Savannah River NUCLEAR SOLUTIONS℠
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Geospatial Technology Summit

Flight Planning Tool

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GeoNEARing
where innovations grow...

Presented by: *Dave Isiminger*
Site GIS & Environmental Systems

AGENDA

1. Background
2. Radiological Assistance Program (RAP)
3. The Flight Planning Tool (FPT)

U.S. DEPARTMENT OF ENERGY

Established early 1950s for the production of materials used to fabricate nuclear weapons

Today the mission focuses:

- Cold war clean up & environmental stewardship
- Technology Innovation
- Energy independence

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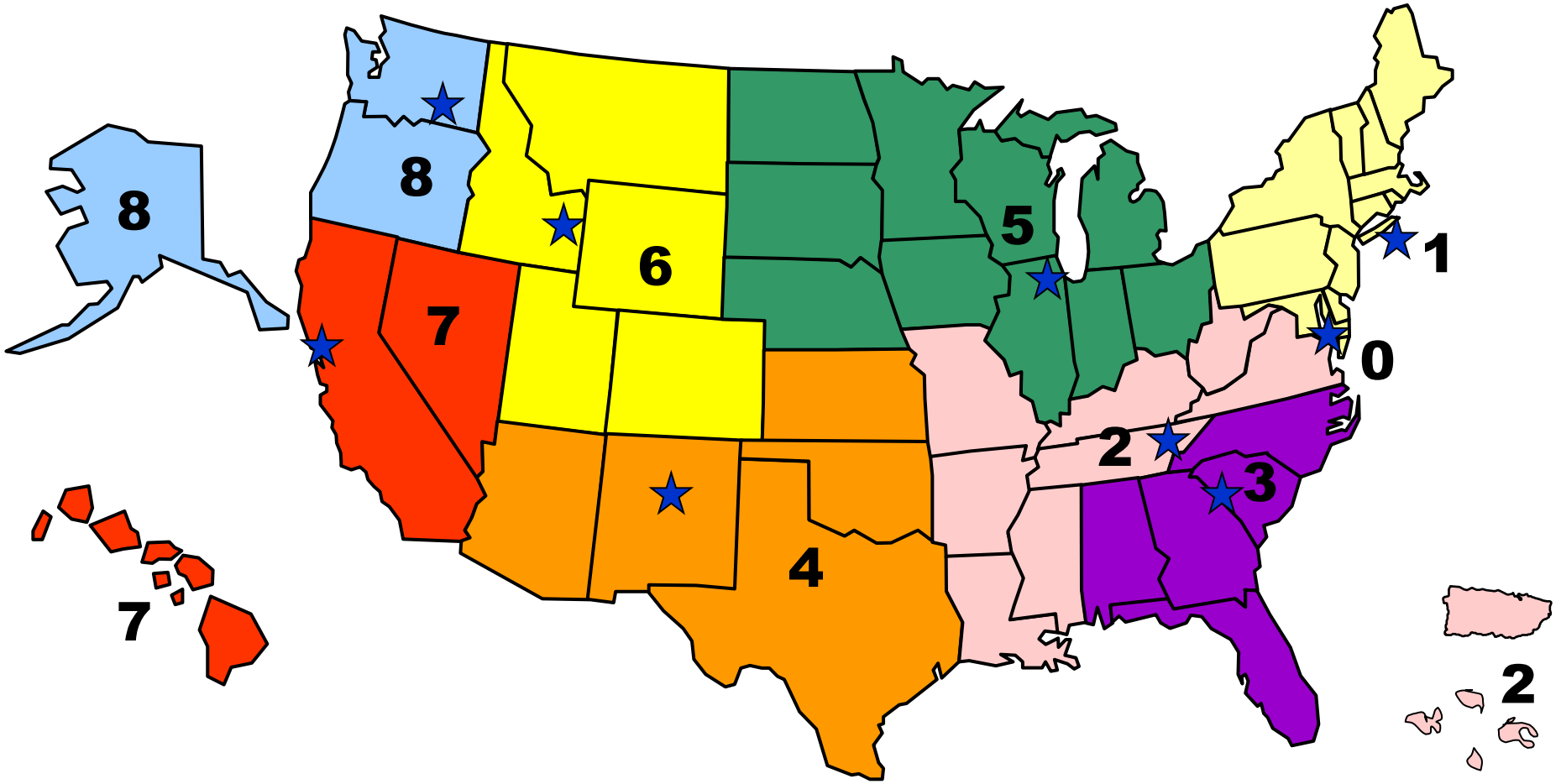
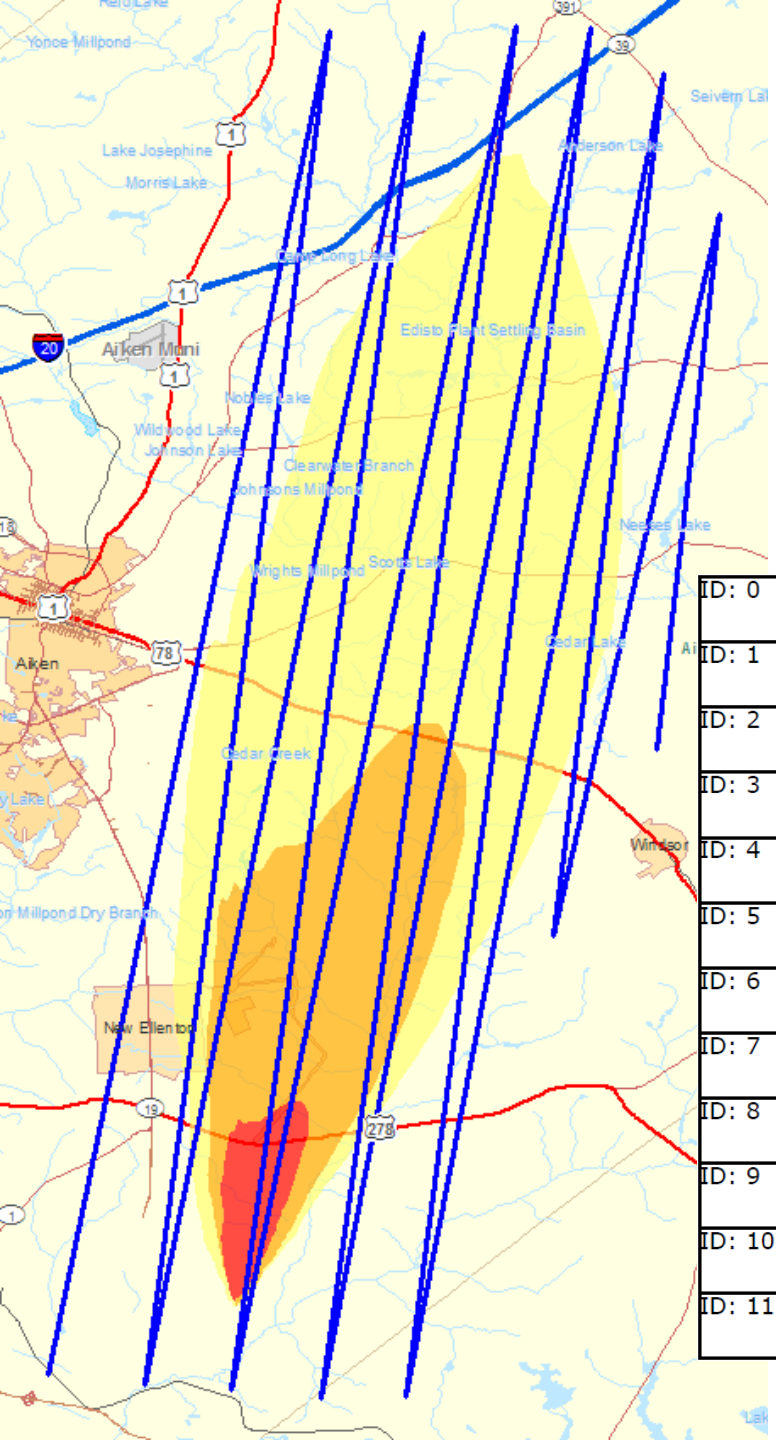
- DOE/NNSA Radiological First Responders
- Deployable within 2 hours.
- Regionally located to provide a timely response capability and foster relationships with other emergency response elements

DOE Regional Map and Coordinating Offices



Aerial Measuring System (AMS) detects, measures and tracks radioactive material at an emergency to determine contamination levels


LANDING LIGHTS
COMMAND SELL
OFF
LOW
HIGH
PARK
STROBE



Basic Map & Navigation Coordinates

ID: 0	Start Lon: 81° 43.17216 Start Lat: 33° 18.17401	End Lon: 81° 37.48430 End Lat: 33° 45.34555	Azimuth: 11.8231
ID: 1	Start Lon: 81° 37.48430 Start Lat: 33° 45.34555	End Lon: 81° 41.21910 End Lat: 33° 17.96843	Azimuth: 187.7684
ID: 2	Start Lon: 81° 41.21910 Start Lat: 33° 17.96843	End Lon: 81° 35.59977 End Lat: 33° 45.31129	Azimuth: 11.6134
ID: 3	Start Lon: 81° 35.59977 Start Lat: 33° 45.31129	End Lon: 81° 39.47163 End Lat: 33° 17.86563	Azimuth: 188.0299
ID: 4	Start Lon: 81° 39.47163 Start Lat: 33° 17.86563	End Lon: 81° 33.71523 End Lat: 33° 45.44834	Azimuth: 11.7882
ID: 5	Start Lon: 81° 33.71523 Start Lat: 33° 45.44834	End Lon: 81° 37.65562 End Lat: 33° 17.69431	Azimuth: 188.0806
ID: 6	Start Lon: 81° 37.65562 Start Lat: 33° 17.69431	End Lon: 81° 32.20761 End Lat: 33° 45.41408	Azimuth: 11.1191
ID: 7	Start Lon: 81° 32.20761 Start Lat: 33° 45.41408	End Lon: 81° 35.94241 End Lat: 33° 17.72858	Azimuth: 187.6829
ID: 8	Start Lon: 81° 35.94241 Start Lat: 33° 17.72858	End Lon: 81° 30.73425 End Lat: 33° 44.48895	Azimuth: 11.0134
ID: 9	Start Lon: 81° 30.73425 Start Lat: 33° 44.48895	End Lon: 81° 32.96142 End Lat: 33° 27.04845	Azimuth: 187.2774
ID: 10	Start Lon: 81° 32.96142 Start Lat: 33° 27.04845	End Lon: 81° 29.60353 End Lat: 33° 41.64501	Azimuth: 12.9553
ID: 11	Start Lon: 81° 29.60353 Start Lat: 33° 41.64501	End Lon: 81° 30.87130 End Lat: 33° 30.81751	Azimuth: 186.6783

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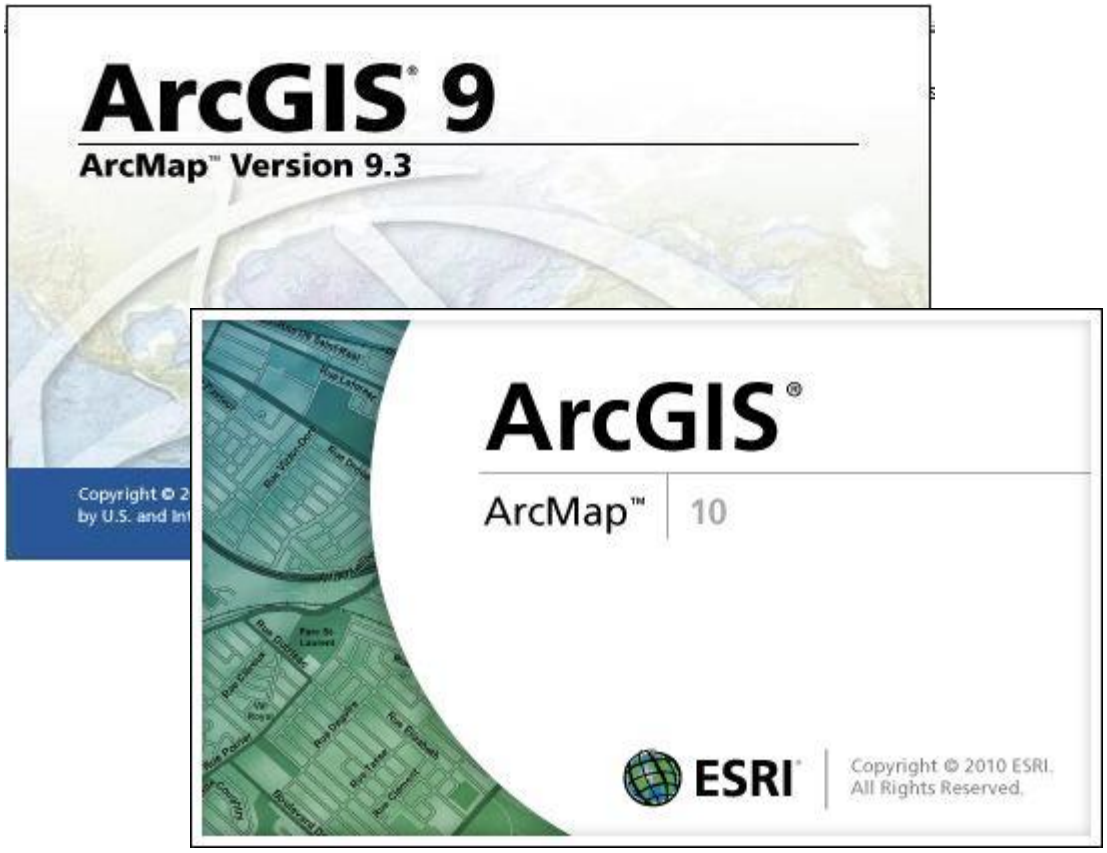
OBJECTIVES

1. Automate flight plan packages
2. Decrease creation time
3. Minimize human error potential



Microsoft®
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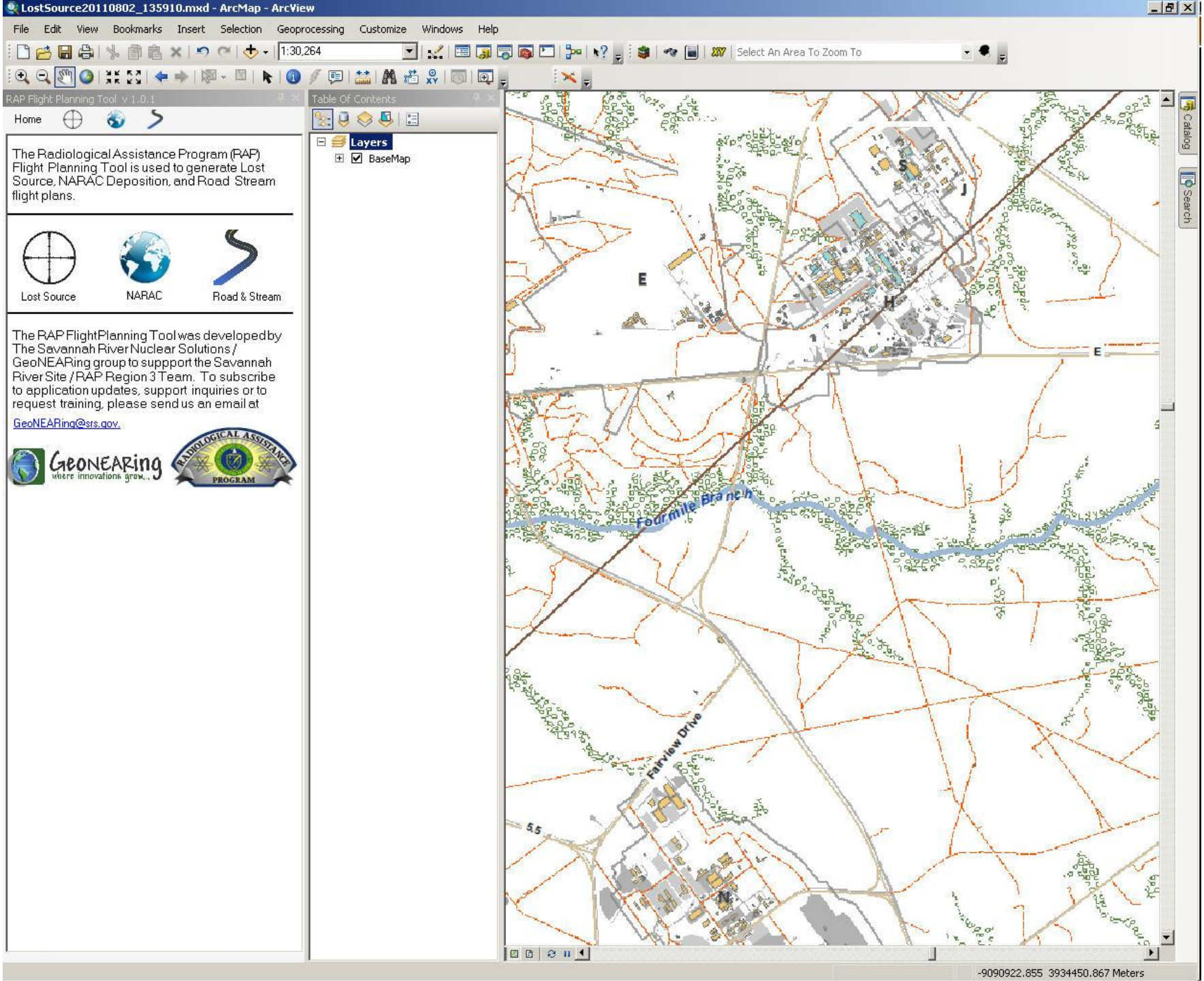
LostSource20110802_135910.mxd - ArcMap - ArcView
File Edit View Bookmarks Insert Selection Geoprocessing Customize Windows Help
1:30,264
Select An Area To Zoom To
RAP Flight Planning Tool v 1.0.1
Home
The Radiological Assistance Program (RAP) Flight Planning Tool is used to generate Lost Source, NARAC Deposition, and Road Stream flight plans.
Lost Source
NARAC
Road & Stream
The RAP FlightPlanning Tool was developed by The Savannah River Nuclear Solutions / GeoNEARing group to suppport the Savannah River Site / RAP Region 3 Team. To subscribe to application updates, support inquiries or to request training, please send us an email at
GeoNEARing@srs.gov.
GeoNEARing where innovations grow...
RADIOLOGICAL ASSISTANCE PROGRAM
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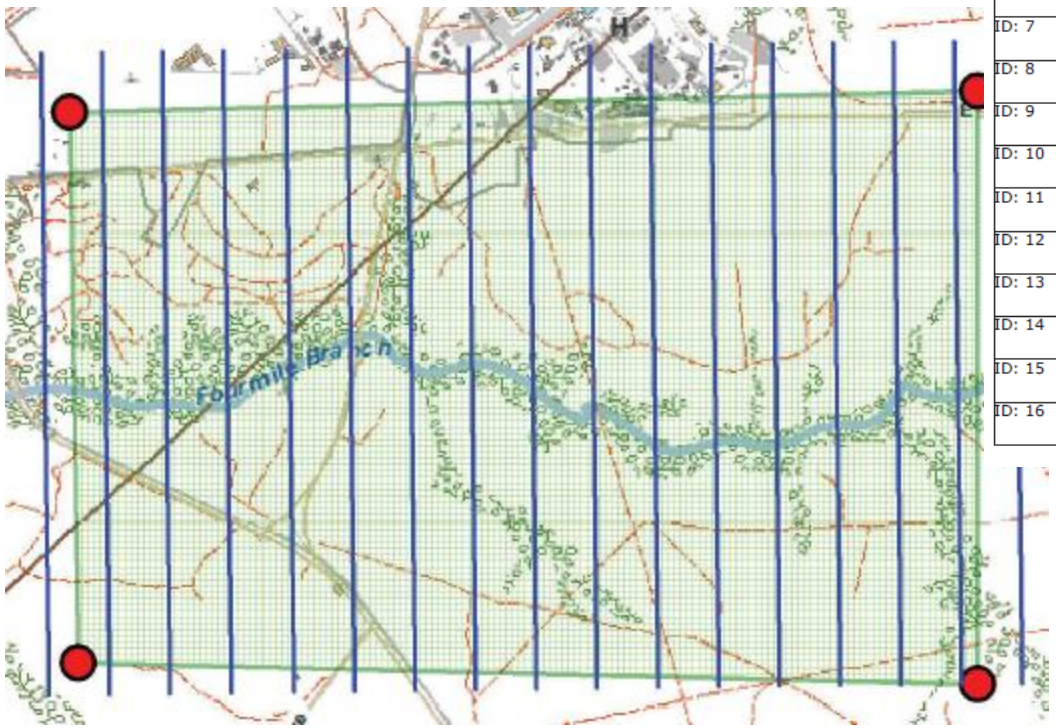
Layers
BaseMap
Fourmile Branch
Fairview Drive
Catalog
Search
-9090922.855 3934450.867 Meters

Scenarios

Lost Source



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Scenarios

Road & Stream

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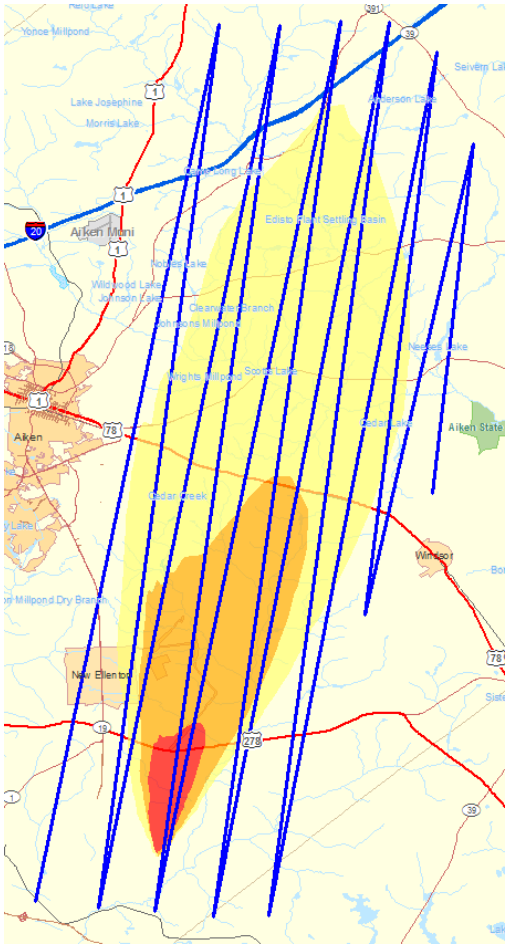
Scenarios

NARAC Deposition

National Atmospheric Release Advisory Center



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Benefits:

- Preflight briefings have been reduced from 1.5 hours to 15 min.
- Clear communications. Coordinates & headings for the aircraft computer.
- Prevents weather aborted flights by combining flight plan with weather data.
- A second location (backup plan) can already be selected for monitoring.
- Optimizes and minimizes travel paths.
- Better planning. Better utilization of pilot and aircraft.
- Eliminated training. Tool is intuitively obvious to use.

Summary:

The RAP Flight Planning Tool is used by DOE RAP Region 3 to respond to emergency radiological situations. The tool automates the flight planning package process while decreasing Aerial Measuring System response times and decreases the potential for human error.

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