GIS Server Layers

While IGT4SAR was designed to be completely function without the need for Internet conductivity, ArcGIS has a host of capabilities when connection to the World Wide Web is available. To take advantage of the on-line functionality built into ArcGIS, a new Data Layer Group title "15 GIS Servers-Requires Internet" was added to IGT4SAR. Figure 1 displays the new data group and the available data layers. A description of each of the data layers follows.

In the event an Internet connection is not available, the layers may show a "broken link" shown graphically with a red exclamation point. When no Inernet access is available, these broken links can be ignored as the data layers can not be used. Should Internet access be re-established the user can simply save the map file in ArcMap, close the map file by exiting ArcMap and then re-starting

Arcmap and re-opening the map file. The links should now be available.

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⊞ ☑ 13 Incident_Analysis
⊞ ☑ 14 Base_Data_Group
⊟ ☑ 15 GIS Servers - Requires Internet Access
    ⊟ ☐ Basemap
        ⊞ ☑ USA_Topo_Maps
        ⊞ ☐ World_Imagery
           ☐ OpenStreetMap
    ⊟ ☐ Weather (US/Canada)
        ⊞ ☐ nowCOAST 'obs' WMS
        ⊞ ☐ Weather - 5 Day Forecast
    ⊞ ☐ Hazards
    ⊞ ☐ FAA_Sectional_Charts
    ⊞ ☐ PlaceNames
    ⊞ ☐ DOI Info
```
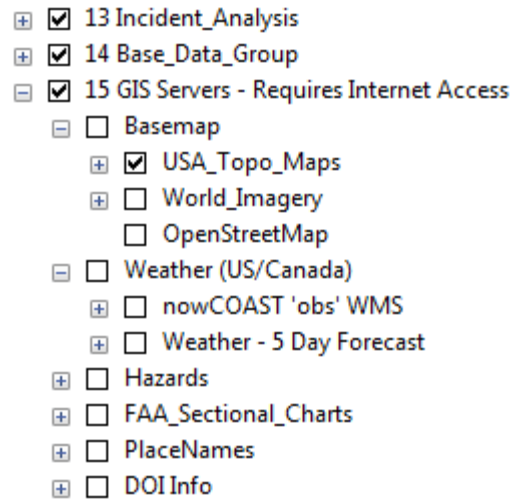
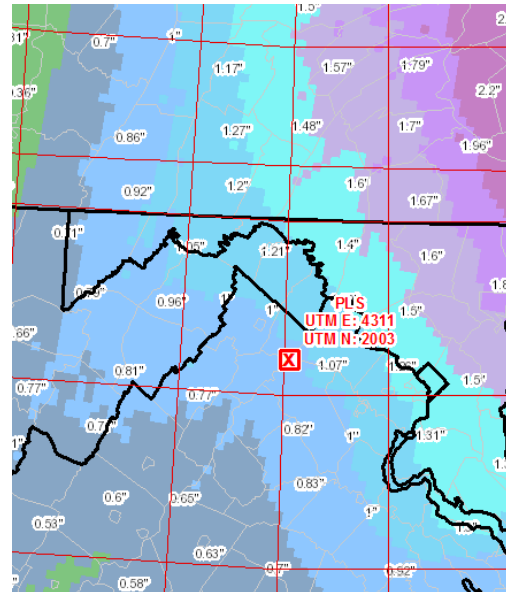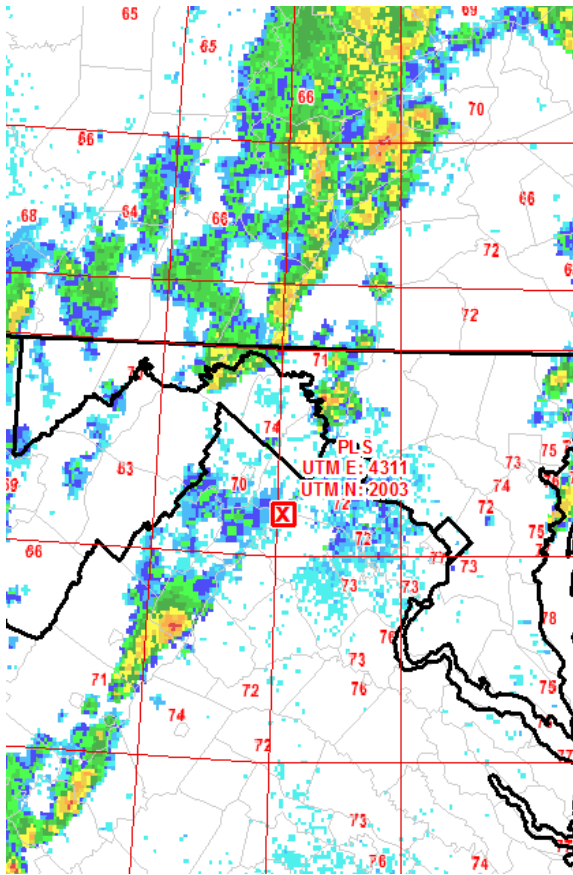Figure 1: GIS Server Data group Layer

Each of the services are offer for free or with your ArcGIS Online Subscription (Topo and Aerial imagery Basemaps).

1. Basemap – ArcMAP offers a rich assortment of basemaps using the "Add Basemap" tool. Several of these Basemaps have be added to the Table of Contents to reduce demands on the user to find the desire layers. The user can select from USA Topo Maps, Aerial Imagery (world Imagery) and OpenStreetMap.
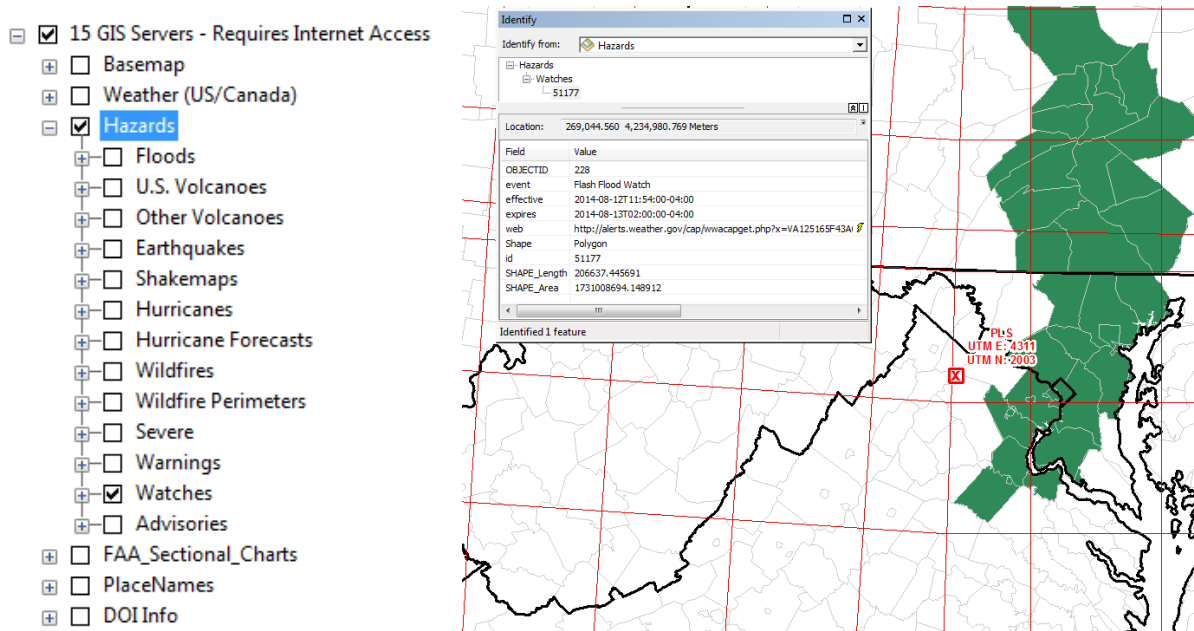
2. Weather – nowCOAST Observation composite of US and Canada weather RADAR. Updated at 5 minute intervals. Additional data layers available as shown below. Image to the right below shows the Five day forecast for precipitation.
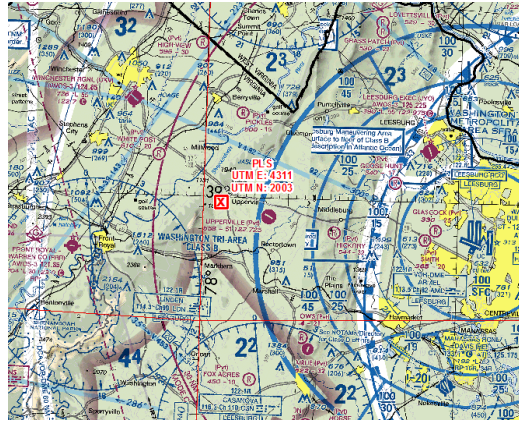
3. Hazards - This map presents the geospatial locations and additional information for current natural hazards events including earthquakes, hurricanes, floods, and wildfires. This map is part of the Interior Geospatial Emergency Management System (IGEMS) and is supported by the DOI Office of Emergency Management. This map contains data from a variety of public data sources, including non-DOI data, and information about each of these data providers, including specific data source and update frequency is available at: http://igems.doi.gov.

Using the "Information" tool, the user can click on any of the layers to obtain a URL link with additional information. Image to the right below shows flash flood warnings for the regions covered in Green polygons.
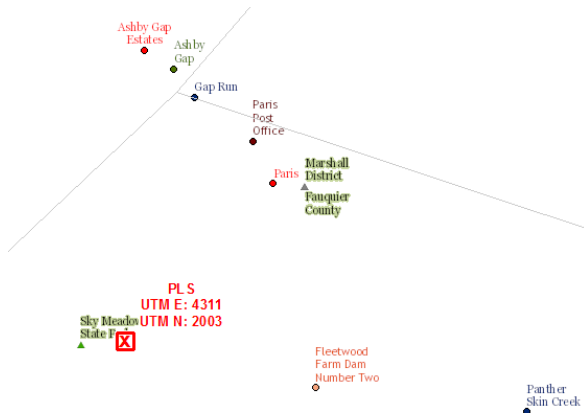
4. FAA Aeronautical Sectional Charts - he FAA's Aeronautical Charts, separated to show 54 different regions of the US with specific information about classes of airspace, airports, and obstructions.



5. Placenames – Geographical Names Information System, See http://viewer.nationalmap.gov/help for assistance with The National Map viewer, services, or metadata.

6. Department of Interior Information – This map presents the geospatial locations and additional information for global tide monitoring stations, and  U.S. stream gages, weather stations and DOI managed lands. This map is part of the Interior Geospatial Emergency Management System (IGEMS) and is supported by the DOI Office of Emergency Management. This map contains data from a variety of public data sources, including non-DOI data, and information about each of these data providers, including specific data source and update frequency is available at: http://igems.doi.gov.