

Section 175

Understanding Dispersion



Federal Aviation
Administration



FAA Presenters

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2018 FAA Reauthorization Section 175

- What does Section 175 say?
 - New or amended procedure between the surface and 6,000 feet.
 - Request must come from an Airport Operator, not community.
 - Must not increase noise over noise sensitive area.

SECTION 175. ADDRESSING COMMUNITY NOISE CONCERNS.

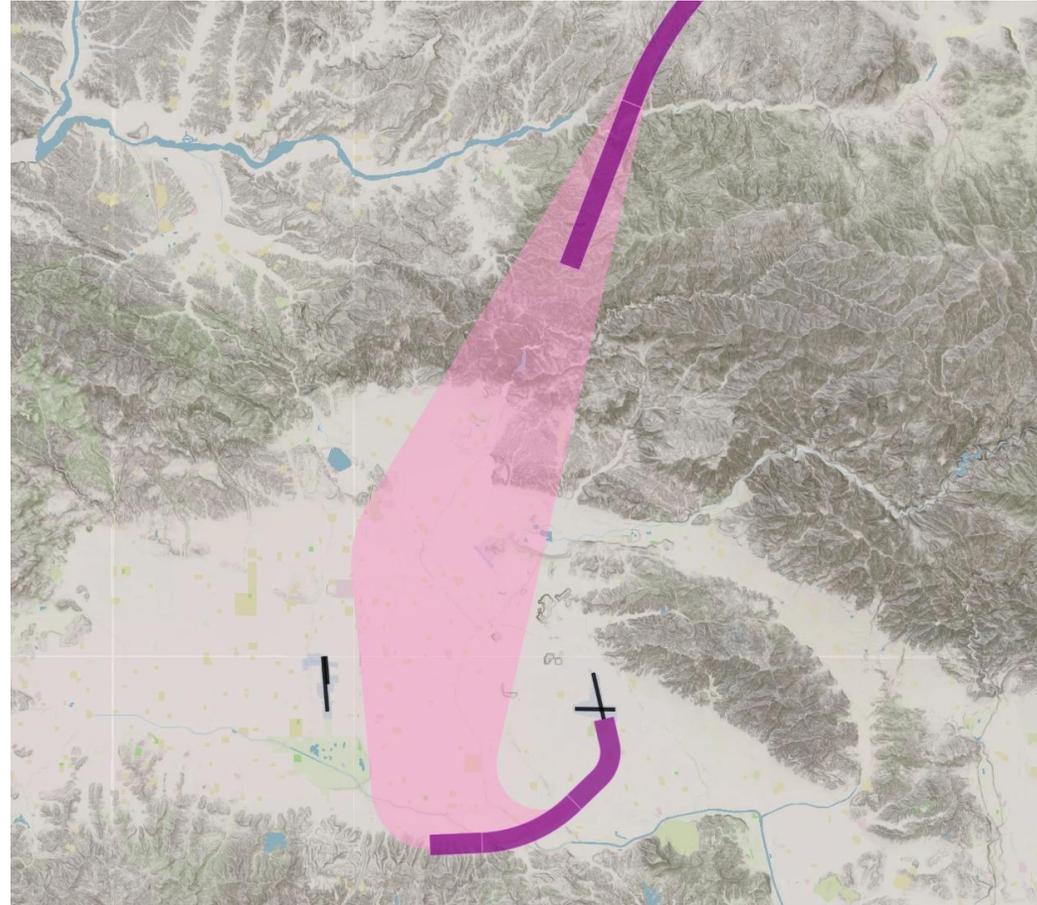
When proposing a new area navigation departure procedure, or amending an existing procedure that would direct aircraft between the surface and 6,000 feet above ground level over noise sensitive areas, the Administrator of the Federal Aviation Administration shall consider the feasibility of dispersal headings or other lateral track variations to address community noise concerns, if—

- (1) the affected airport operator, in consultation with the affected community, submits a request to the Administrator for such a consideration;*
- (2) the airport operator's request would not, in the judgment of the Administrator, conflict with the safe and efficient operation of the national airspace system; and*
- (3) the effect of a modified departure procedure would not significantly increase noise over noise sensitive areas, as determined by the Administrator.*



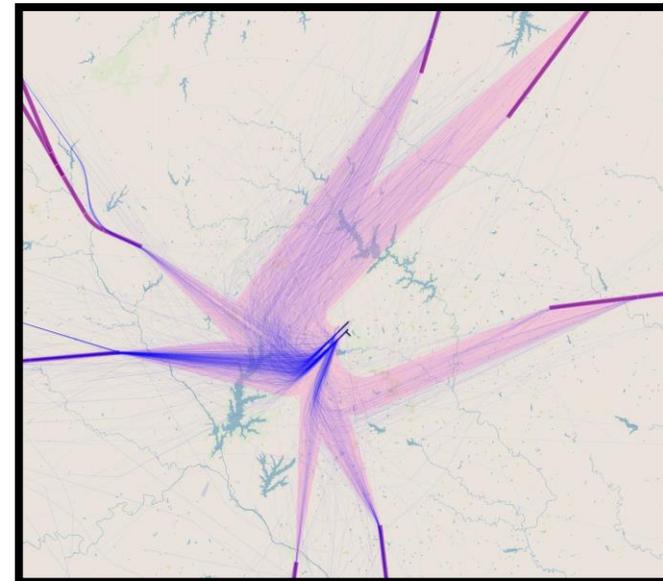
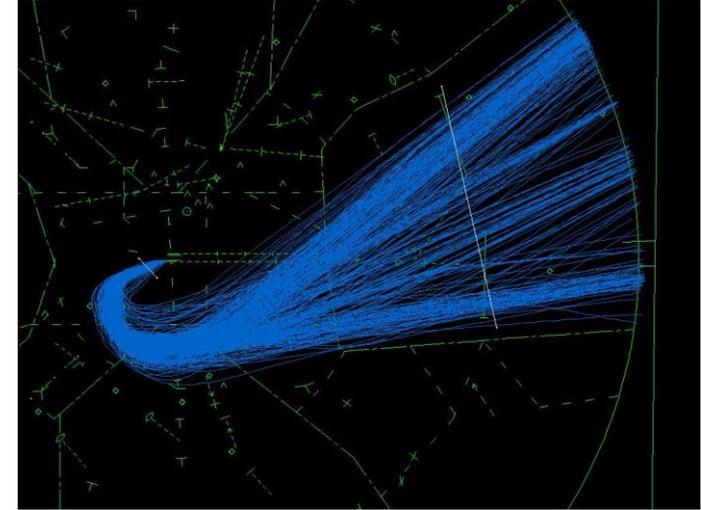
What is Dispersion?

- The process of introducing track variability by changing aircraft lateral position enough to spread out repetitive noise events experienced by people living under highly concentrated flight paths.



Natural vs. Operational Dispersion

- Natural (or random)
 - Associated with manually flown conventional procedures and ATC vectors
- Operational
 - Aircraft use alternative flight paths with very precise and predictable trajectories but in a controlled manner
 - This type of dispersion is most associated with the use of satellite-based navigation capabilities
 - Examples
 - Radar Vectors to RNAV
 - Open SIDs
 - Additional departure tracks



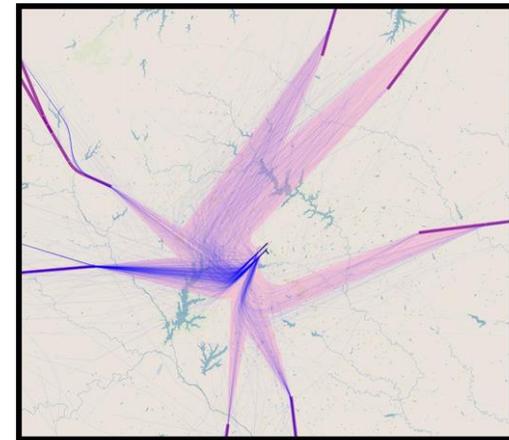
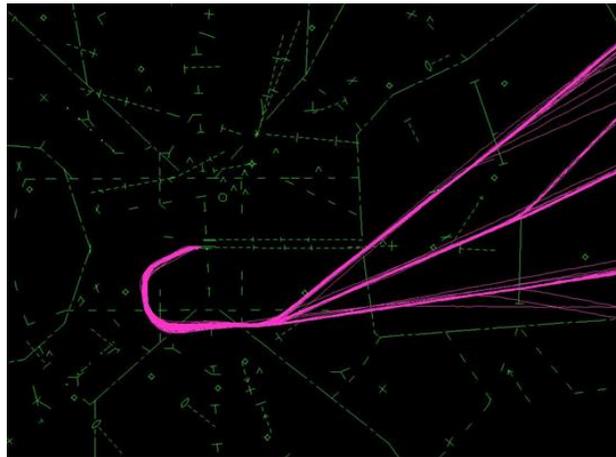
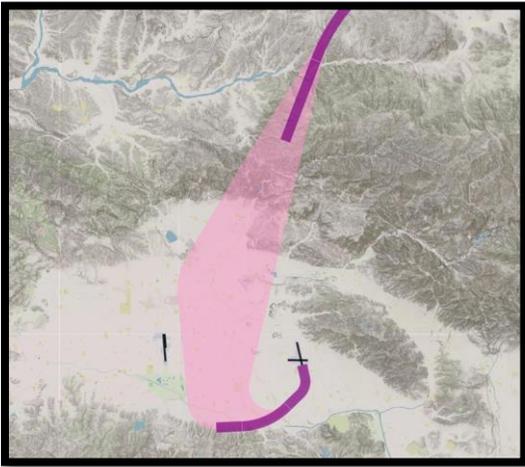
Naturally Occurring Concentration

- It is very important to note that concentration is not just due to PBN or NextGen. It's also more accurate trajectories on conventional procedures enabled by modern avionics. Newer aircraft may fly a conventional procedure with the same concentration of a satellite procedure.
- The operational line up of arriving aircraft will appear concentrated, but this is essential for a safe stabilized approach.



Types of operational dispersion concepts

- Open SIDs
- Multiple departure tracks
- Radar Vectors to RNAV SIDs



Why the FAA is implementing Instrument Flight Procedures (IFP)?

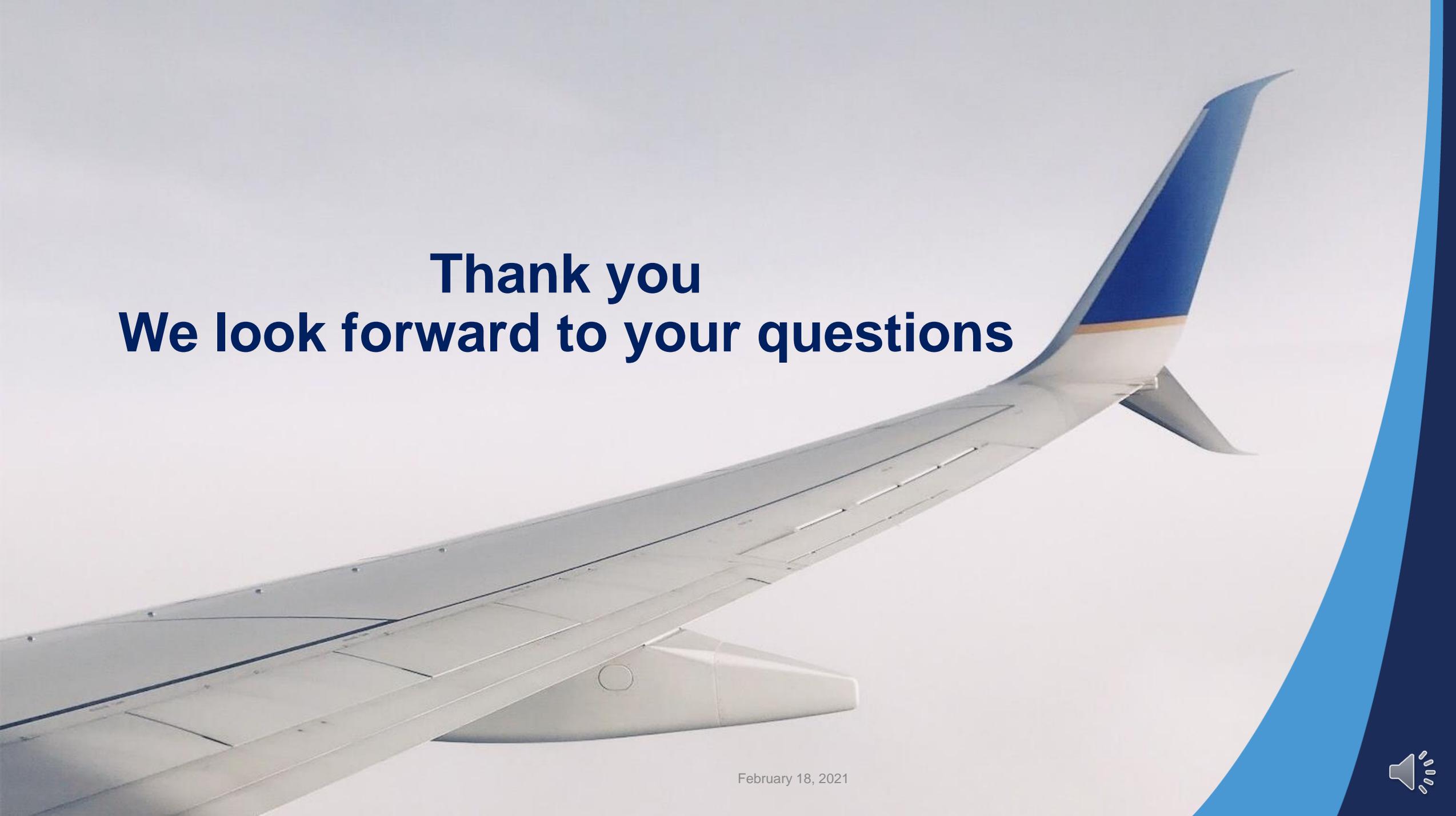
- It is a safety enhancement.
- In the 2008 and 2012 Reauthorization Congress mandated FAA to move to Satellite based National Airspace System (NAS)
- Benefits
 - Voice communications reduction
 - Procedurally separated routes
 - Better predictability



Dispersion should always be evaluated on case-by-case basis

- Community constraints
 - Location of noise sensitive areas
 - Level and breadth of community support
- ATC Constraints
 - Terrain
 - Airspace complexity
 - Runway layout
 - Operational needs





Thank you
We look forward to your questions

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