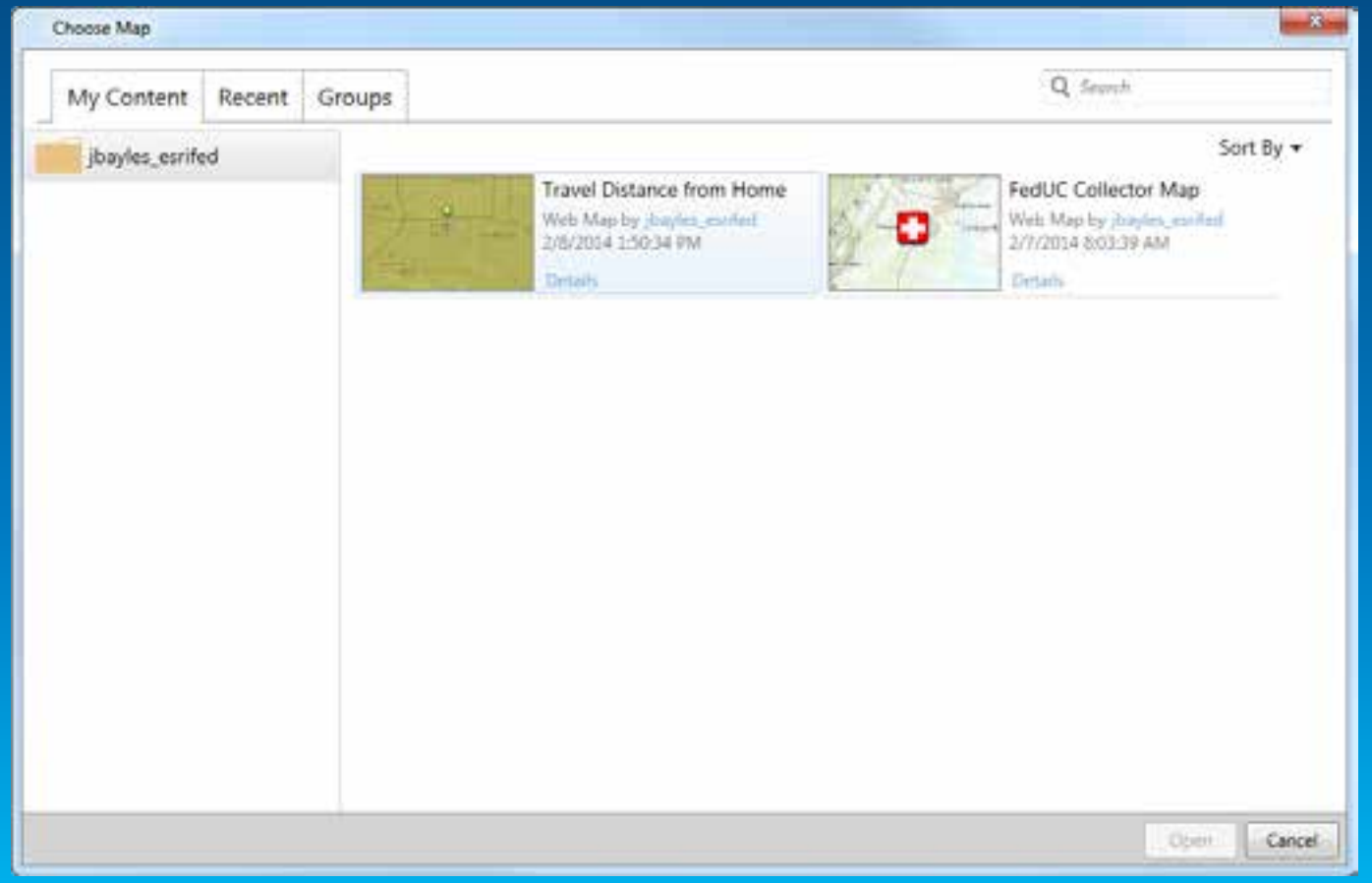
Choose your Operation View type

- **Multi-Display**
- **Single Display**
  - **Browsers require Single Display**



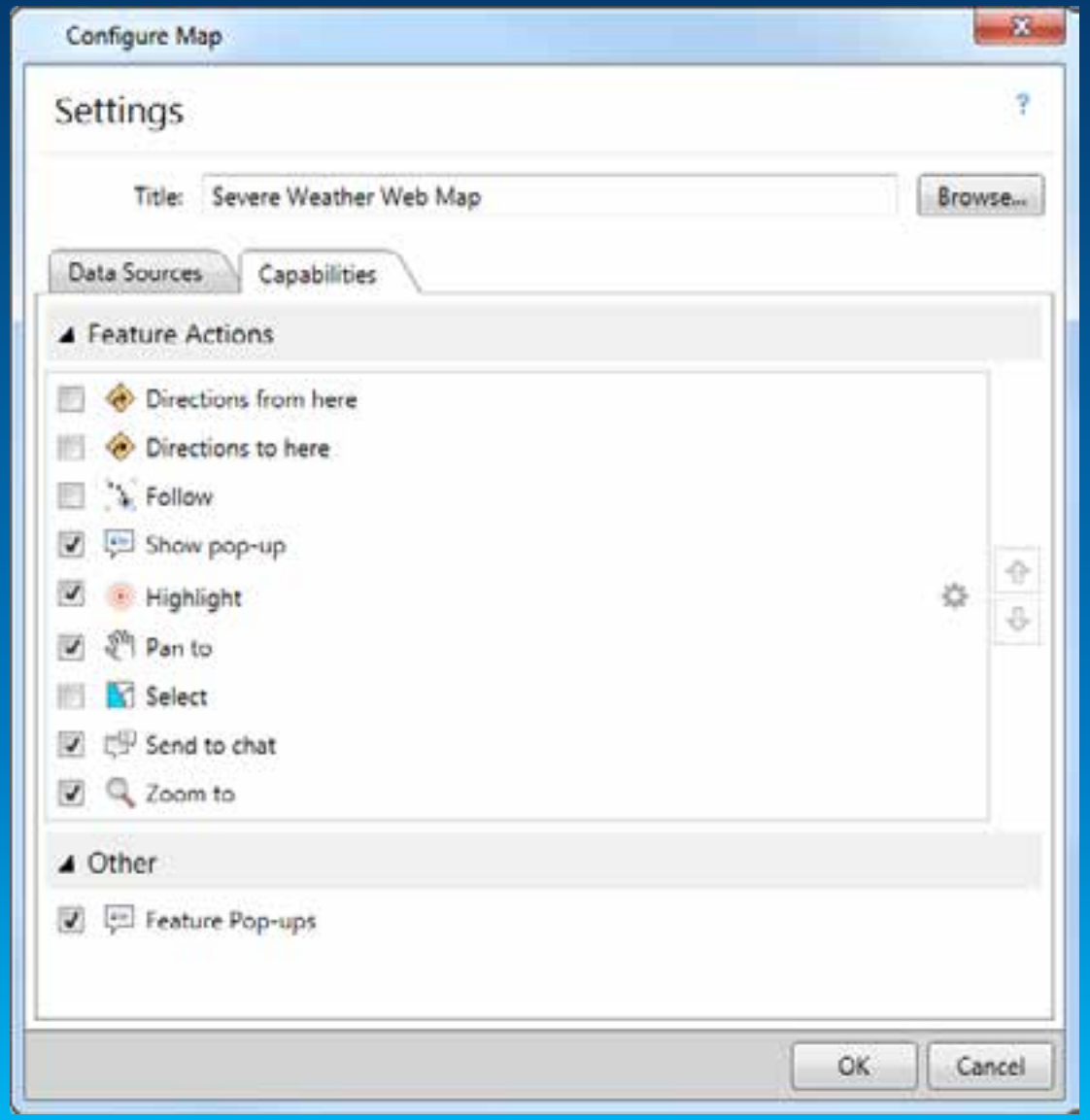
Choose your initial Web Map

- Your Web Map can be hosted anywhere on the portal
  - (as long as you have access to it)

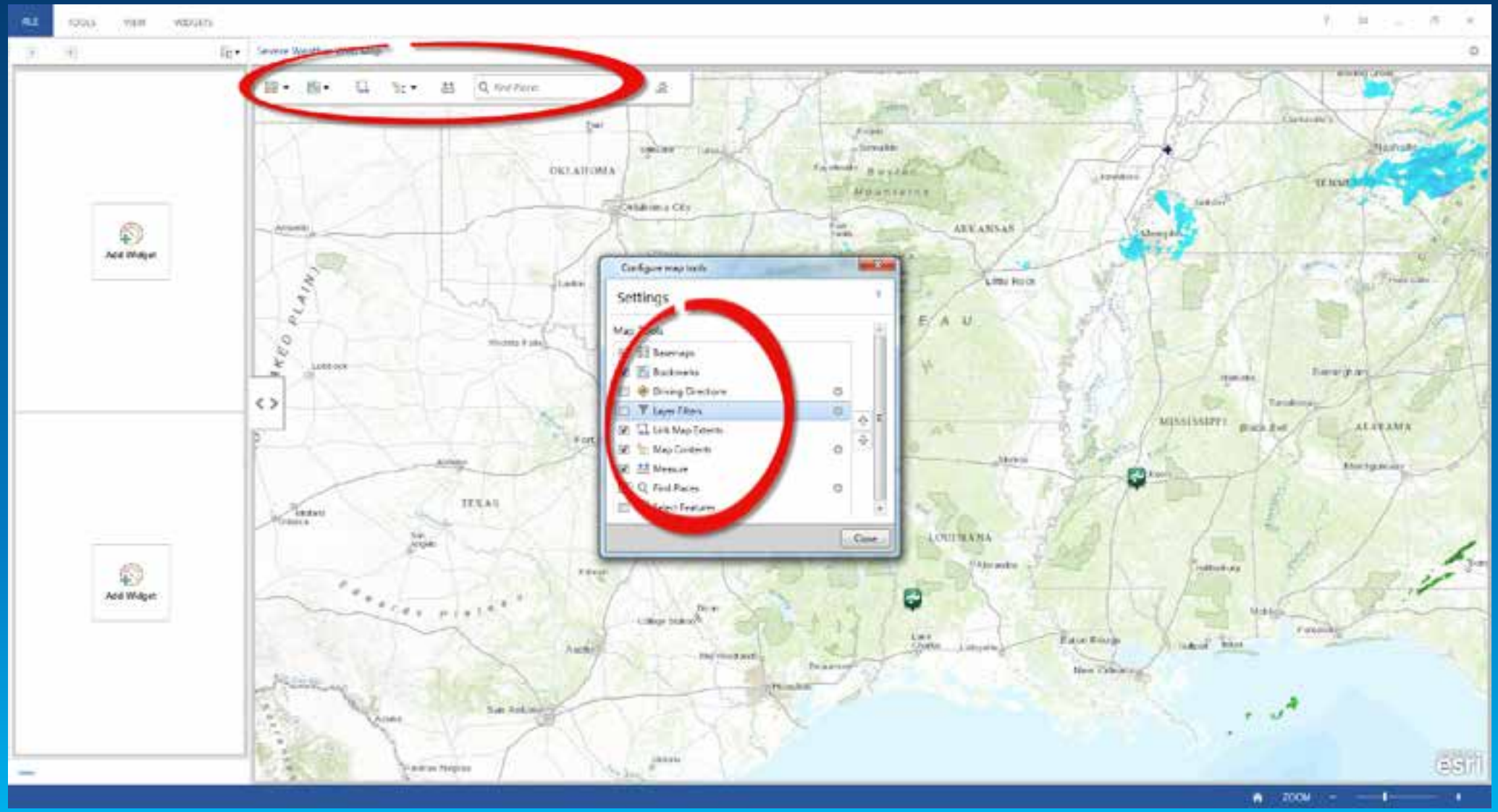


Configure your initial Web Map

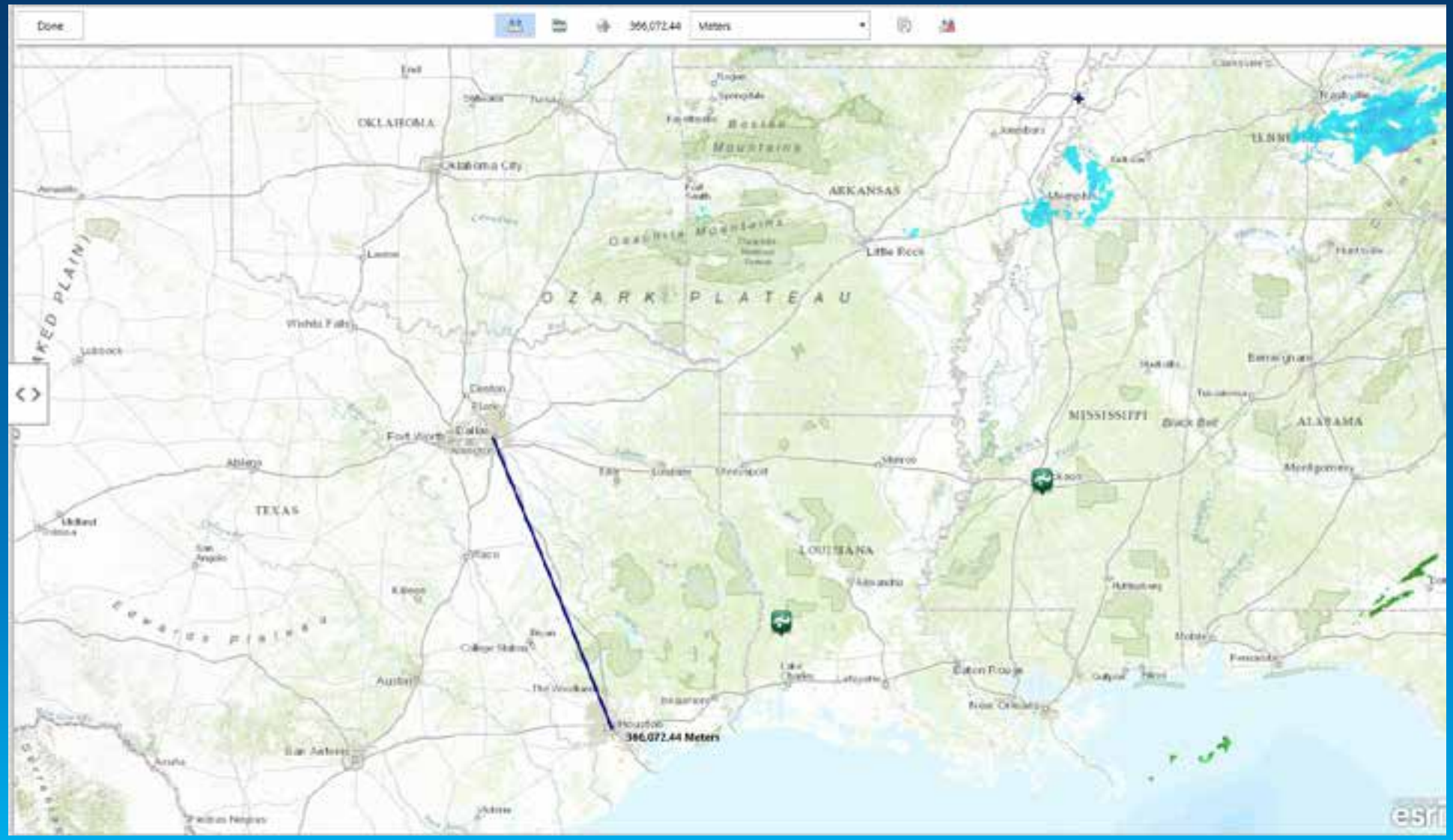
- Configure your map data sources…
- … and capabilities.



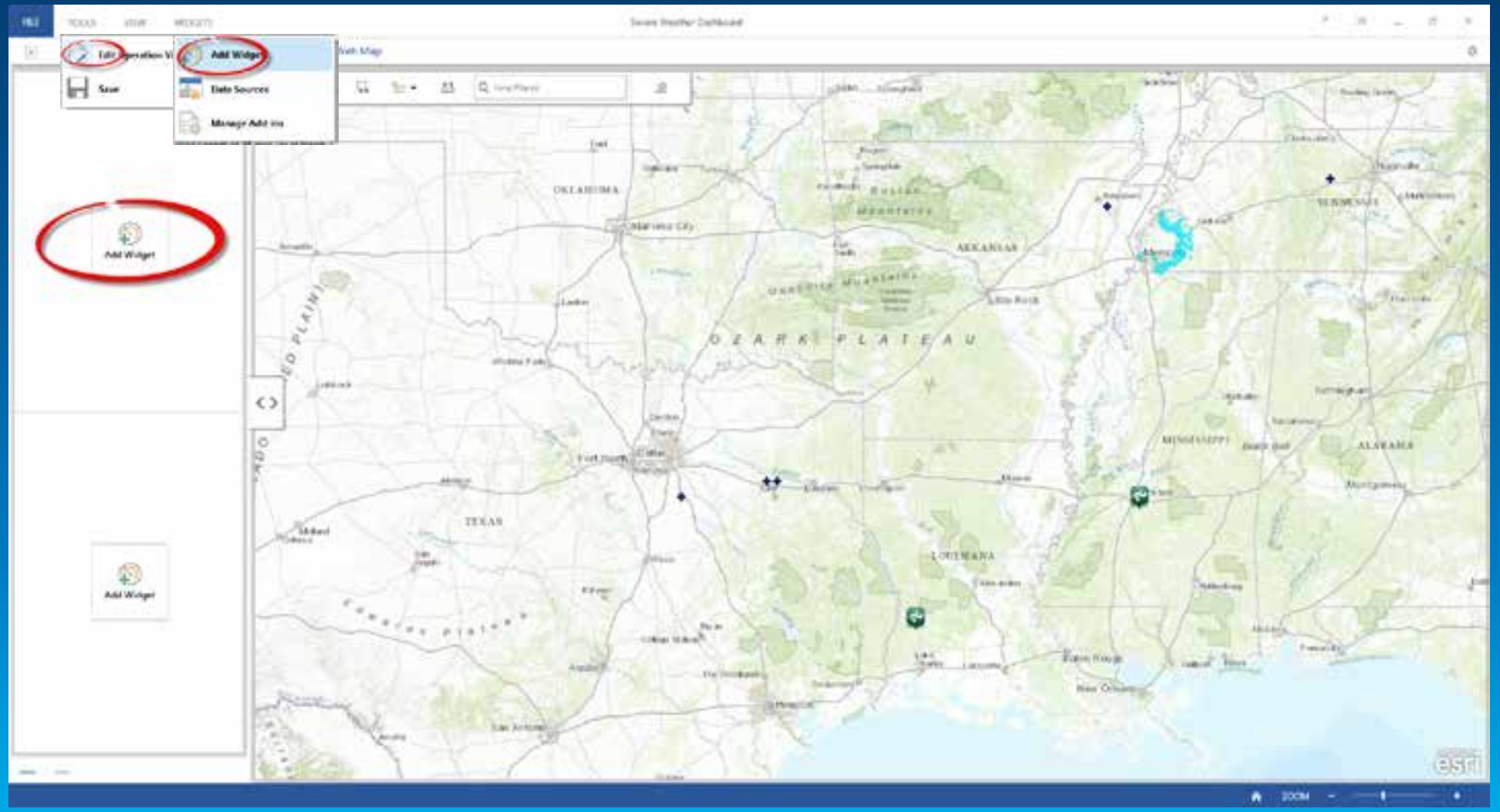
Operations View with Web Map



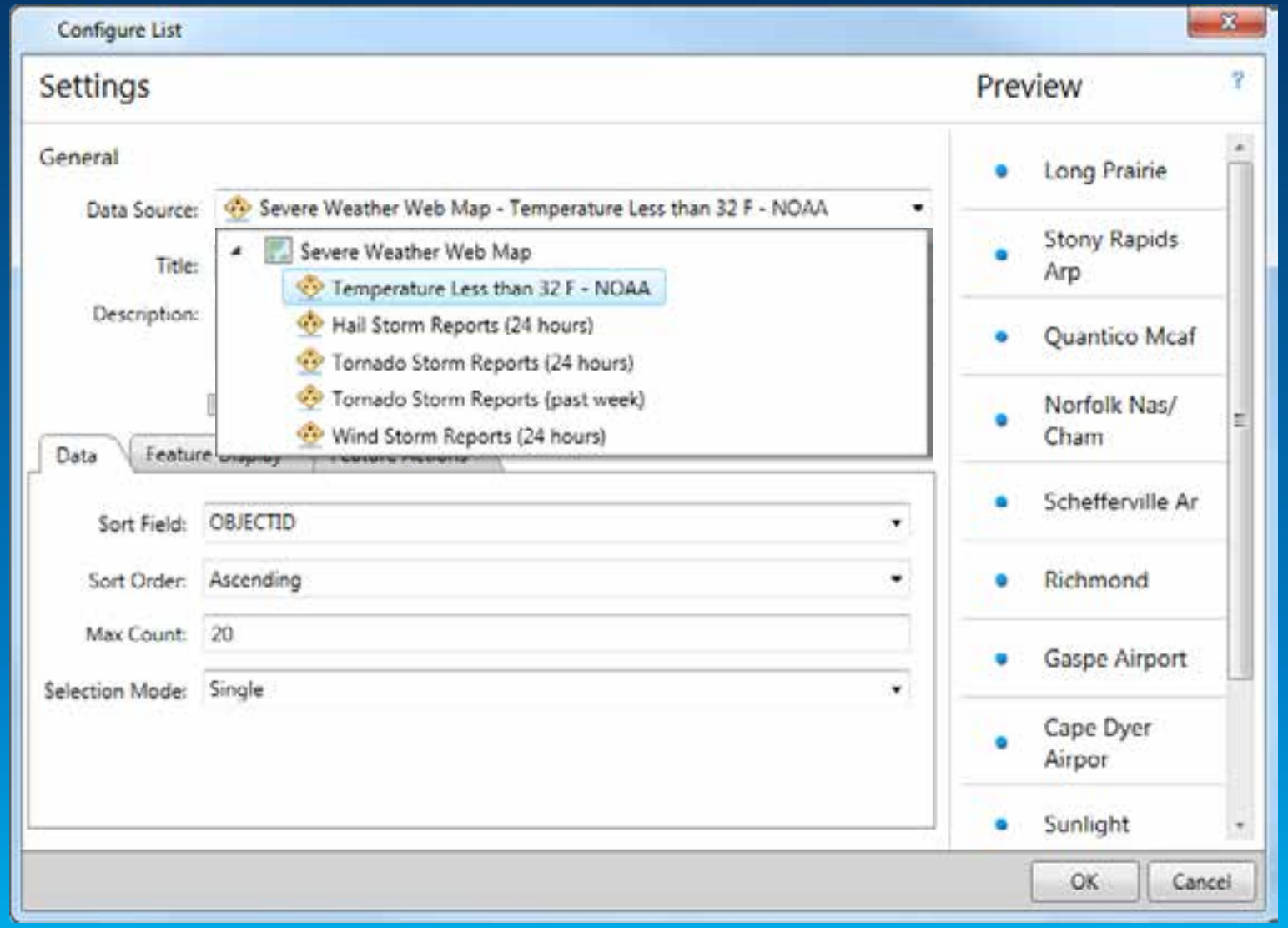
Operations View Web Map Tools



Adding Widgets



Creating a List



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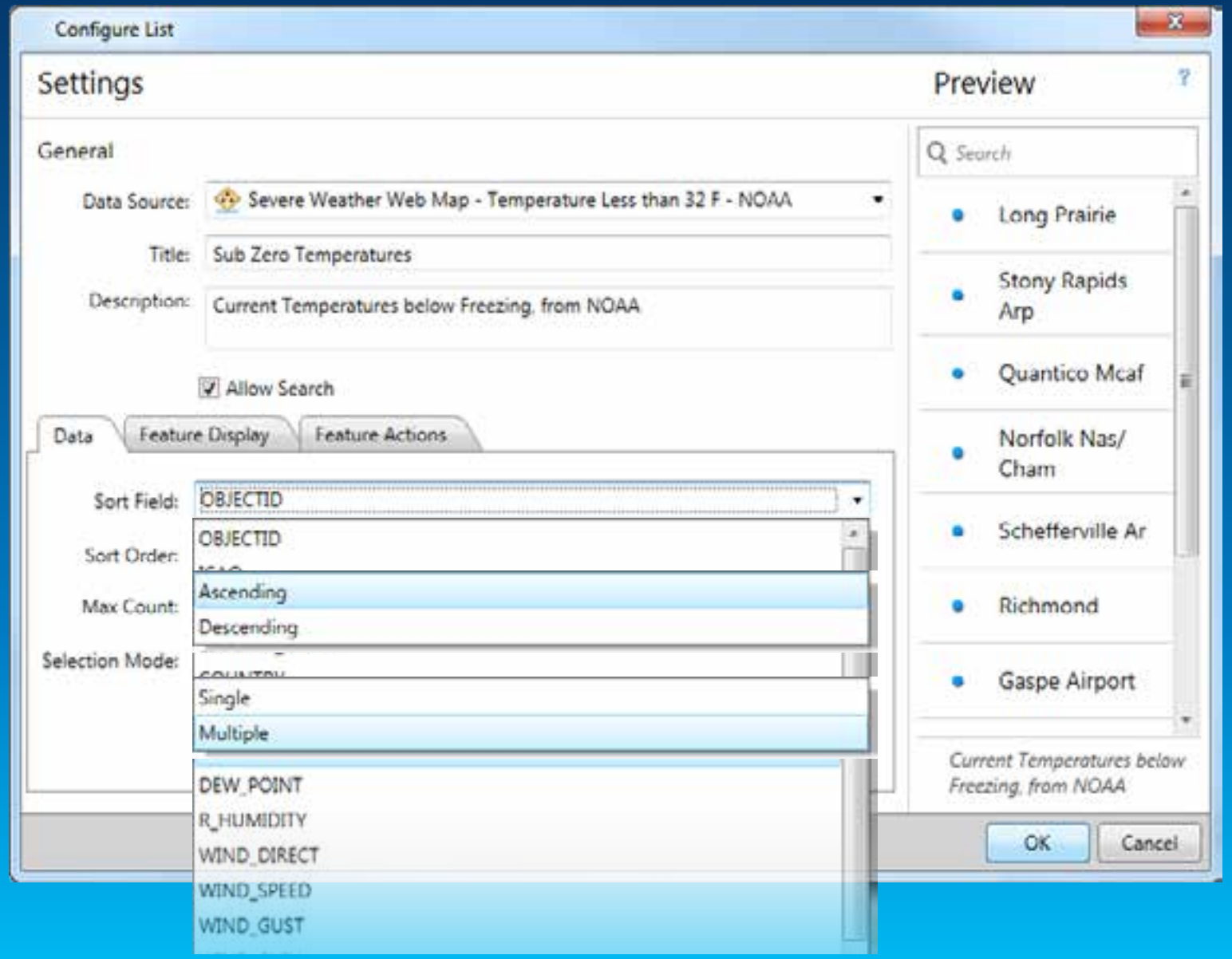
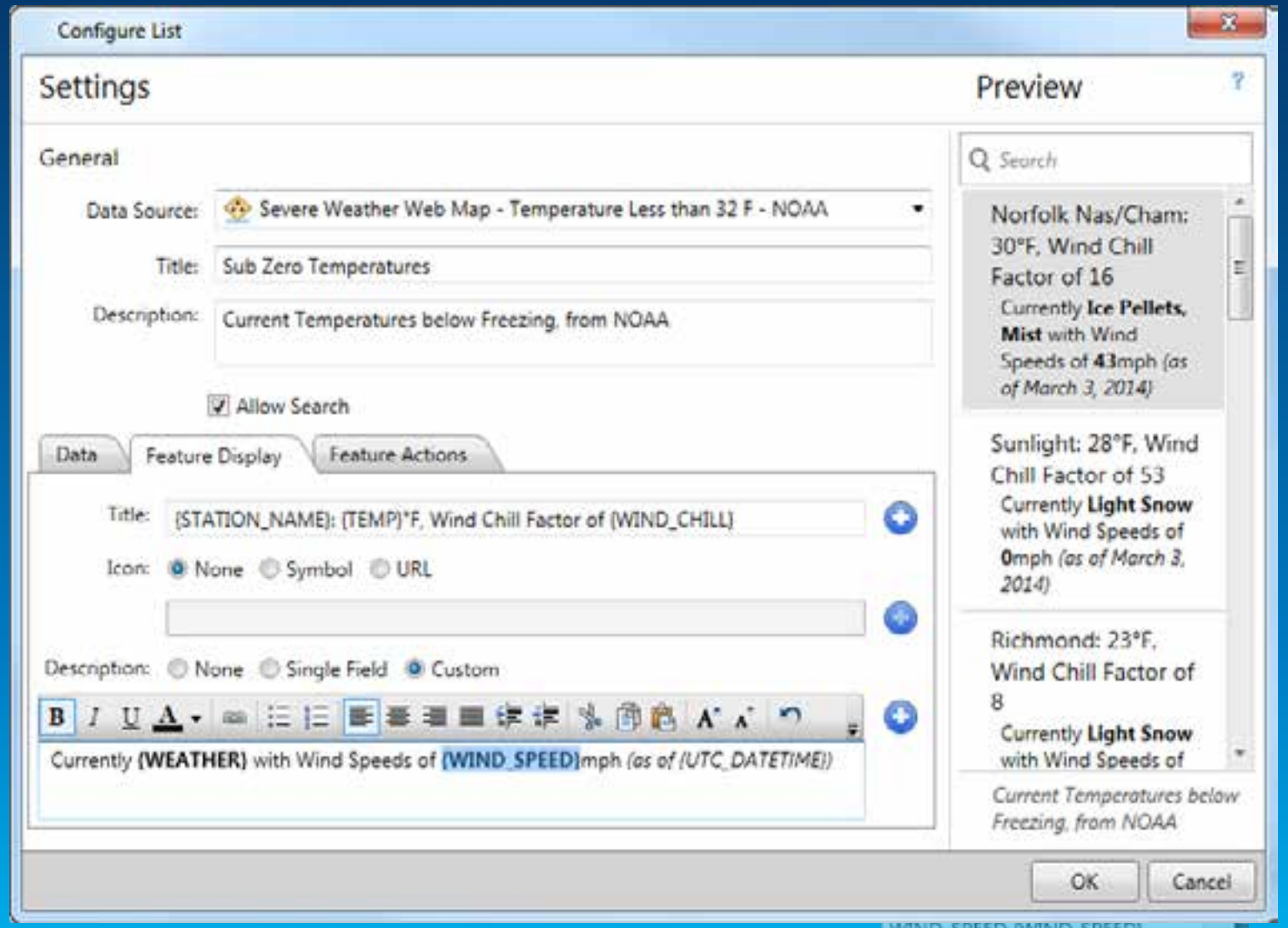
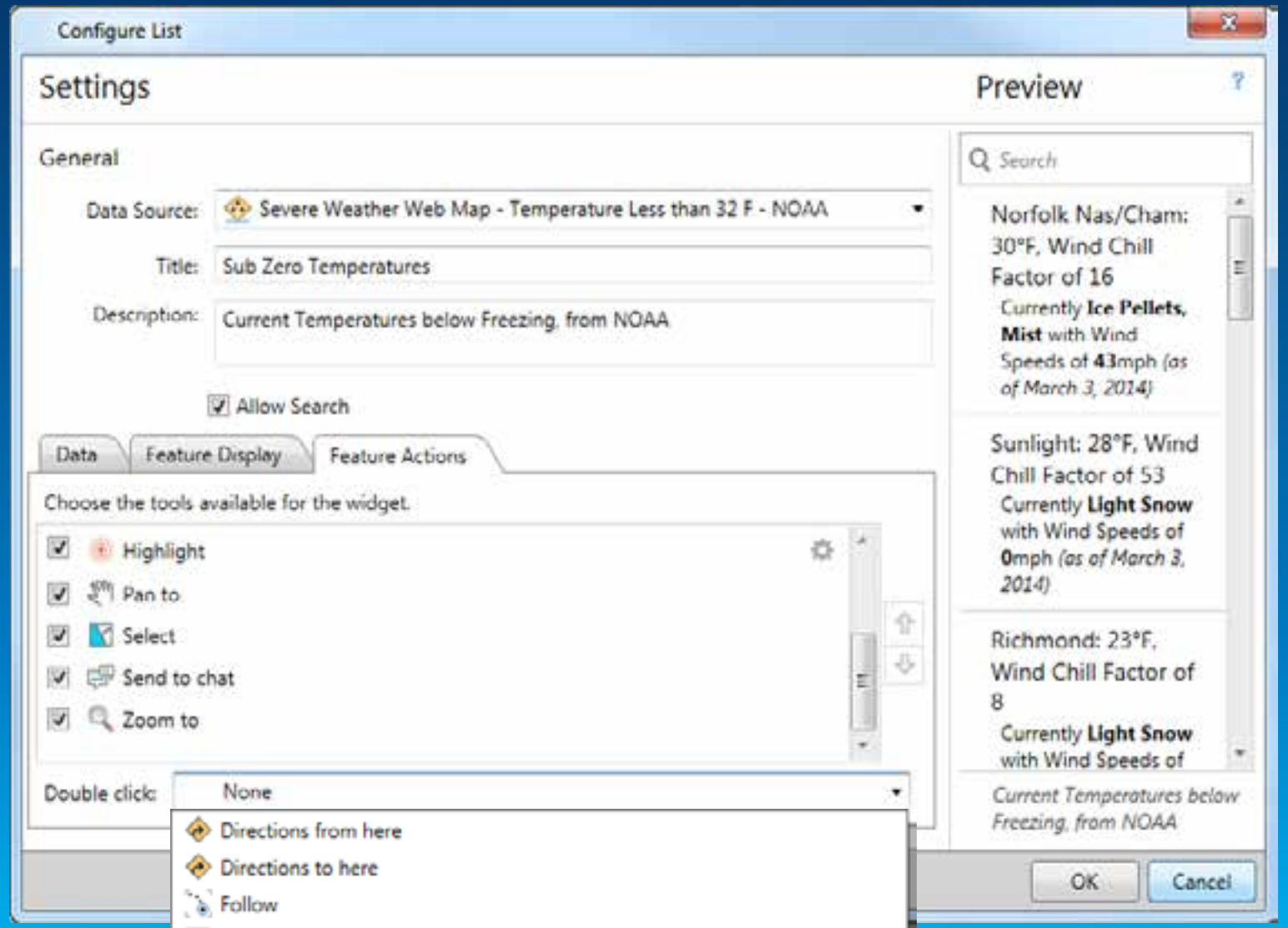


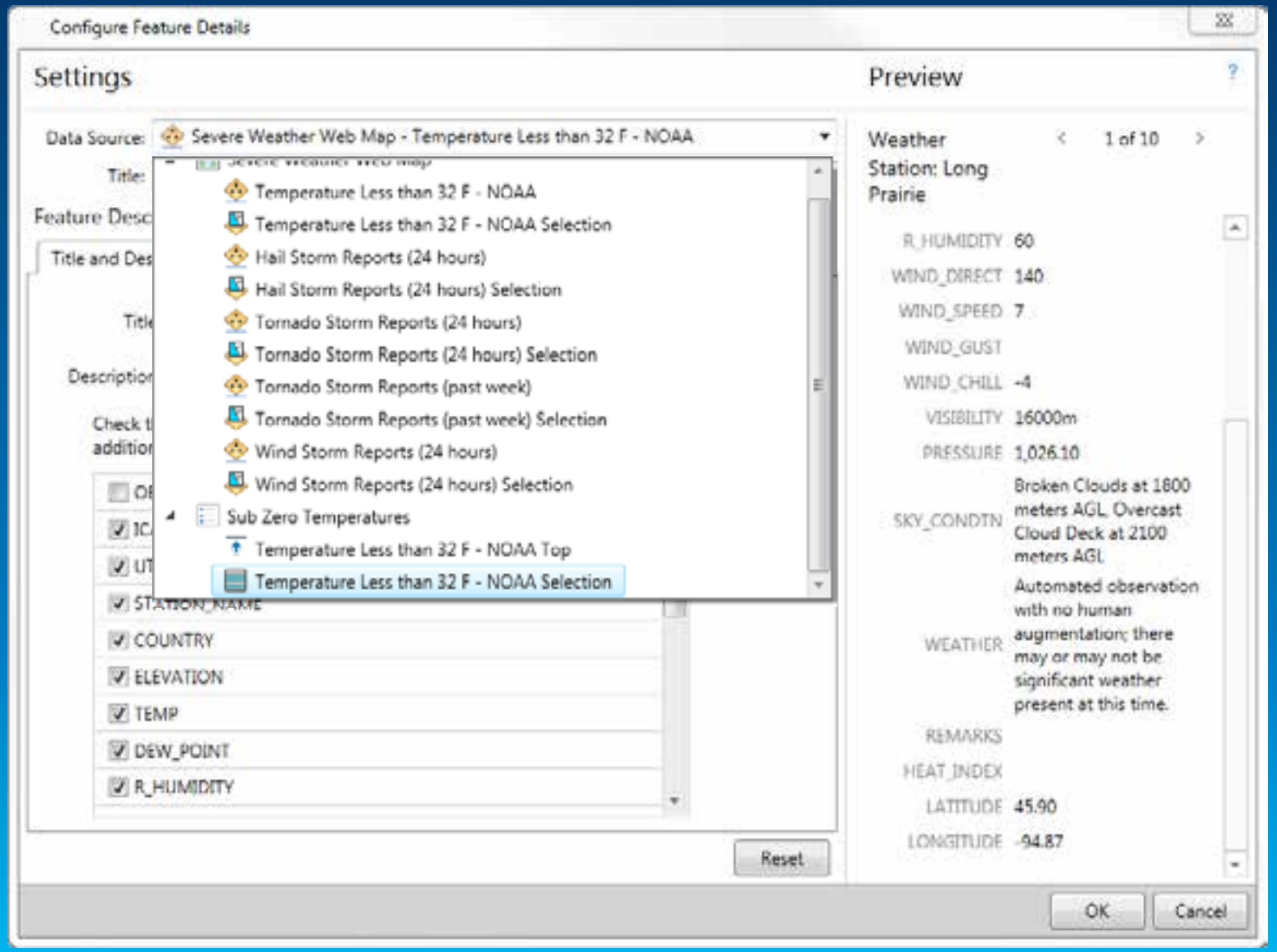
Creating a List



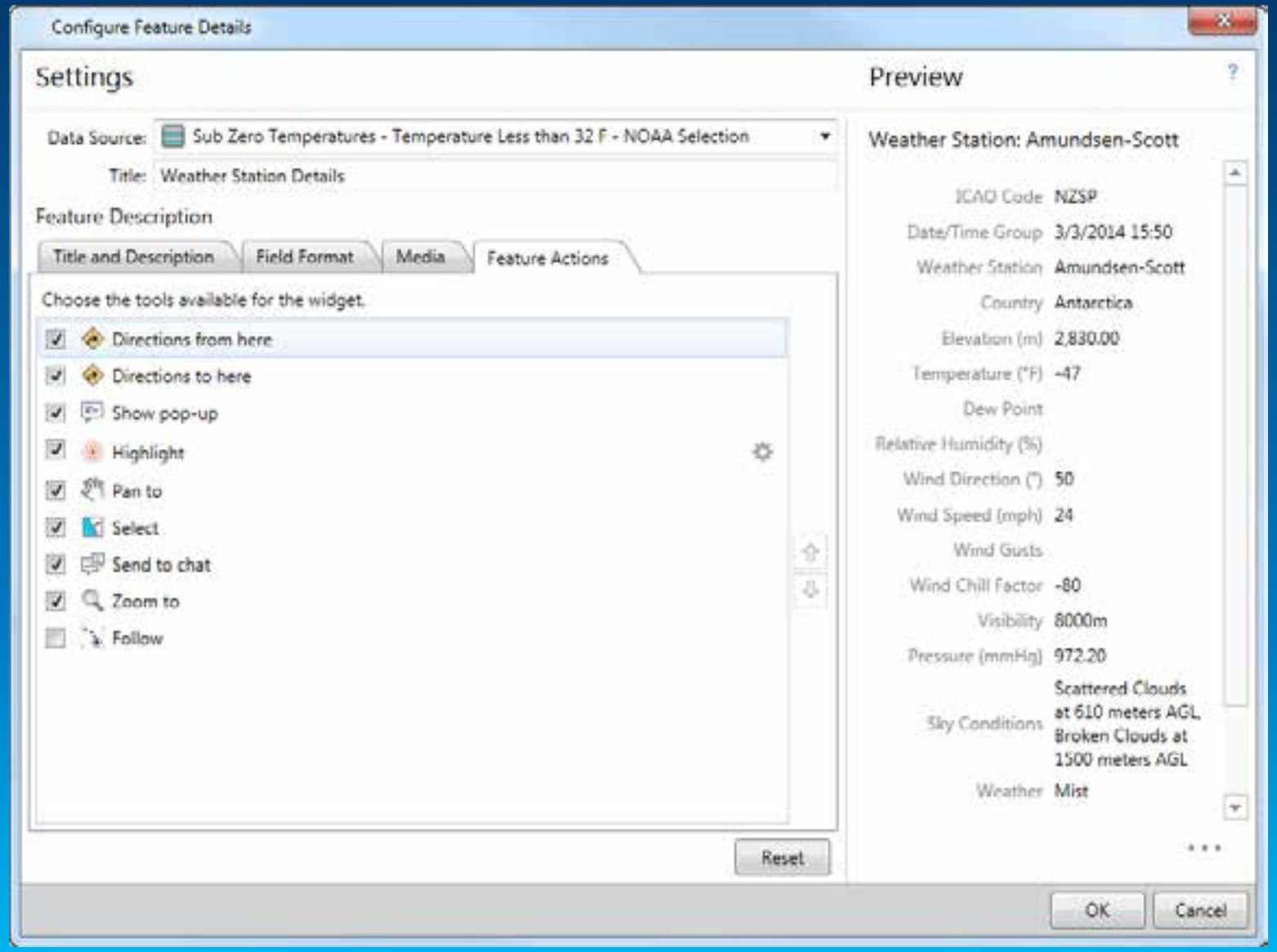
Creating a List



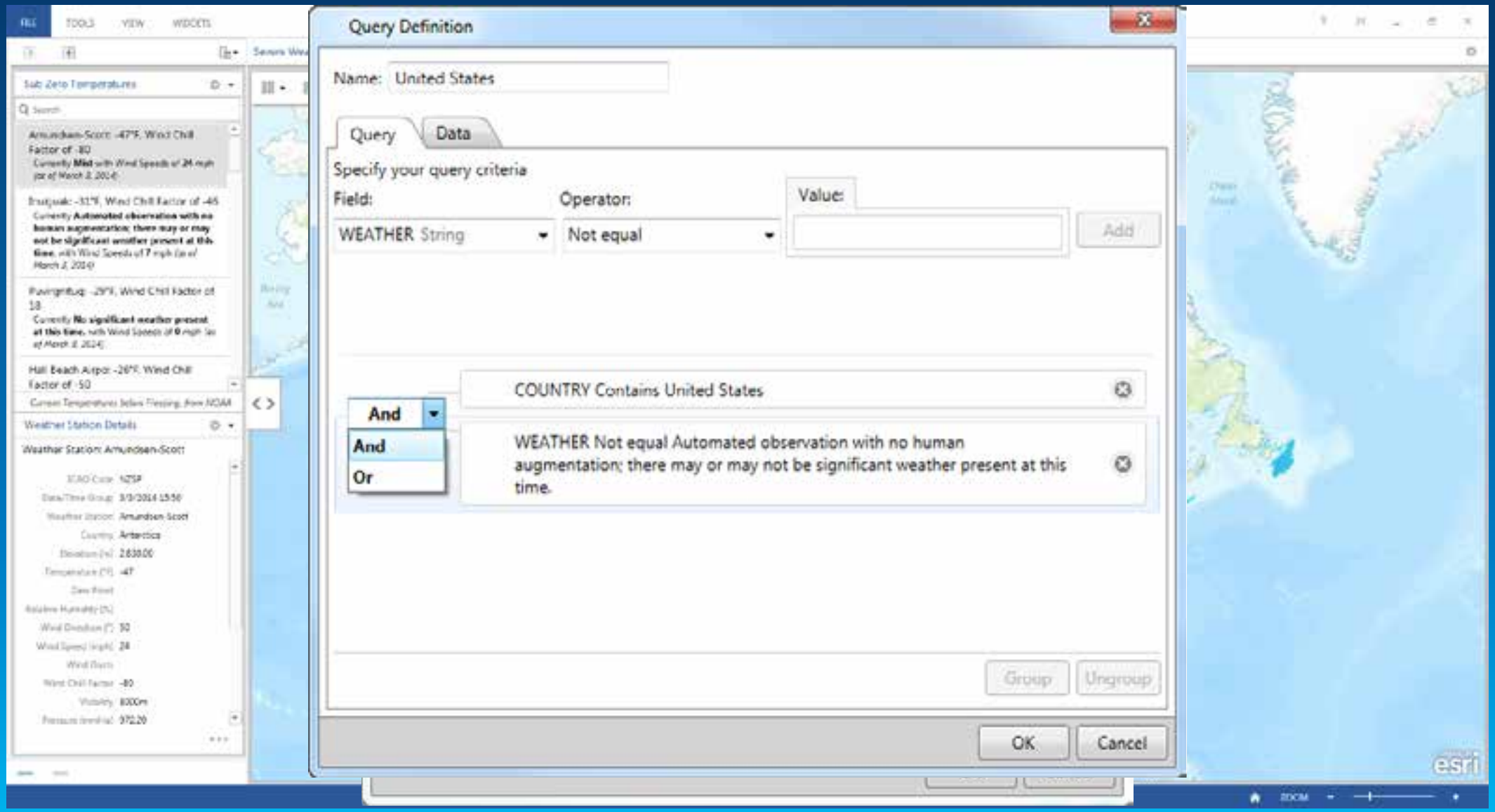
Creating a Feature Details Display



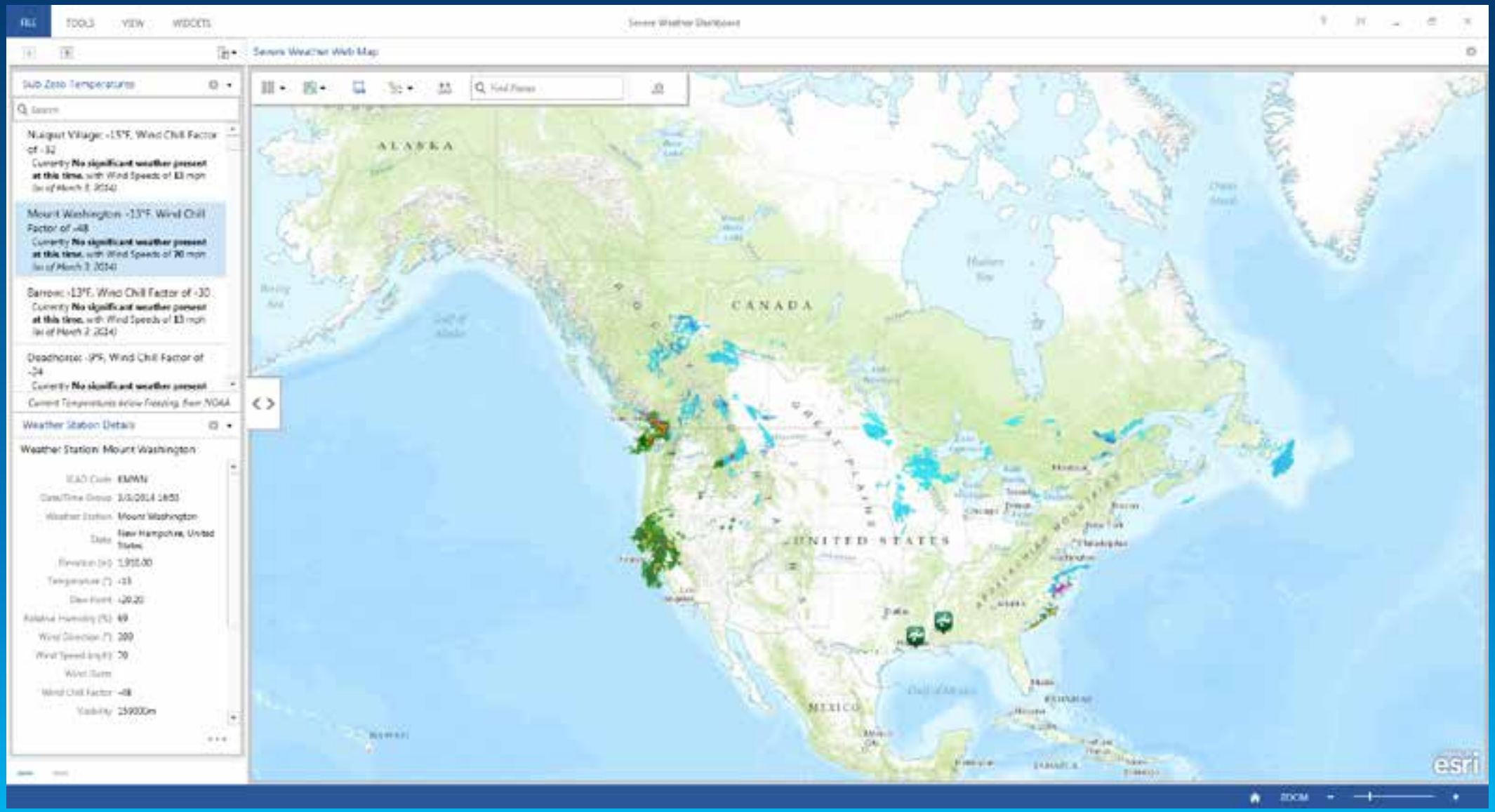
Creating a Feature Details Display



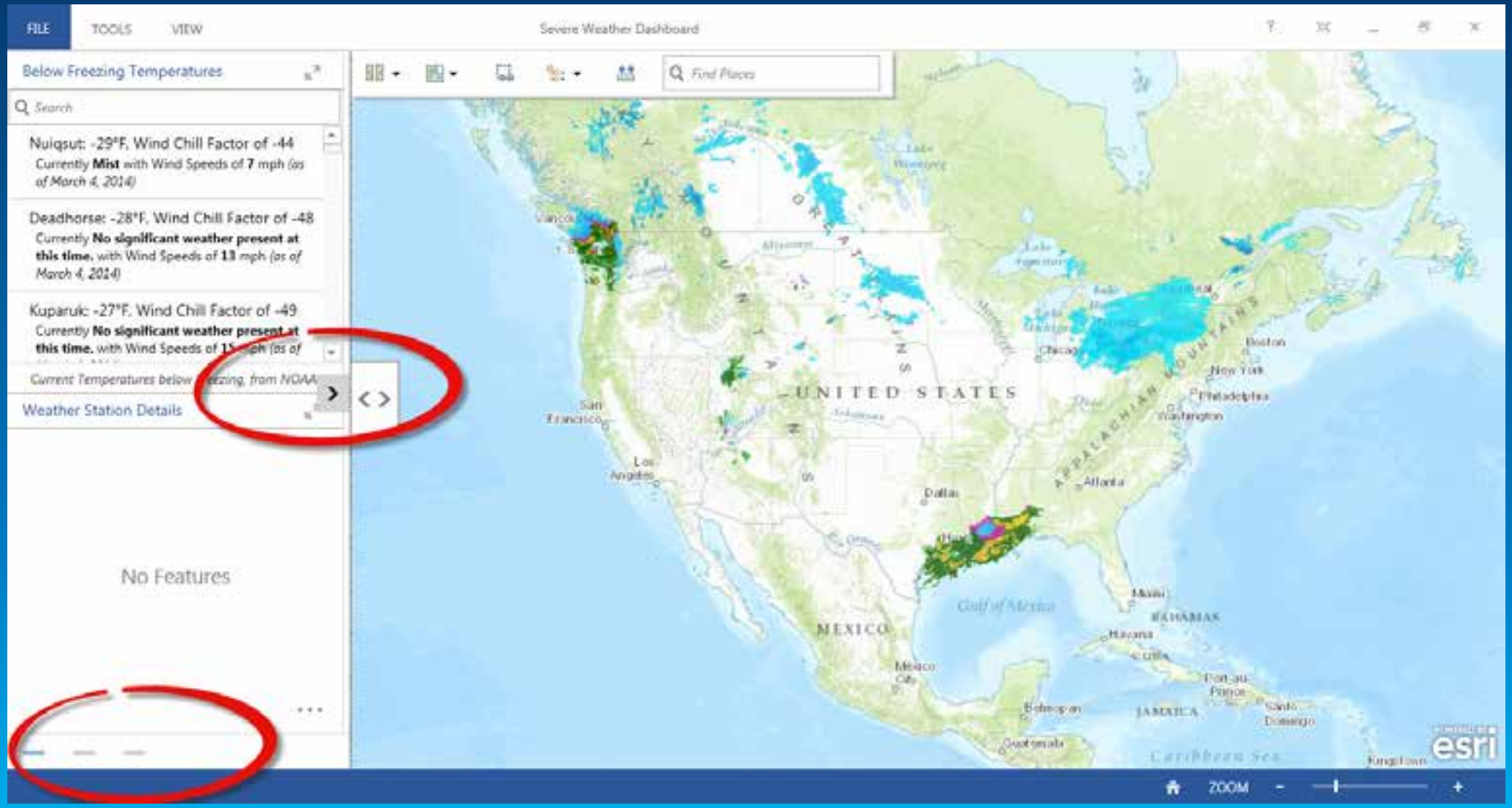
Check on Learning



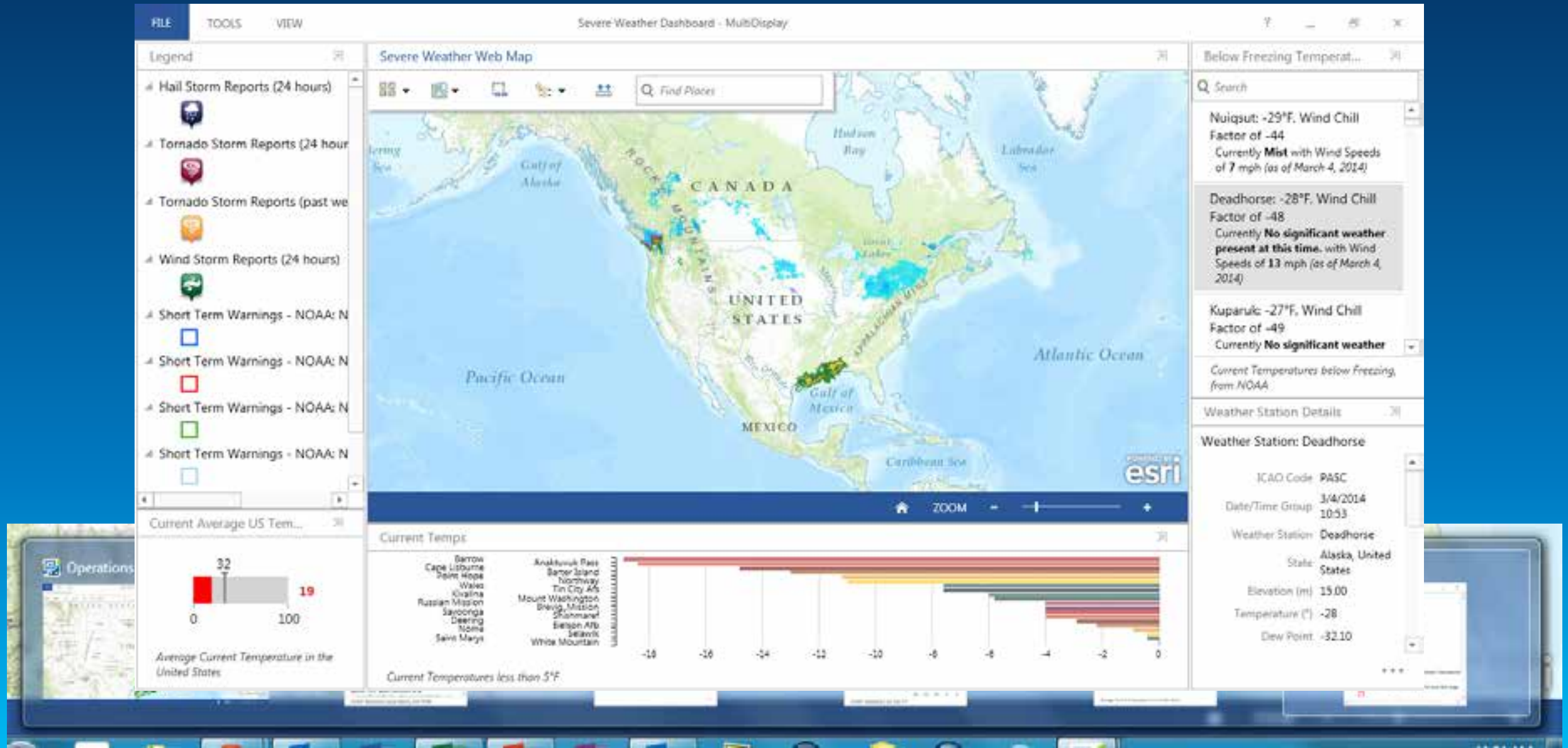
Adjusting the List for the Filter



Panels


FILE
TOOLS
VIEW
Severe Weather Dashboard
Below Freezing Temperatures
Search
Nuiqsut: -29°F, Wind Chill Factor of -44
Currently Mist with Wind Speeds of 7 mph (as of March 4, 2014)
Deadhorse: -28°F, Wind Chill Factor of -48
Currently No significant weather present at this time, with Wind Speeds of 13 mph (as of March 4, 2014)
Kuparuk: -27°F, Wind Chill Factor of -49
Currently No significant weather present at this time, with Wind Speeds of
Current Temperatures below
Weather Station Details
No Features
Find Places
UNITED STATES
MEXICO
Gulf of Mexico
Caribbean Sea
BAHAMAS
JAMAICA
Havana
Miami
Dallas
Atlanta
Chicago
Boston
New York
Philadelphia
San Francisco
Los Angeles
Mexico City
Guatemala
Kingstown
APPALACHIAN MOUNTAINS
ZOOM
esri

Saving a new Operation View



What’s Next

- March Release
  - Improved data source support
  - Fully leverage the new dynamic nature of a web map
  - Unified Search of both data and/or places
  - Improve working with selections
  - Widget enhancements
  - NEW Web Viewer
    - Addresses key cross-platform needs
    - User’s can open and work with Single Monitor Operations Views
- In Development

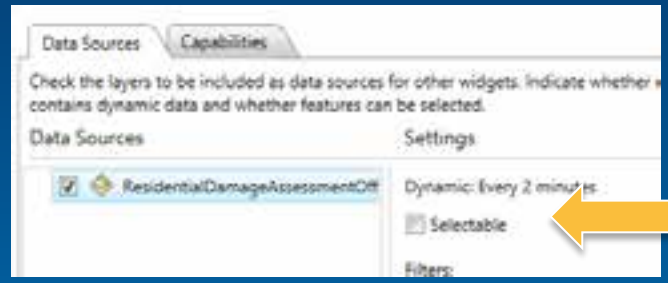
What’s Coming in March

- **Operations Dashboard in a Browser!**
  - Single display operation view
  - All widgets, feature actions and map tools supported**
  - Supported within the following browsers
    - IE 9.0+, Chrome, Firefox, Safari
    - Mobile Browsers (tablets only)

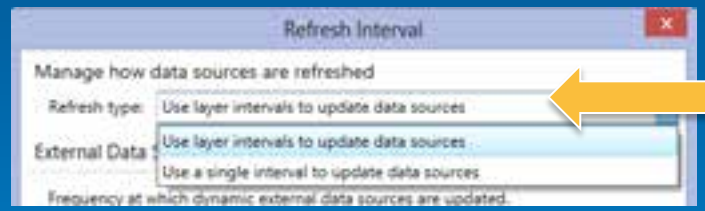
What's Coming in March

- Data source improvements
  - Support for dynamic map service layers as a data source
  - Honor dynamic layer settings for all layers
  - Ability to override the refresh for your data source layers
- Search Improvements
  - Search against features
  - Search suggestions for geocode
  - Search by coordinate notation
- Coordinate Display

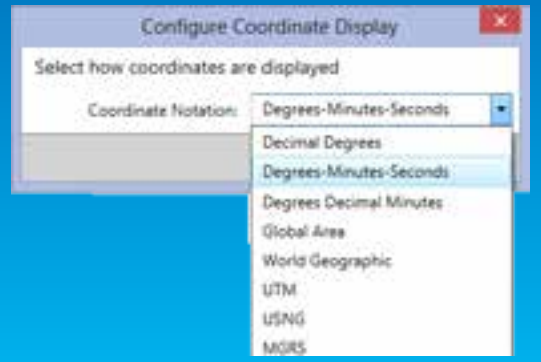
Set a refresh interval for a layer from the layer menu



Reads the layer refresh setting in your web map



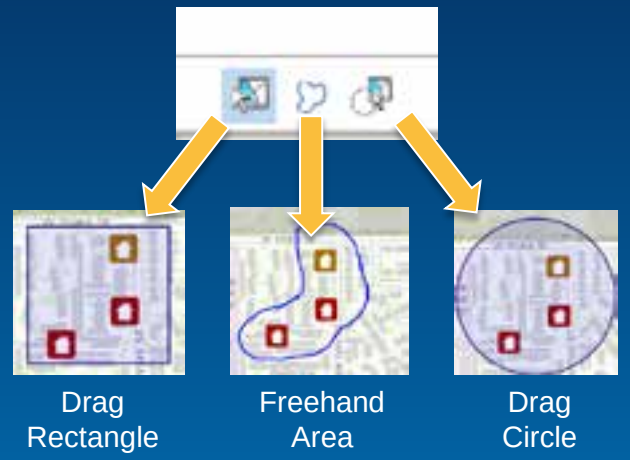
Override that refresh for data sources if you want



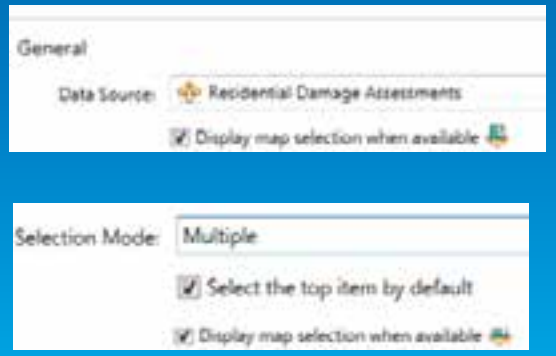
Configure coordinate notation

What's Coming in March

- Selection Improvements
  - New Clear Feature Selection Tool
  - New Selection Tool options
    - Rectangle, freehand, circle



  - New List configuration settings for handling of selections from data sources



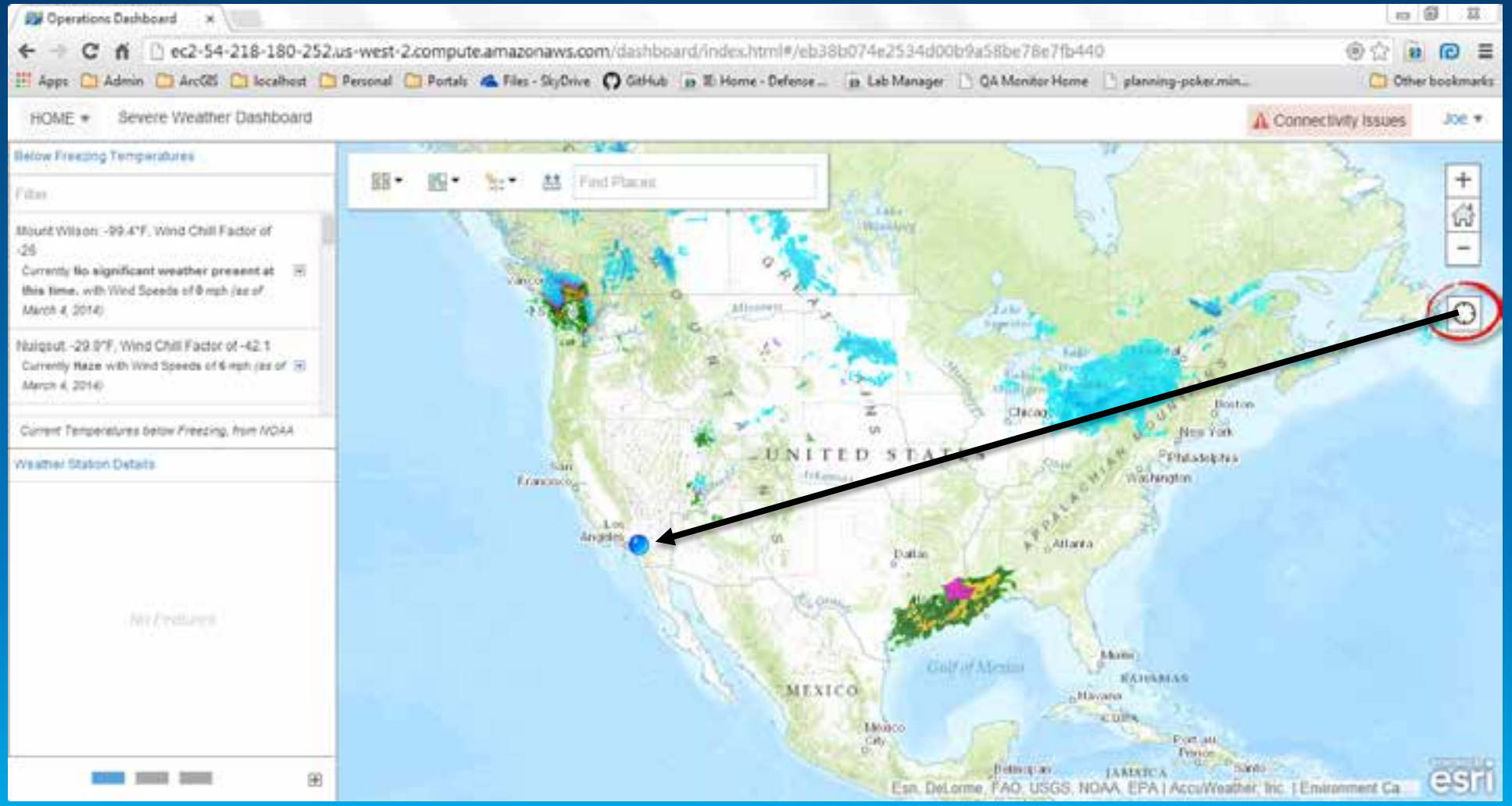
Filter when features are selected on the map

Set the default behavior to select the top most item in the list

Demonstration

Using Operations Dashboard in Browser

Operations Dashboard in the Browser



Resources

http://doc.arcgis.com/en/operations-dashboard/

http://forums.arcgis.com/

http://ideas.arcgis.com/

esri

Don’t forget to complete a session evaluation form!

Session ID: 38

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Networking Reception

Smithsonian National Museum of Natural History

Tuesday, 6:30 PM–9:30 PM

Bus Pickup located on L Street

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Printing stations located in Hall B
and the 140/150 Room Concourse.

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GIS Solutions EXPO, Hall B

Monday, 12:30 PM–6:30 PM
Tuesday, 10:45 AM–4:00 PM

- Exhibitors
- Hands-On Learning Lab
- Technical & Extended Support
- Demo Theater
- Esri Showcase

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Add a day to your Fed GIS experience and register to attend the Esri DevSummit Washington DC. Stop by the registration counter to sign up.

Understanding our world.