

# **Love Field Noise Program**

**City of Dallas**

**Environment and Sustainability Committee**

**Date: May 2, 2022**

**Mark Duebner, Director  
Department of Aviation  
City of Dallas**



# Presentation Overview

- Provide an overview of the Voluntary Noise Program
- Review measures implemented to address noise
- Address findings from the City Auditor's report on the Department's Voluntary Noise Program
- Present Department of Aviation's recommendations to update the Voluntary Noise Program
- Next Steps



# Voluntary Noise Program

- To better respond to the concern of our neighbors, the Department of Aviation for the City of Dallas has developed a Voluntary Noise Program for Dallas Love Field
- The Federal Aviation Administration (FAA) controls the National Airspace System in the United States
- FAA's Air Traffic Control (ATC) directs commercial air traffic to and from Dallas Love Field
- Department of Aviation is responsible for complying with FAA regulations and ensuring runways and taxiways meet standards



# Background/History

- **1980** – The Love Field Citizen’s Action Committee is founded
- **1981** – Voluntary Noise Control Program is adopted by Dallas City Council
- **1982** – Nighttime Preferential Runway measure implemented
- **1986** – Dallas Love Field’s first Noise Program Review
- **1988** – Designated Engine Run-Up area
- **1994** – ISD Public School Soundproofing Program
- **2017** – Casper Solutions is adopted as Department of Aviation’s newest Noise and Operations Monitoring System (NOMS)

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# 1981 Noise Study

- January 1981 – Love Field Environmental Advisory Committee selects consultant to evaluate and make recommendations to improve Voluntary Noise Abatement Program
- 15 noise abatement alternatives were recommended and reviewed by Advisory Committee
- December 16, 1981 – Of the 15 alternatives, 7 are approved by City Council to be included in the Voluntary Noise Control Program

# Voluntary Noise Program Overview

- The nighttime preferential runway measure encourages all jets and aircraft over 12,500 lbs. to use Runway 13R/31L (parallel to Denton Ave.) between 9 p.m. and 6 a.m. daily
- There is a non-standard Noise Abatement Departure Procedure for night operations off Runway 13R that routes aircraft over the Trinity River
- Aircraft are prohibited from aircraft engine runups between midnight and 6 a.m. Operators are asked to avoid this activity after 10 p.m. as a voluntary measure

# Airport Noise and Capacity Act of 1990

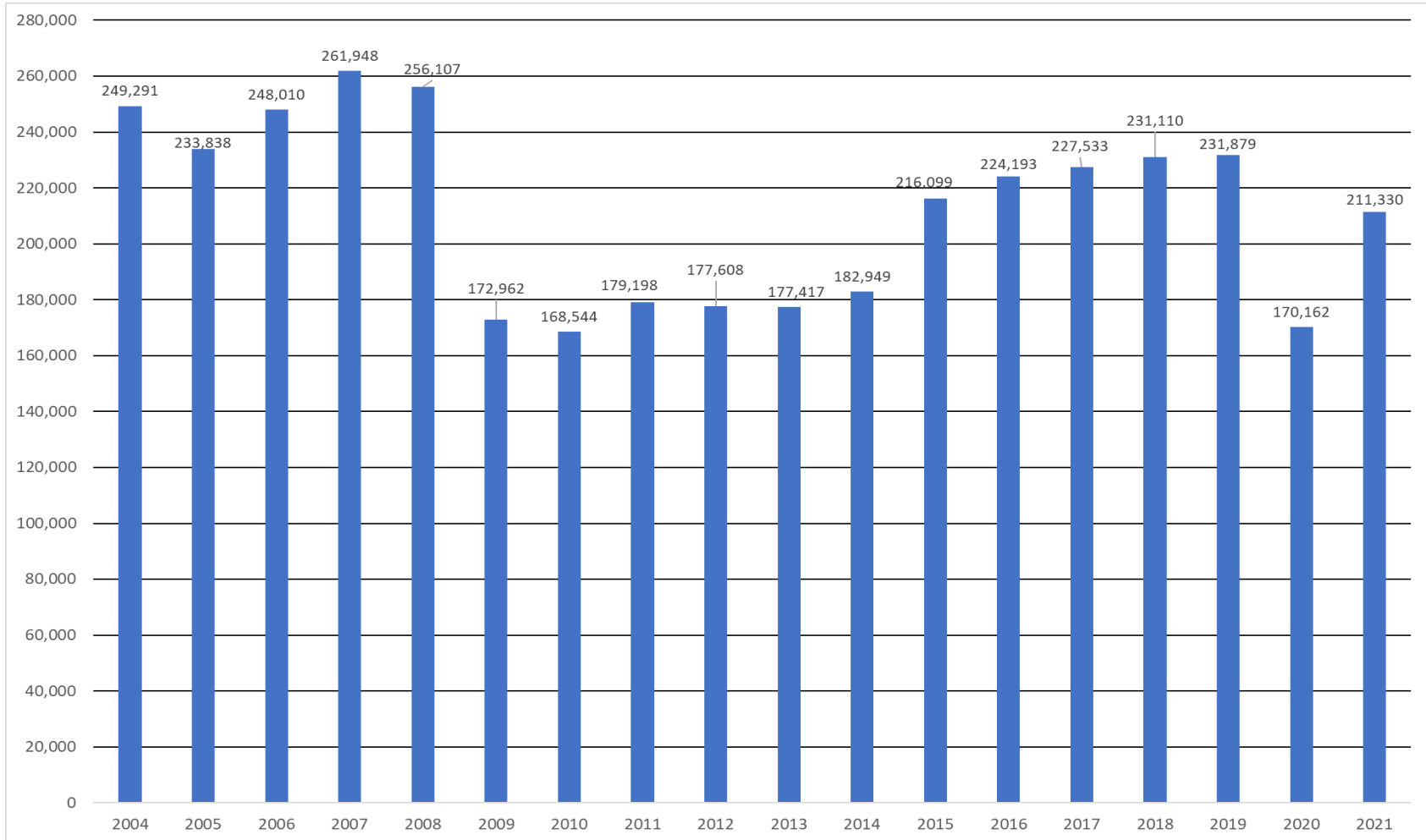
- Congress passes the Act requiring the approval of FAA
- Marks the elimination of all Stage II aircraft operated in or out of the U.S. airports by December 31, 1999, and is replaced by Stage III aircraft, which are much quieter
- The Act also removes authority for noise abatement/mitigation away from local governments and airport proprietors and grants the FAA sole authority on all noise restrictions
- Airports that had restrictions in place prior were grandfathered in

# Optimization of the Airspace and Procedures in the Metroplex (OAPM)

- FAA has integrated capabilities in place to improve air traffic flow for an entire region or metroplex
- Airspace was redesigned to consider multiple general aviation airports and major commercial airports
- Redesigned DFW airport traffic to make the Metroplex more integrated, efficient and predictable
- North Texas Metroplex was implemented September 2014
- Dallas Love Field has no authority on arrivals or departures



# DAL Total Operations

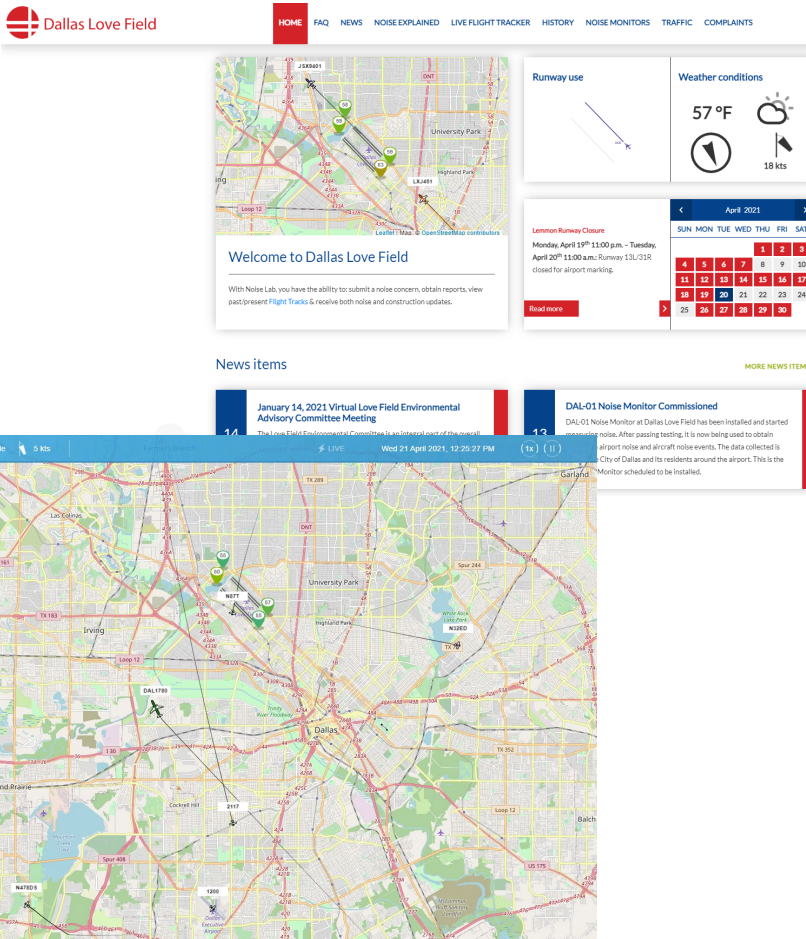


# Total Operations Cont'd

Runway Usage	Aircraft Departures			
	Day		Night	
	13L/31R	13R/31L	13L/31R	13R/31L
2013	49%	51%	40%	60%
2014	66%	34%	54%	46%
2015	52%	48%	43%	57%
2016	50%	50%	40%	60%
2017	41%	59%	28%	72%
2018	46%	54%	34%	66%
2019	37%	63%	28%	72%
2020	50%	50%	41%	59%

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# Recent Noise Program Improvements



- Upgraded NOMS
- New features available: Casper Noise Lab, ATC Recording
- Noise Complaint Initiative – FAA
- Zoning change request reviews
- Outreach: Quarterly Love Field Environmental Advisory Committee meetings, outreach events and monthly/weekly newsletters
- Pilot Signage

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“Focus Area”

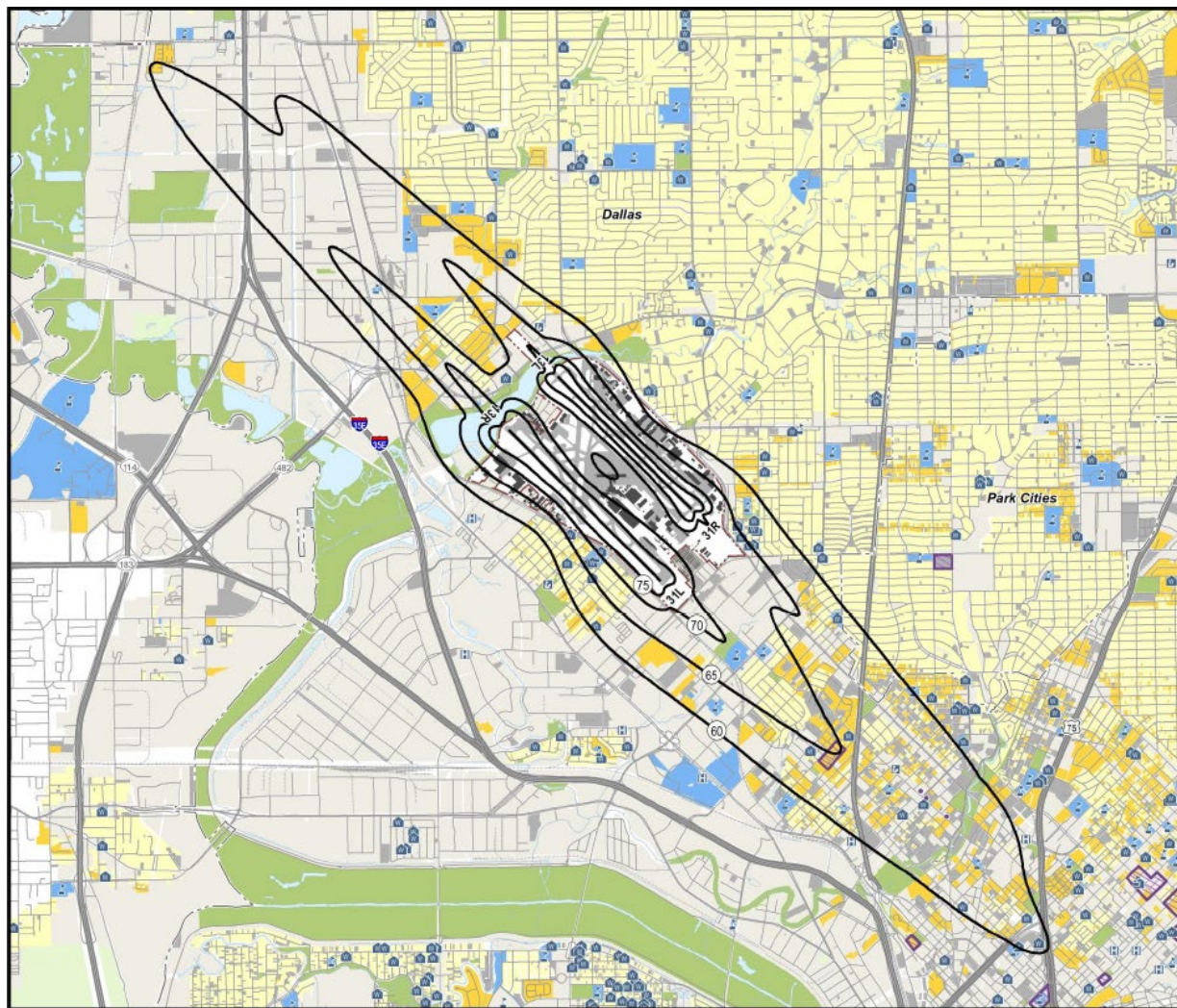
# Day-Night Average Sound Level

- Day-Night Average Sound Level (DNL) is used to describe the cumulative noise exposure during an average annual day.
- It provides a quantitative basis for identifying potential noise exposure
- DNL has been accepted as the best available method to describe aircraft noise exposure and is the noise descriptor required by the FAA for use in aircraft noise exposure analyses and noise compatibility planning
- The FAA has defined noise exposure at or above DNL 65 decibels as the “significance threshold” to the population
- 14 CFR Part 150 guidelines also indicate that all land uses are normally compatible with aircraft noise at exposure levels below DNL 65

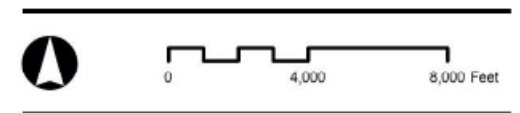
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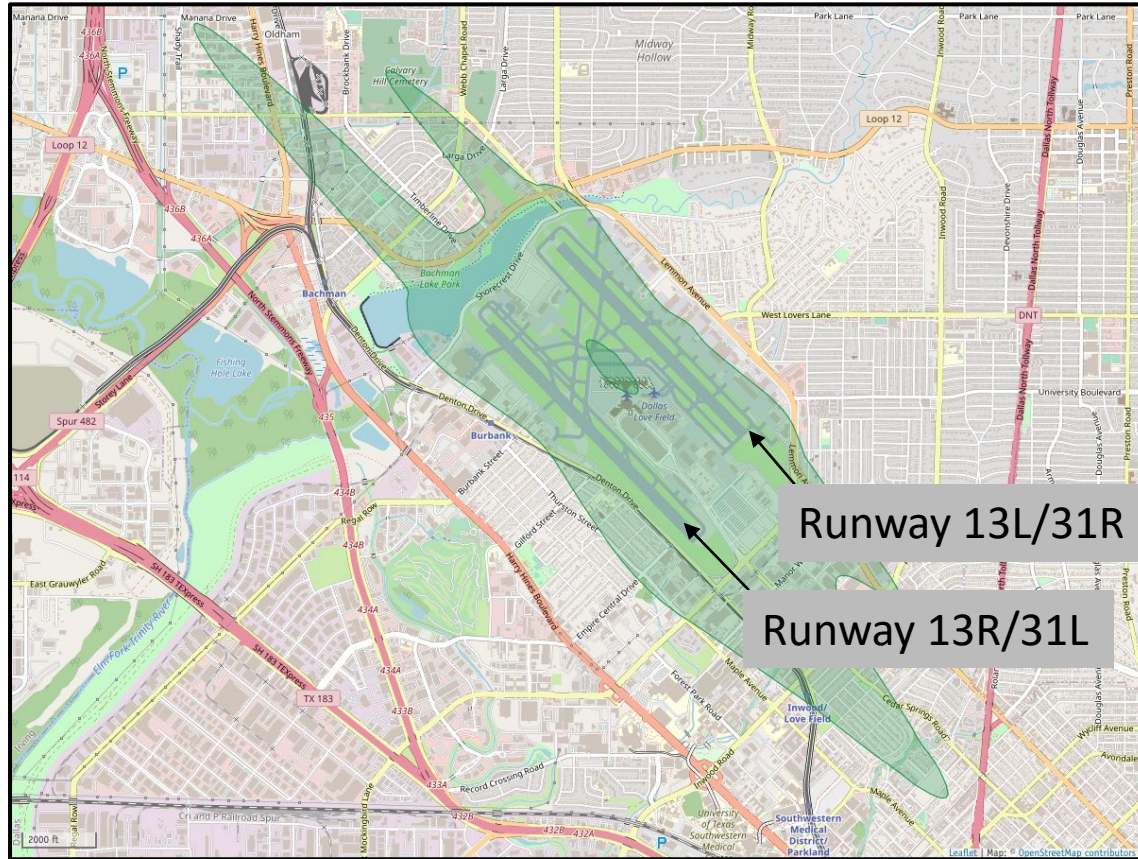


- Airport Boundary
- Airport Runway / Taxiway
- Airport Buildings
- Single Family Residential
- Multi-Family Residential
- Mobile Home
- Transient Lodging
- Public Use
- Open Space / Recreation
- Agricultural
- Water
- Vacant / Undefined
- Non-Residential
- City Limit
- Interstate
- Highways
- Major / Local Roads
- Railroad
- Schools
- Place of Worship
- National Register Historic Place
- National Register Historic District
- Hospital
- Libraries





# Map of 65 DNL Noise Exposure

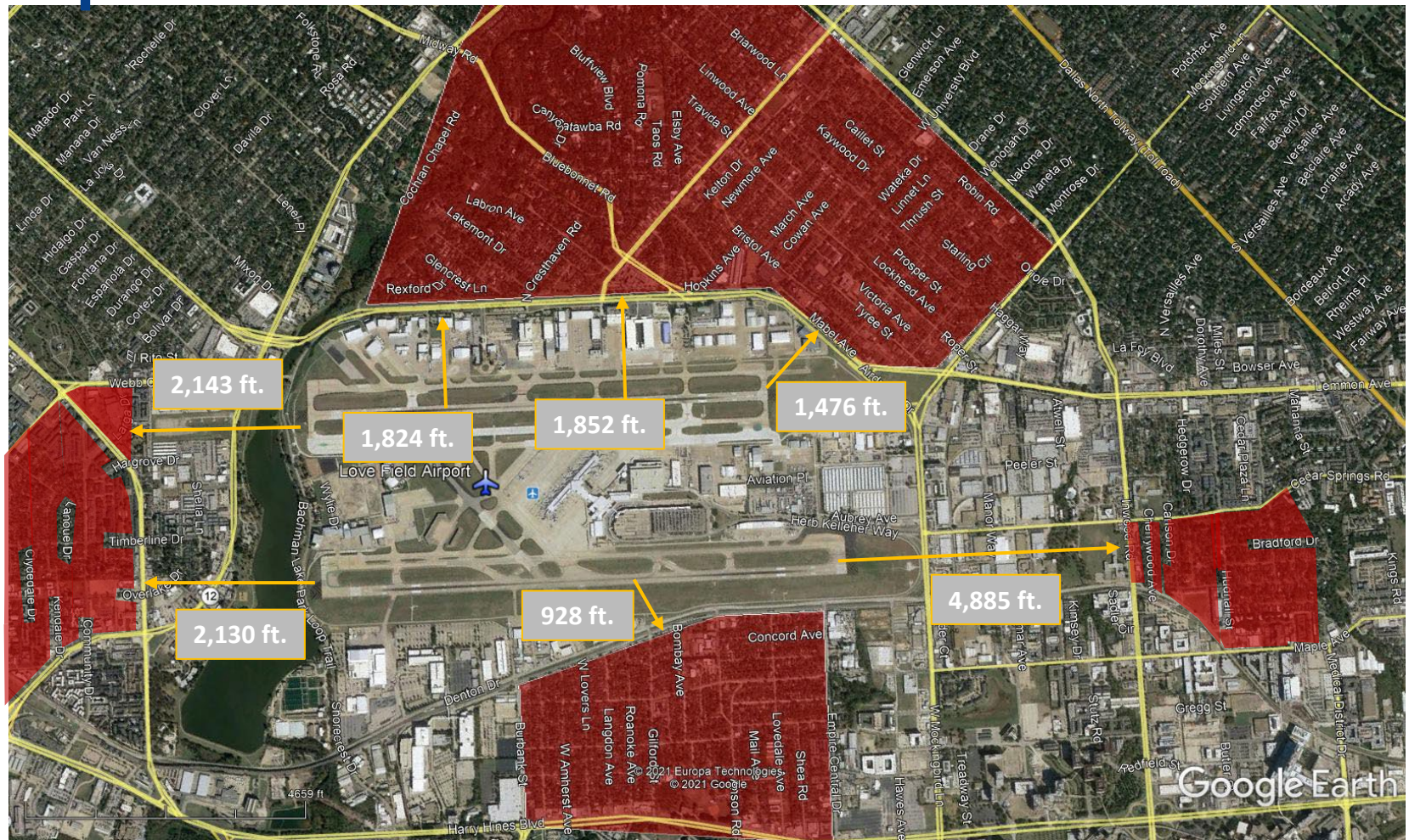


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“Focus Area”



# Map of Nearest Residential Areas



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“Focus Area”

# Audit of the Noise Program

- In November 2019, the City Auditor's Office conducted an audit on the Noise Program to determine whether the Department of Aviation is adhering to the program
- The audit recommended Department of Aviation improve or design controls to effectively monitor and document program participation and performance
- A key issue identified was that the program has not been reviewed and reauthorized by City Council since 1986
- Department of Aviation needs to update its program to be consistent with federal regulations and ensure equity in noise exposure (e.g., balanced runway usage)

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# City Auditor's Findings

Auditor's Recommendation	Concurrence/Action Plan
<p><b>A.1:</b> Develop a plan of action aimed at reversing, slowing down, or holding steady the growing land area and population exposed to excessive noise.</p>	<p>The City Manager accepts the risk as revised building codes now include requirements for sound insulation for all new buildings and some modified buildings, which require soundproofing to achieve DNL of 45 or less inside of the building.</p>
<p><b>B.1:</b> Develop and implement documented work procedures for investigating excessive noise complaints.</p>	<p>The Department of Aviation will update the existing procedure and develop a checklist for staff to follow and detailed instructions for training future staff.</p>
<p><b>B.2:</b> Develop and implement documented work procedures for monitoring airline participation in the following program components — Trinity departure, prohibition of engine maintenance run-ups, and optimal take-off profile.</p>	<p><u>Trinity Departure:</u> DAL will initiate reporting on level of use using the Casper Flight Tracking System. However, until the RNAV procedures are implemented by the FAA, the use of the Trinity Departure will remain low.</p> <p><u>Maintenance run-ups:</u> DAL will log maintenance run-ups to track compliance with the current measure.</p> <p><u>Optimal Takeoff Profile:</u> DAL will receive a written acknowledgment from airlines stating that they are flying the optimal takeoff profile</p>

# City Auditor's Findings

Auditor's Recommendation	Concurrence/Action Plan
<b>B.3:</b> Create performance measures specifying the participation percentage for the nighttime preferential runway usage that would initiate an escalation to next level of actions.	The City Council has not formally reviewed and re-adopted the noise program, including the preferential runway component, in 30 years. The program has some policies which are no longer applicable. In order to update the program to align with the current legal environment, the Department of Aviation will review the Noise Program and make recommendations to Council to revise the program as needed and sunset outdated policies

# Recommended Modifications

- **Modify** - the establishment of channelization tracks and remove altitude restrictions for helicopters
  - Since this measure was adopted, the FAA has published Helicopter routes for Dallas Love Field
  - Implement measure to encourage operators to follow the FAA published routes and monitor usage
- **Remove** - all training flights at night and restrict touch-and-go activity during busy periods
  - FAA requires Dallas Love Field to be open for aircraft 24/7 and controls all traffic; the airport cannot restrict operations

# Recommended Modifications

- **Retain** - optimize jet aircraft orientation during engine maintenance run-ups
  - Monitored and logged by Department of Aviation staff
- **Retain** - optimize turbo-jet take-off profiles
  - Written acknowledgment memos from Southwest Airlines, Alaska Airlines, and Delta Airlines stating that they are flying their optimal take-off profile
- **Remove** - construct a new high-speed exit for Runway 13R/31L
  - Subsequent analysis concluded there was no noise benefit to a proposed high-speed taxiway

# Recommended Modifications

- **Review** - Nighttime Preferential Runway and Trinity Departure utilize Runway 13R/31L (Parallel to Denton Dr.)
  - The Nighttime Preferential Runway measure was initially adopted with the Trinity Departure in mind
  - With FAA's modernization of the National Airspace System, the existing Trinity Departure procedure is not viable or efficient
  - With residential proximity on the west side of the airport, this preference results in disproportionate and unequitable noise exposure impacts
  - When these measures were adopted, the area southwest of the airport was primarily industrial, but now has many multi-family residential units and expanded medical facilities

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# Next Steps and Recommendations

- Obtain feedback from Environment and Sustainability Committee regarding recommendations
- Update Love Field Environmental Advisory Committee and obtain feedback
- Facilitate a stakeholder workshop to review the Preferential Runway Program, and any potential program enhancements
- Finalize program recommendations
- Place item on City Council Agenda for official adoption of updated Voluntary Noise Control Program

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