

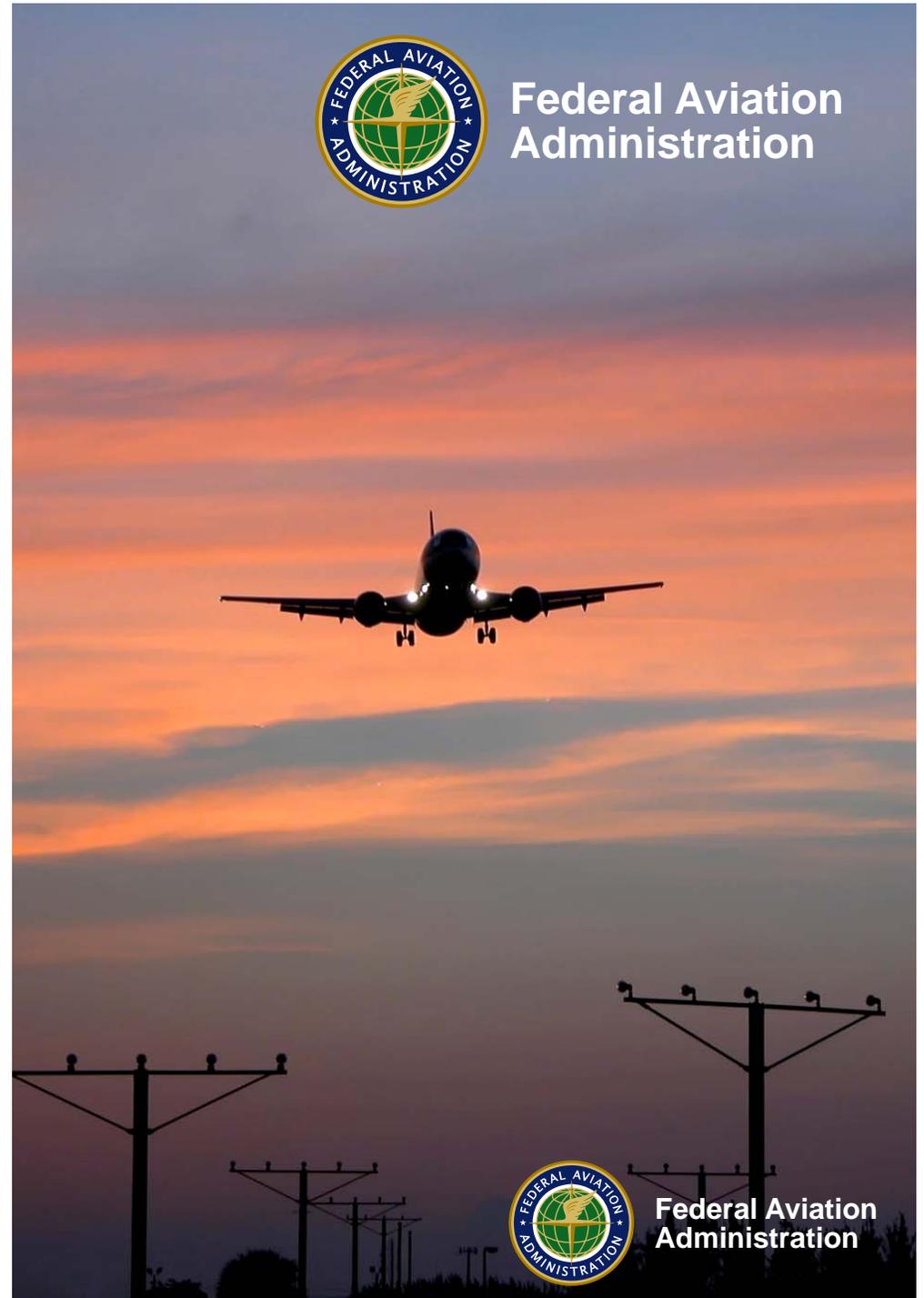
Environmental

Air and Noise Models

Presented to: **2018 Southwest Region
Airports Conference**

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Date: **January 31, 2018**



Objective

Provide better understanding about what models to use in different circumstances.



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Is Modeling Needed?

- **Noise**

- Project will not increase operations – **NO.**
- Projects involving operations ***below*** 90K annual operations of piston-powered aircraft, or 700 annual jet-powered aircraft operations, or 3600 annual operations of helicopter operations and hover times exceed 2 minutes – **NOT TYPICALLY.**



Is Modeling Needed? (noise cont'd)

- **Noise**

- Projects involving operations **above** 90K annual operations of piston-powered aircraft, or 700 annual jet-powered aircraft operations, or 3600 annual operations of helicopter operations and hover times exceed 2 minutes.

- Multi-runway airport – **YES**.
- Single runway airport – **MAYBE**.



Is Modeling Needed? (noise cont'd)

- **Single Runway Airport Projects Above Operational Thresholds**
 - Aircraft fleet changes – **YES.**
 - Flight tracks change – **YES.**
 - Aircraft fleet and flight tracks don't change – **MAYBE.**
 - Use the Area Equivalent Method (AEM) screening tool.
 - 65 DNL area increases by less than 17% - **NO.**
 - 65 DNL area increases by 17% or more – **YES.**



Is Modeling Needed?

- **Air**

- Airport is located in an air quality attainment area – **MAYBE.**
- Airport is located in an air quality non-attainment area – **MAYBE.**



Is Modeling Needed? (air cont'd)

- **Attainment Area**

- Project will not increase air emissions – **NO.**
- Project will increase air emissions, but is below threshold* - **NO.**

** FAA is working on a new national threshold. Until then, ASW uses the de minimus level of criteria pollutants in a Non-attainment Maintenance Area (100 tons/year) as the interim threshold.*



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Is Modeling Needed? (air cont'd)

- **Attainment Area**

- Project will cause increase in air emissions exceeding threshold – **MAYBE.**

- No air quality concerns raised during scoping and emissions increase does not jeopardize the area's attainment status – **NO.**
 - Emissions increase jeopardizes area's attainment status – **YES.**



Is Modeling Needed? (air cont'd)

- **Non-Attainment Area**

- Project is exempted from General Conformity or on the “Presumed to Conform” list – **NO**.
- Project’s increase in air emissions are below *de minimus* thresholds – **NO**.
- Project’s increase in air emissions exceed *de minimus* thresholds – **YES**.



Aviation Environmental Design Tool (AEDT)

- **AEDT2b was released on May 29, 2015.**
- **AEDT is to be used in place of;**
 - Integrated Noise Model (INM).
 - Noise Integrated Routing System (NIRS).
 - Model for Assessing Global Exposure to the Noise of Transport Aircraft (MAGENTA).
 - Emissions and Dispersion Modeling System (EDMS).
 - System for assessing Aviation's Global Emissions (SAGE).



AEDT (cont'd)

- **Noise**
 - AEDT models noise from aircraft operations (landing, takeoff, run ups).
 - AEDT does not model surface transportation noise.
 - FHWA's Traffic Noise Model is to be used for surface transportation noise modeling.



AEDT (cont'd)

- **Air**
 - AEDT models emissions from aircraft operations (landing, takeoff, run ups, taxi times).
 - AEDT models emissions from APUs, ground support equipment operations (tugs, baggage carts, etc...), on-airport motor vehicle fleets, boilers, generators, etc....
 - AEDT can also do dispersion modeling.
 - AEDT does not model construction emissions.
 - EPA's NONROAD should be used to model construction emissions.



Questions?



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