



GIS for Airport Land Use Compatibility Planning Aircraft Noise / Airspace Obstructions

[Airport Name]

[Date of Presentation]



Agenda

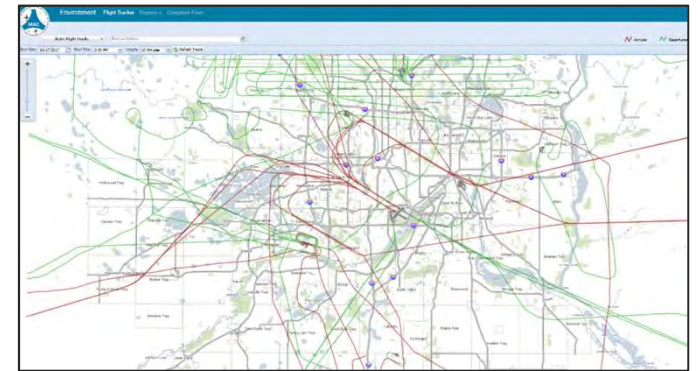
- Airport Overview
- How can GIS be used to help Airport, Community, and Regional Planners?
- How can GIS be applied for land use compatibility planning?

Airport Overview

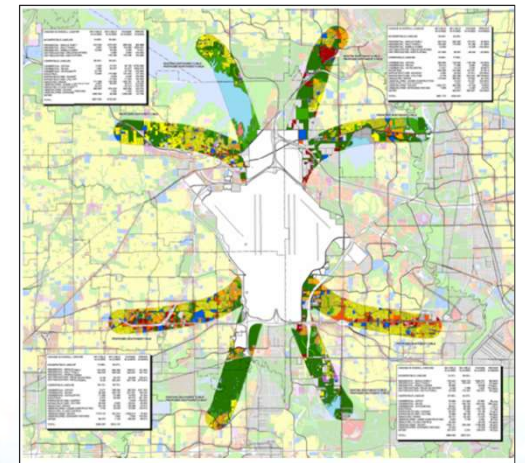


How can GIS Help?

- Visualize aircraft noise impacts
- Proactively identify affected communities
 - Prioritize mitigation areas
- Create scenarios for flight paths
- Assess interactions between land use and flight paths
 - Highlight compatible and incompatible land uses
- Establish zoning restrictions around affected parcels



▲ **MSP Airport Flight Tracker Tool**



▲ **Land Use along Simulated Departures at DFW Airport**

[airport code]'s Past

- Established in [year established]
- Primarily provided [early type of air service] to
 - [Destination/Market Region 1]
 - [Destination/Market Region 2]
 - [Destination/Market Region 3]
- [Original number and length of runways]
- Significant Milestones
 - [Milestone 1]
 - [Milestone 2]
 - [Milestone 3]



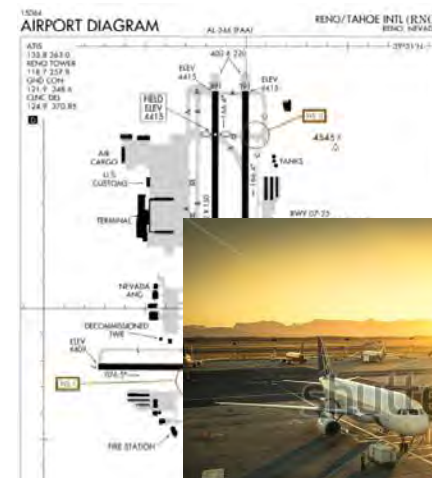
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[airport code]'s Present

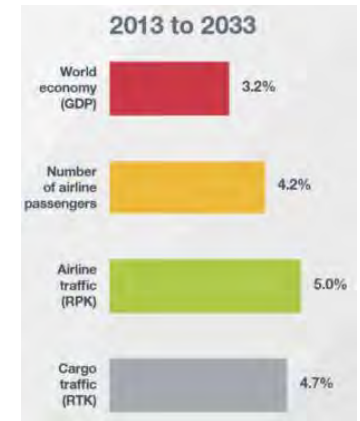
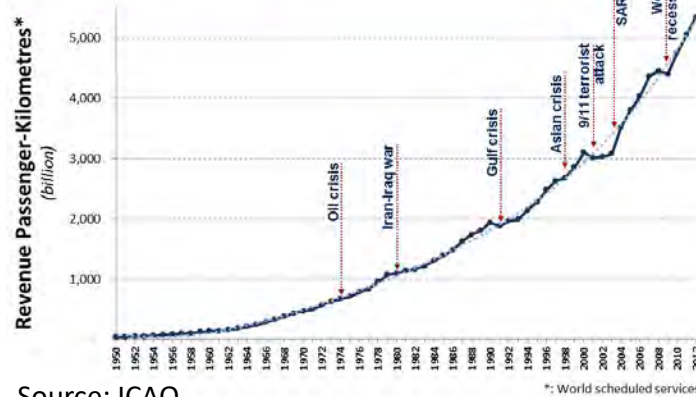
- Our Aircraft [total based aircraft]
- [Current number and length of runways]
- Passengers served [number of enplanements]
- Primary Destinations
 - [Destination/Market Region 1]
 - [Destination/Market Region 2]
 - [Destination/Market Region 3]



[airport code]'s Future

- The Trend is Clear
- Our Near Term Plans
 - [Initiative 2]
 - [Initiative 2]
 - [Initiative 2]

The world aviation - 1950 to 2012



Source: Boeing



Our Community's Past

- Our community was established [era when community was founded]
- Early settlers came from [origins early settlers]
- Growth was fueled by
 - [Economic Driver 1]
 - [Economic Driver 2]
 - [Economic Driver 3]
- Transportation played a major role

Our Community Today

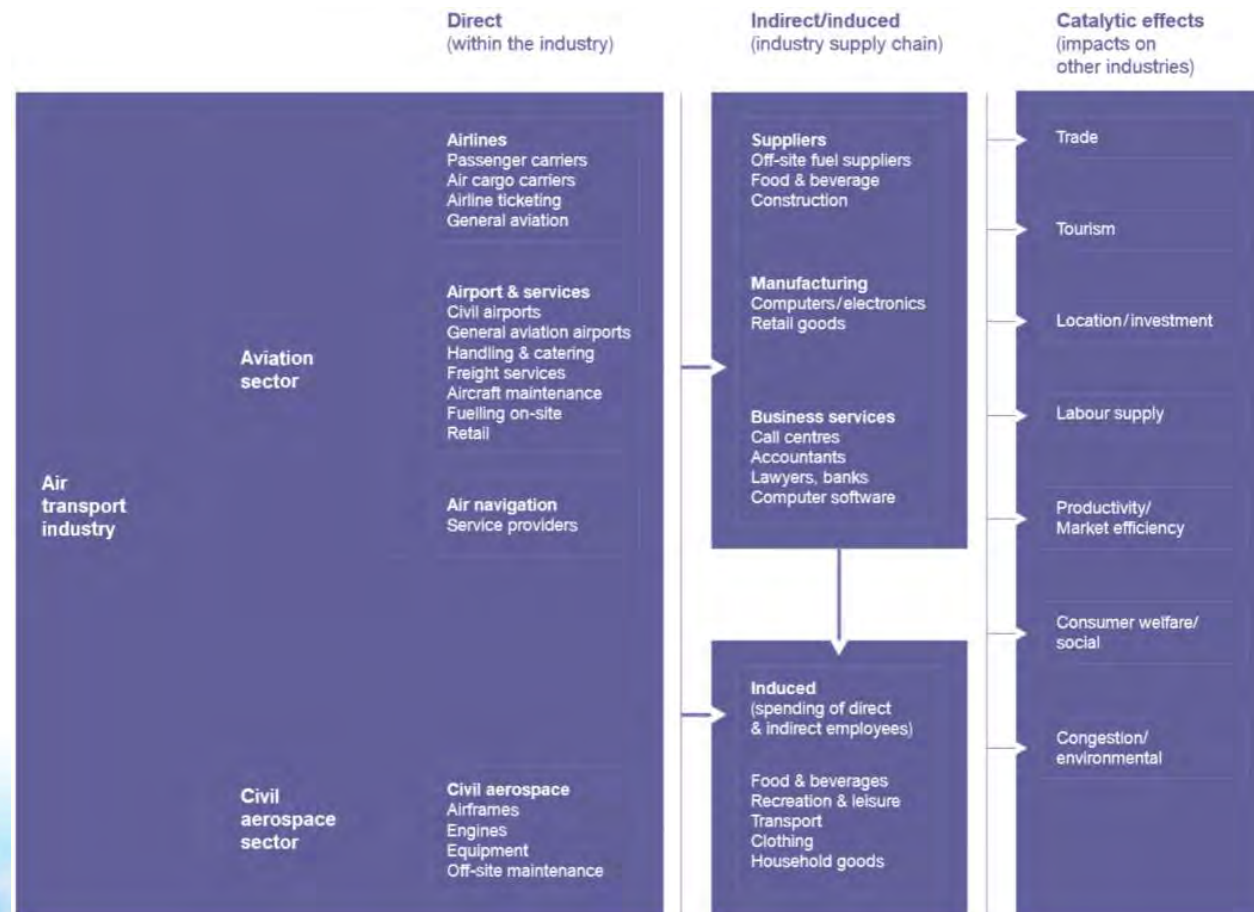
- Population of [regional population]
- Early settlers came from [orgins early settlers]
- Economy was driven by
 - [Economic Driver 1]
 - [Economic Driver 2]
 - [Economic Driver 3]



Our Community's Future

- [Community Direction 1]
- [Community Direction 2]
- [Community Direction 3]
- [Community Direction 4]
- [Community Direction 5]

Aviation's Fuels our Growth



Source: OEF 2005

How Can GIS Help Land Use Compatibility Planning Near Airports?



Why is Noise such a Concern?

- Annoying
- Distracting
- May be linked to increased health risks
- Reduction in property values
- Congress found¹ that aviation noise is critical

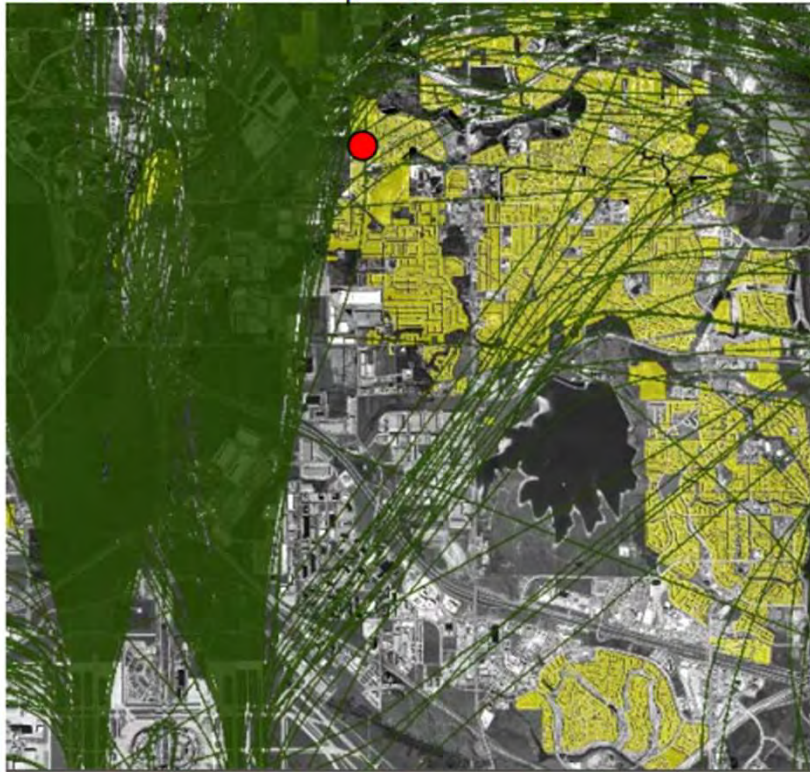


Jet Noise From National Airport Pushes D.C. And Virginia Residents To Sound Off

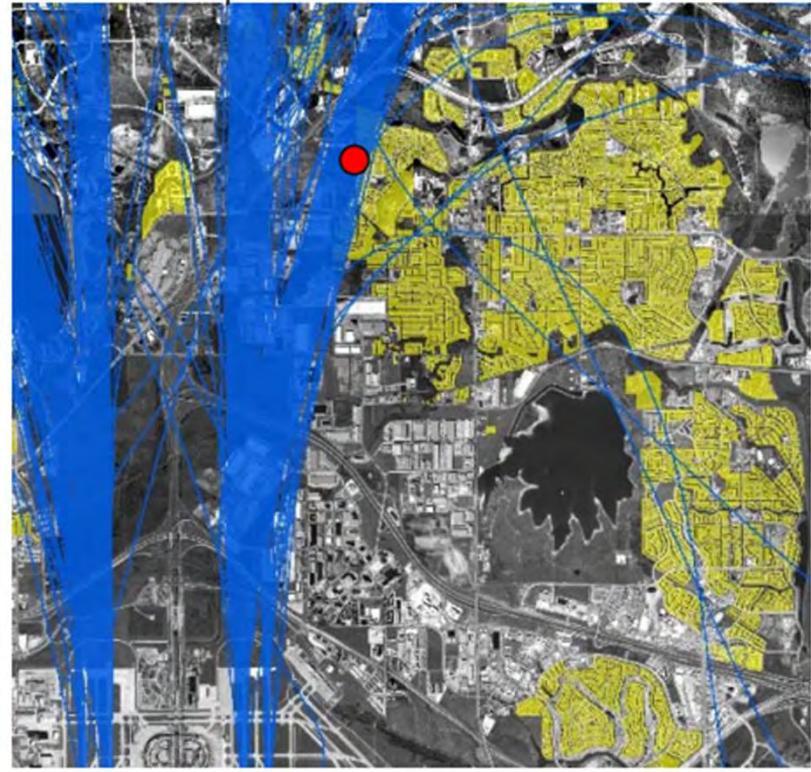
¹ 1990 Airport Noise and Capacity Act

How will I be Effected?

Conventional Departure Tracks



RNAV Departure Tracks



▲ **The affect of RNAV-enabled departure tracks on local residential areas at DFW Airport**

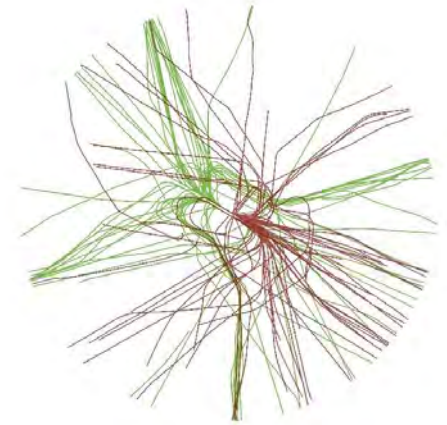
Source: DFW Noise Compatibility, NextGen: New Technology for Improved Noise Mitigation Efforts

How Can GIS be applied to Land Use Compatibility Planning Near Airports ?

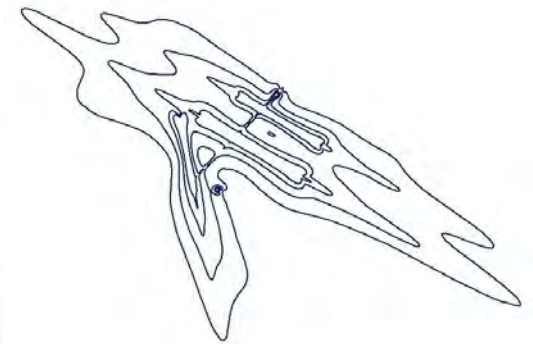


How can GIS Help?

- Blending data from various sources to analyze:
 - Land Use
 - Flight Operations and Noise Impacts
- Aircraft Noise Data
 - Noise Monitoring Stations
 - Flight Tracks
 - Noise Contours
- Land Use Data
 - Land Cover
 - Land Use (existing & future)
 - Parcels
 - Zoning

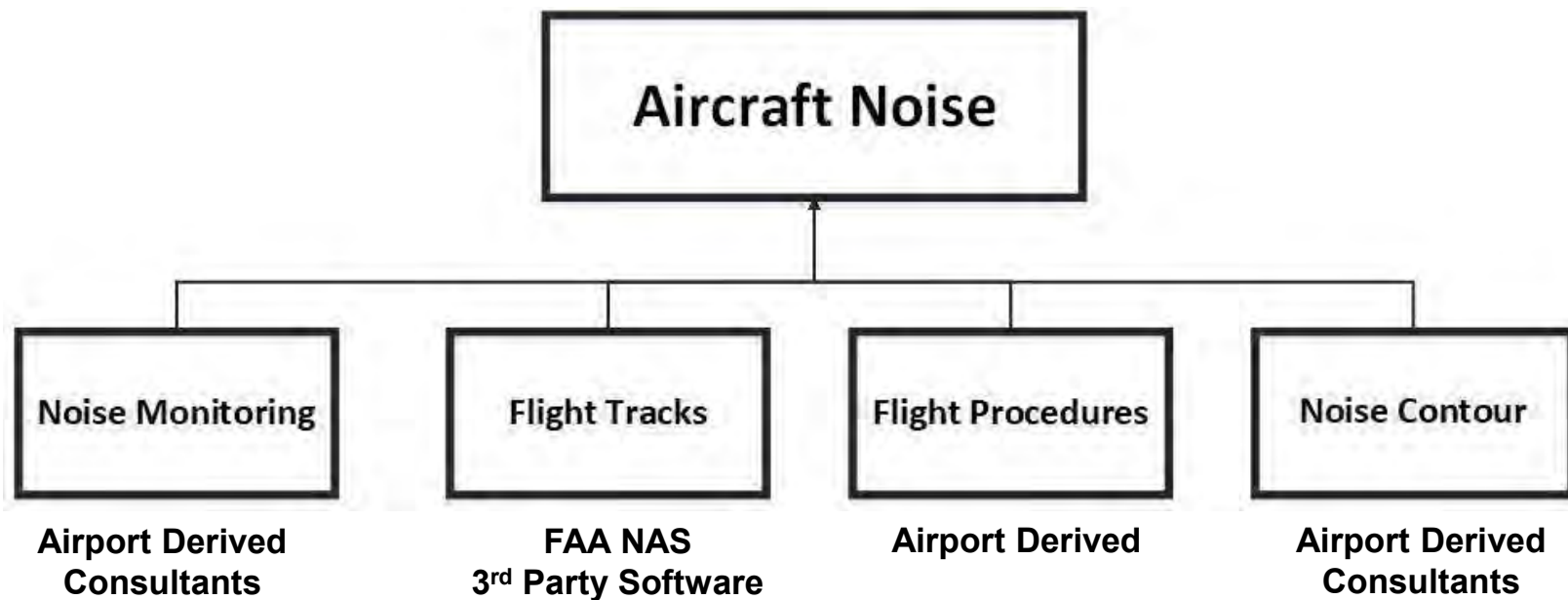


▲ **Flight Tracks**
(Departures vs. Arrivals)

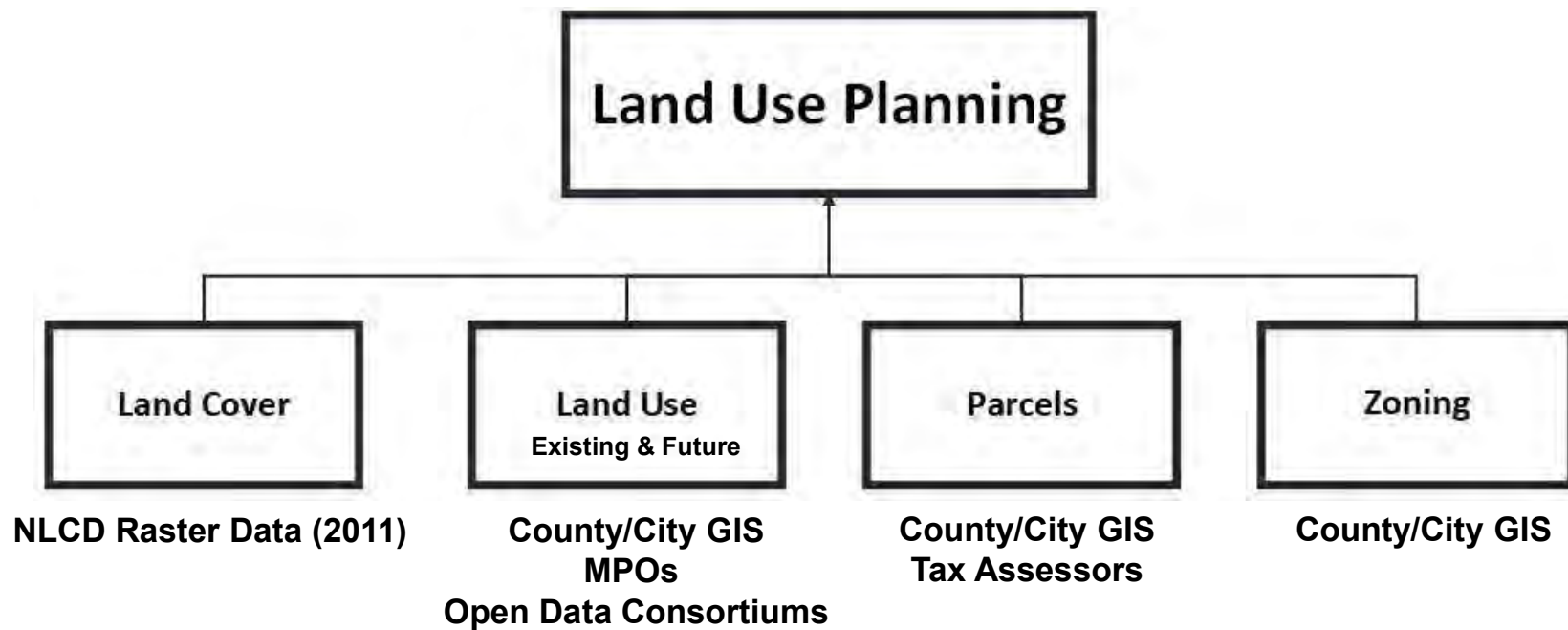


▲ **Noise Contour Lines**

GIS Data Sources

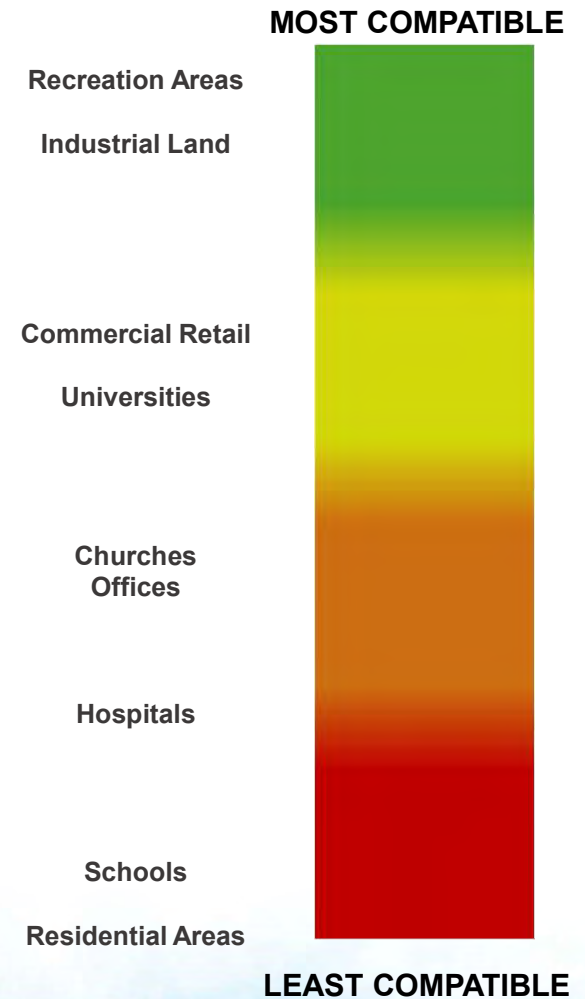


GIS Data Sources



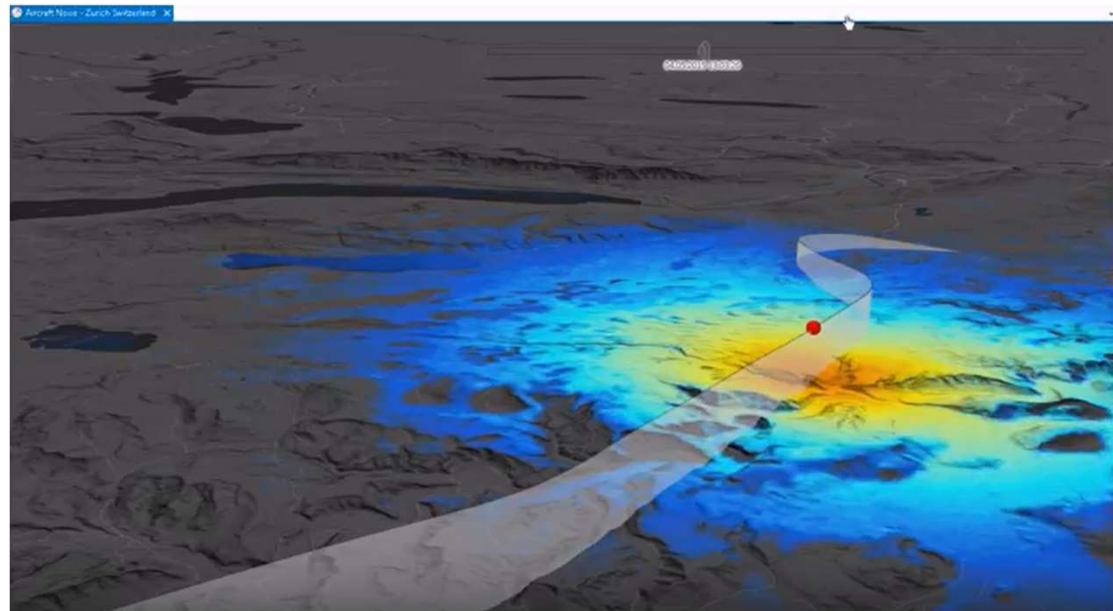
GIS Data Sources

- Land Use Compatibility Data
 - Land Use Types
 - Recreation Areas
 - Parking Lots
 - Commercial Areas
 - Education Facility
 - House of Worship
 - Medical Facility
 - Land Cover Types
 - Water Bodies
 - Road Centerlines



GIS Functionality

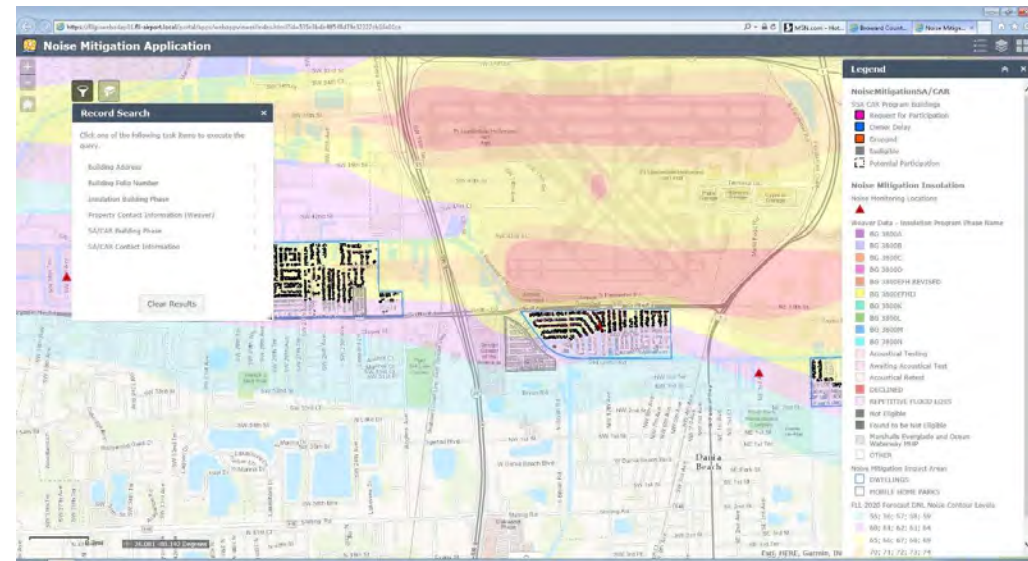
- ArcGIS Pro & ArcGIS for Desktop
 - Mitigation Strategies
 - Noise Contour Overlays
 - Spatial Analysis of Noise and Tracks



▲ *Spatial Analysis of Flight Tracks and Aircraft Noise Impacts using ArcGIS Pro*
Source: SonAIR

GIS Functionality

- Applications
 - Tracking Flight Tracks Real-time
 - Mitigating Noise Impacts
 - Querying Results
- PDFs
- Maps



▲ Noise Mitigation Application showing Noise Contours and Properties receiving Mitigation

Source: BCAD / FLL Airport

Questions & Answers

[Enter Airport Contract Information Here]

