

New Smyrna Beach Airport Part 150 Update



Project Overview

- Background
- Review of Noise and Operational Conditions
 - Current Operational Conditions
 - Existing Noise Exposure Contours
 - Noise Abatement Measures
- Community Workshops and Public Comments
- Review of Other Airports
- Landing Fee Assessment
- Next Steps/Recommendations

Project Overview Continued



The Airport is located on 769 acres and has three paved runways: Runway 07/25, Runway 11/29, Runway 02/20



Over 1,000 homes sold within 2 miles of the airport over the past 36 months



The Airport is Home to:

- Aircraft Charter and Sales
- Fixed Based Operators
- Corporate Aviation
- Flight Schools
- Volusia County Mosquito Control

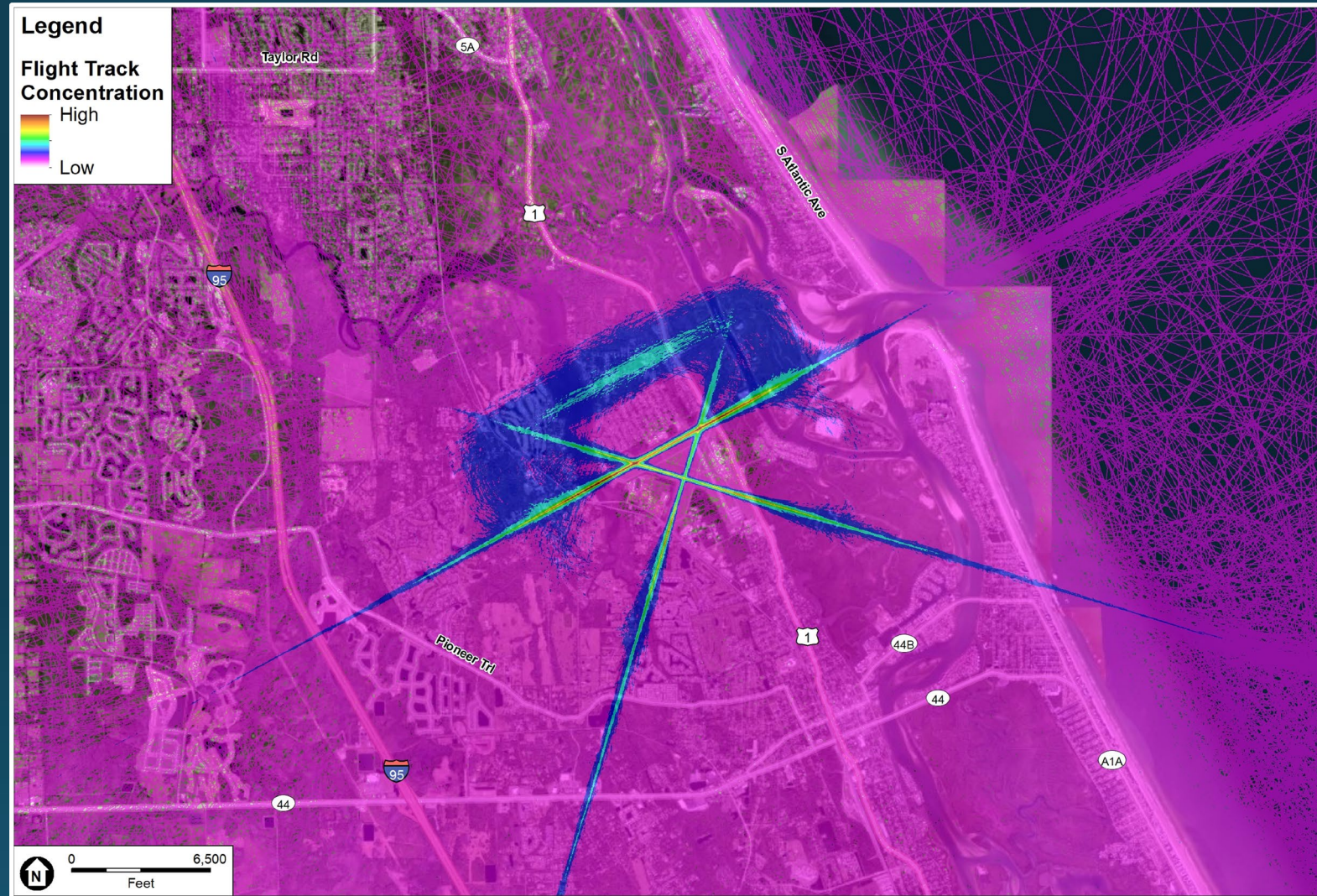


163,738 operations (arrivals, departures, and touch-and-go operations) in CY2022

Background

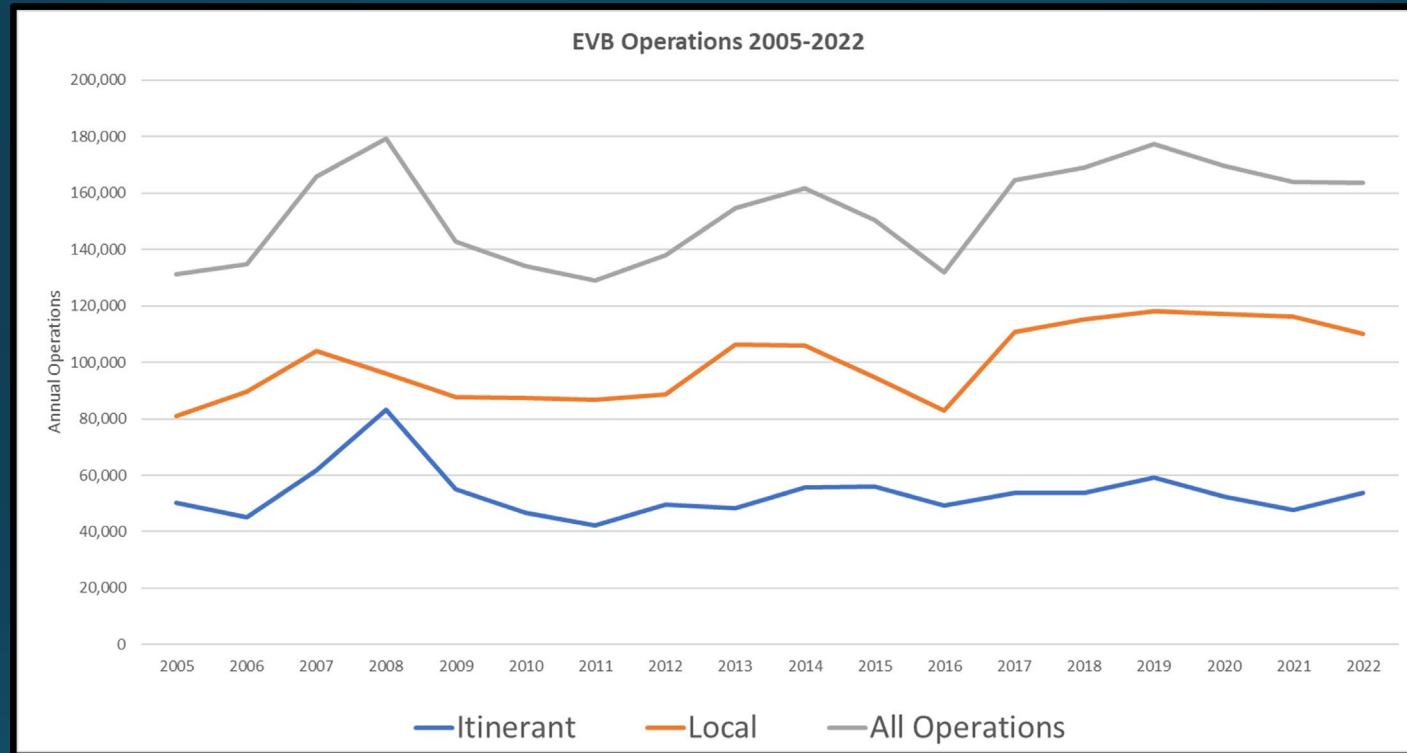
- A formal Title 14 Code of Federal Regulations Part 150 Noise and Land Use Compatibility Study was conducted in the 2010 timeframe.
- Measures were identified in the draft Part 150 Noise Compatibility Program (NCP) that could potentially reduce the affect of noise on the community, however the NCP process was ultimately suspended.
- A review of current operational and noise conditions at EVB was conducted earlier this year.
- July 2023 community workshops offered the community an opportunity to review analysis and provide public comment.

Flight Patterns



Note: Based on Seasonal One-Week Flight Track Data Samples – January, April, August, November 2022

Operational Trends



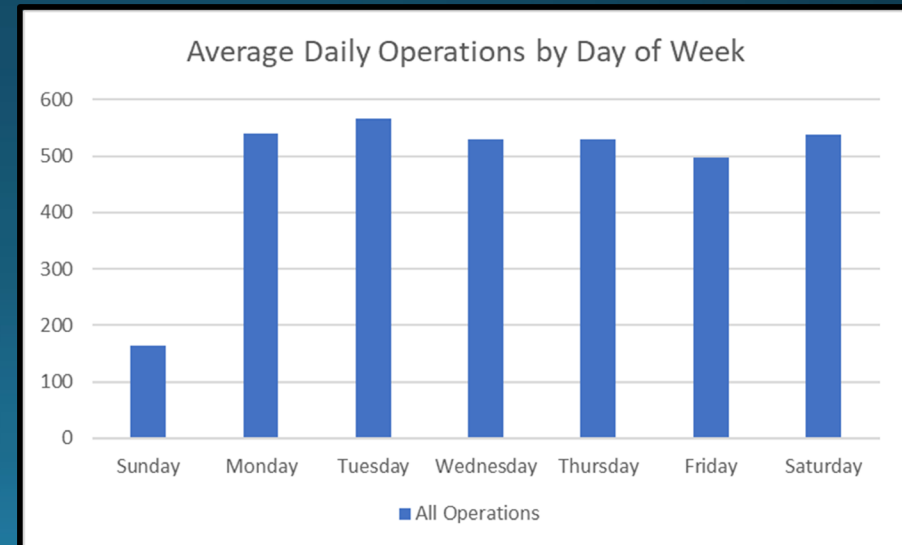
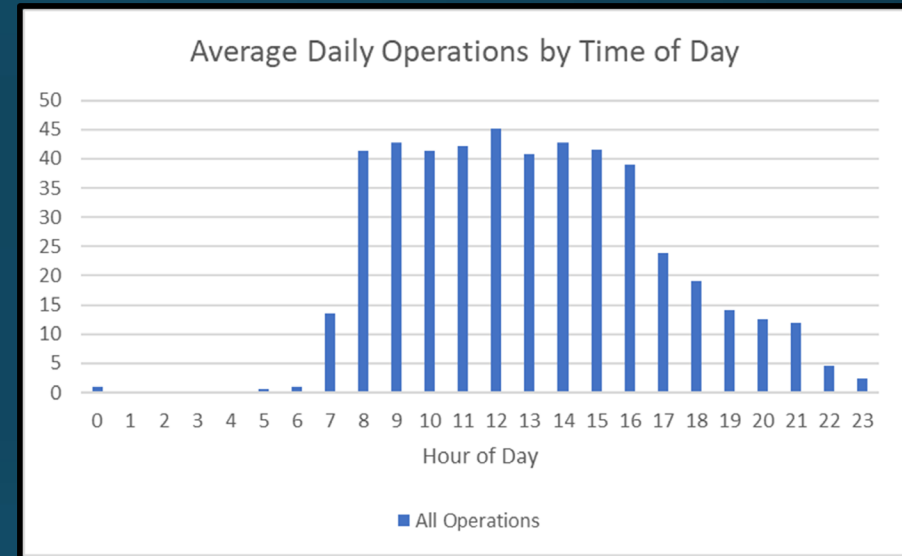
Source: FAA, 2023

- Total number of aircraft operations largely driven by local flight training operations
- Itinerant operations have remained steady after peaking in 2008
- Local operations peaked in 2019 and have remained largely consistent

Airport Daily Activity Profile

- Roughly 22% of operations occur between the hours of 5 p.m. and 8 a.m.
- Fewer than 3% of operations occur between the hours of 10 p.m. and 7 a.m.
- Roughly 5% of weekly operations occur on Sundays
- Airport activity is generally much lower than average on Sundays and national holidays

Note: Based on Virtower operations data from August 6, 2022 – April 30, 2023; scaled to a full year



Regulation of Airport Noise

Framework

Federal law sets aircraft noise standards, prescribes operating rules, establishes the compatibility planning process, and limits an airport's ability to restrict aircraft operations.



Federal Aviation Administration

Stakeholders

The FAA: (1) Controls aircraft while in flight; (2) Responsible for controlling noise at its source (i.e., aircraft engines); (3) Certifies aircraft and pilots

State law sets forth compatibility planning guidelines and noise standards, but aircraft are exempt



Local Governments and States

Local Governments and States: (1) Promote compatible land use through zoning; (2) Require real estate disclosure; (3) Mandate sound-insulating building materials

Local noise ordinances set noise standards and provide for compatible land use planning, but aircraft are exempt

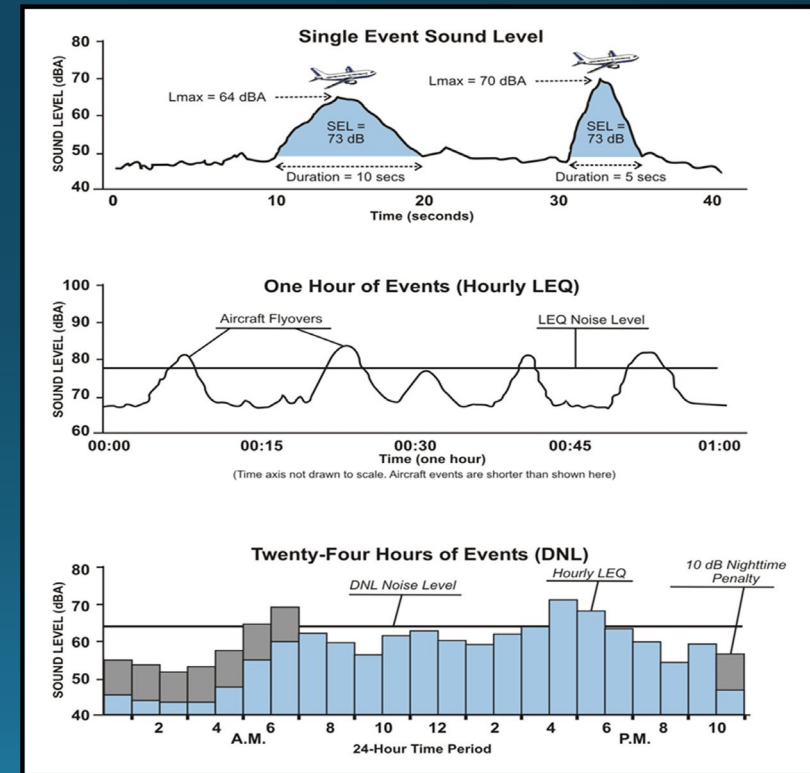
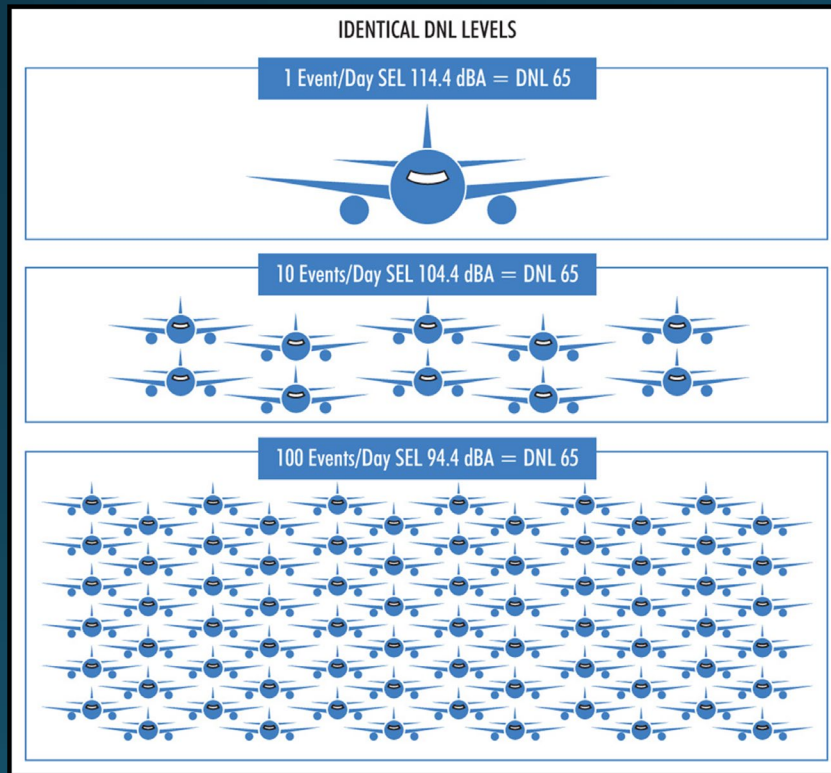


Airport Operators

Airport Operators: (1) Very limited authority to adopt local restrictions; (2) Responsible for capital improvement projects and infrastructure

Day Night Average Sound Level (DNL) Overview

- FAA requires the use of DNL for airport noise assessments performed under Part 150
- DNL represents the weighted average noise level over a 24-hour period
- Reflects increased noise sensitivity at night by making one flight at night equivalent to 10 flights during the day
- FAA considers annual average day DNL 65 dB as the noise exposure level above which is considered noncompatible for noise sensitive land uses
- Seasonal variations in noise exposure are often not well represented in the average conditions reflected in noise contours



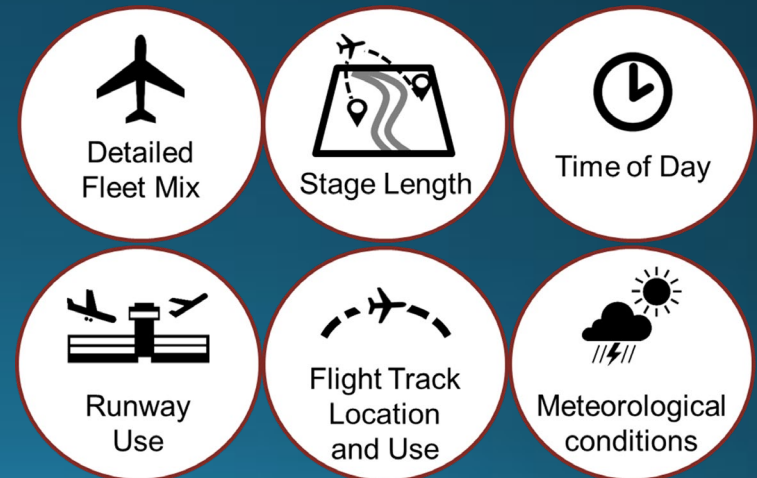
Noise Modeling Methodology

Model Inputs

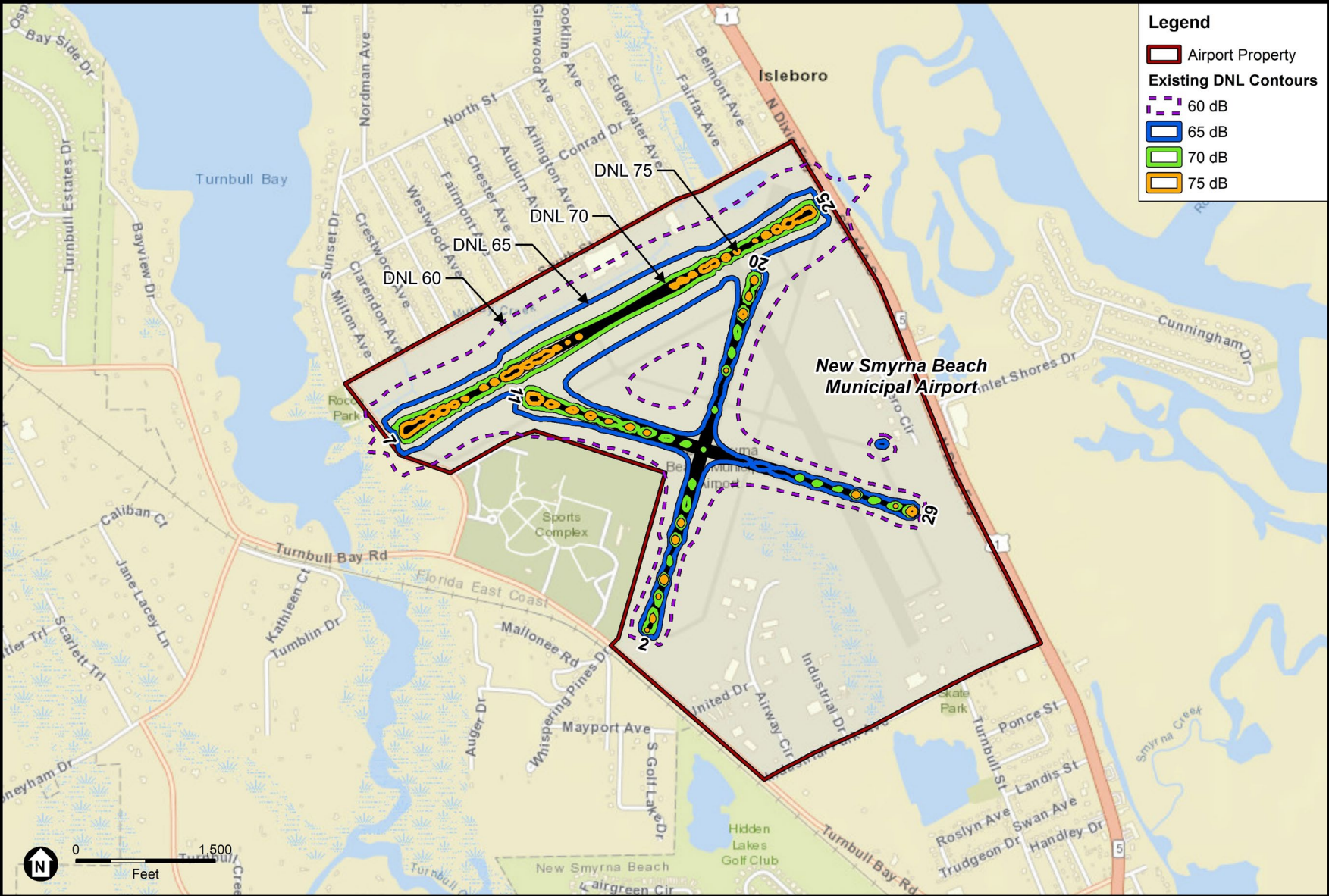
- Amount of noise exposure is determined by:
 - Aircraft types
 - Stage length
 - Number of average annual day operations
 - Nighttime weighting (1 nighttime operation = 10 daytime operations)
- Noise exposure distribution is determined by:
 - Runway configuration and use
 - Flight track locations
 - Flight track use
- Other factors
 - Meteorological conditions
 - Terrain



Aviation Environmental Design Tool (AEDT) Version 3e



2022-2023 Noise Exposure Contours



Summary of Analysis

- Overall, Airport activity has decreased since peaking in 2008, though flight training activity remains at historically high levels
- Over 1,000 homes have sold within two miles of the Airport in the past 36 months, potentially introducing many new people to the area surrounding the Airport
- Updated noise exposure contours reflect decrease in overall operations and jet activity when compared to 2008 NEM baseline level
- Voluntary Noise Abatement Measures remain in place to reduce noise
- Daily Airport activity shows observance of voluntary noise abatement measures

Community Workshop – Public/ Suggestions

Under Consideration

- Designate a calm wind runway.
- Spread flight training operations more evenly across all runways (when feasible and winds permit)
- Continue education and outreach with flight schools.
- Expand voluntary noise abatement hours to 5 p.m. - 8 a.m.
- Institute a landing fee (non noise related - feasibility discussed later).

Not Under Consideration

- Institute more stringent limits on training operations or aircraft allowed in the pattern at one time.
- Expand voluntary noise abatement days.
- Reconvene a Community Noise Abatement Committee (possible agenda item under Airport Advisory Board instead).

Not Feasible

- Move training operations to other airports.
- Relocate the Airport or build a new training airport in nonresidential areas.
- Require flight schools to use quieter aircraft or install mufflers on existing fleet.
- Enforce voluntary noise abatement measures.
- Institute a Residential Sound Insulation Program.



Voluntary Noise Abatement Measures at Similar Airports

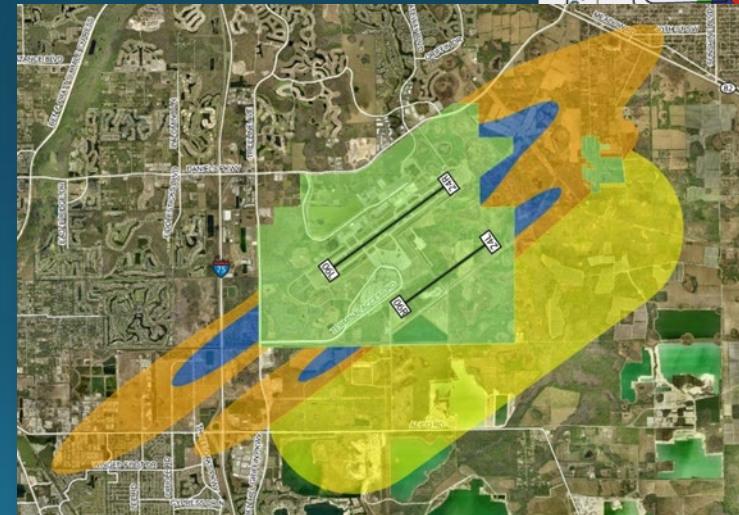
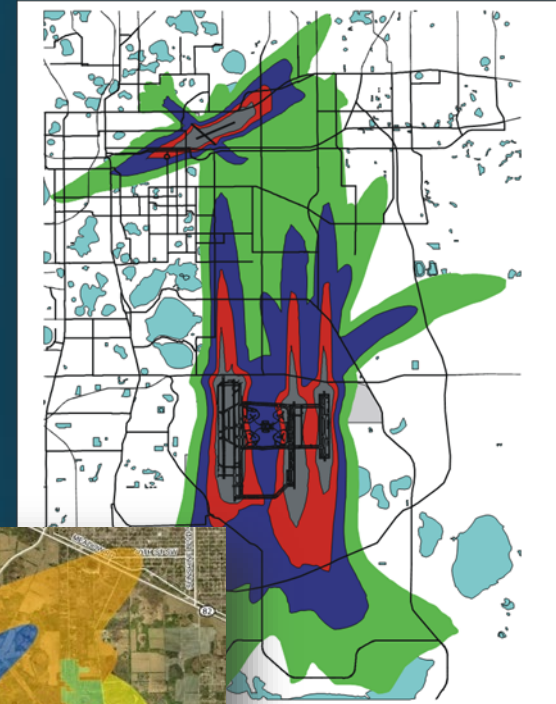
Airport	Total Operations (2022)	Noise Abatement Measures					
		Calm Wind Runway	Flight Training Noise Abatement Hours	Flight Training Noise Abatement Days	Touch & Go Limit	Pattern Altitude	Other
New Smyrna Beach Airport	162,292	No	No touch & gos between 5 p.m. to 8 a.m.; No repetitive flight operations between 10 p.m. and 7 a.m.	Sundays and holidays	8 before full stop or departing pattern	800 ft. MSL	<ul style="list-style-type: none"> - Avoid residential areas where possible - Departures use best rate of climb
Martin County Airport / Witham Field	121,461	No	8 a.m. to two hours after sunset	Sundays and major holidays	3 before full stop or departing pattern	1,000 ft. MSL	<ul style="list-style-type: none"> - Voluntary nighttime curfew for all aircraft 11 p.m. to 7 a.m. - Stop & go intersection takeoffs strongly discouraged - Maintenance run-ups limited to 8 a.m. to 6 p.m. Monday to Saturday
Flagler County Airport	152,378	Yes; Runway 11	10 p.m. to 7:30 a.m.	10 p.m. to 9:30 a.m. Sunday and holidays	No	1,033 ft. MSL	<ul style="list-style-type: none"> - Departures use best rate and angle of climb - Stop & go intersection takeoffs strongly discouraged

Voluntary Noise Abatement Measures at Similar Airports

Airport	Total Operations (2022)	Noise Abatement Measures					Other
		Calm Wind Runway	Flight Training Noise Abatement Hours	Flight Training Noise Abatement Days	Touch & Go Limit	Pattern Altitude	
Ormond Beach Municipal Airport	96,474	Yes; Runway 17	10 p.m. to 8 a.m.	No	No	No higher than 1,200 ft. MSL	<ul style="list-style-type: none"> - Pilots should fly various noise abatement flight paths/avoid certain areas as depicted in in-flight guide map - Departures use best rate of climb - Pilots requested to review and use AOPA “Noise Awareness Steps” where possible
Merritt Island Airport	N/A	No	8 p.m. to 8 a.m.	Sundays and holidays	No	1,000 ft. MSL	<ul style="list-style-type: none"> - Avoid flying low over residential areas where possible - Departures use best angle of climb
Pompano Beach Airpark	141,734	Yes; Runway 15/33	6 p.m. to 8 a.m.	Saturday, Sunday, and holidays	No	800 ft. MSL	<ul style="list-style-type: none"> - Departures use best rate of climb - Pilots requested to review and use AOPA “Noise Awareness Steps” where possible - Stop & go intersection takeoffs strongly discouraged - Simulated engine out procedures prohibited - Touch & Go must touch down within first 1,000 ft. of runway - Engine maintenance runups prohibited between 7 p.m. and 7 a.m.

Noise Notification or Disclosure

- Benefit
 - Sensitivity to noise varies
 - Helps the public become informed
- Threshold
 - Beyond DNL 65
 - DNL 55 would provide little benefit for EVB
- Alternatives
 - Establish airport influence area (AIA)?
 - Combination of DNL 55 and high overflight areas?
 - Incorporate high complaint areas?



Landing Fee Feasibility

- Mechanism used to recover airfield operating expenses and capital costs
- Cannot be used with express purpose of reducing aircraft activity
- Preliminary allocation of labor, expenses and capital costs indicates that more than \$670,000 could be eligible for recovery in FY2024
 - Labor \$190,500
 - Operating Expenses \$166,100
 - Capital Recovery* \$386,250
 - Total Airfield Costs \$671,850
- Based on 2023 operational levels, total cost allocation would be \$7.79/arrival or \$3.31/arrival if capital costs are removed

*annual depreciation expense on airfield assets (runways, taxiways, lighting, etc.)

Landing Fee Feasibility

Collection considerations:

- Estimated cost of collection - \$75-100k/yr
- High volume of flight training (90% of total operations)
 - Tenant accounts for 78% of all operations
- Training activity and based aircraft (tenants) are typically exempt from landing fees
- Conclusion: Landing fees do not appear to be an effective method for cost recovery at EVB.

EVB Top Ten Operators

Operator	Operations
Epic Aviation*	137,746
Embry Riddle*	9,421
Phoenix East*	4,077
Air America*	3,414
P. Santopietro*	3,302
M. Faller	1,203
Airgate	607
Aerosim*	434
Blue Skies	440
Baker Aviation	345
Total Operations (91%)	160,989

Source: Virtower, 2024

* Flight training provider

Next Steps/ Recommendations

- Based on the Noise and Operational Analysis, and feedback received at the July Public Workshops, ESA has identified several areas of possible improvement to the Airport's Voluntary Noise Abatement Program and overall noise environment:
 1. Designate a Calm Wind Runway
 - ESA recommends the Airport work with Air Traffic Control (ATC) to formally designate a calm wind runway.
 2. Raise the Pattern Altitude
 - ESA recommends the Airport work with ATC to determine the feasibility of raising the pattern altitude from 800 ft. MSL to 1,000 ft. MSL.
 3. Simplify Voluntary Noise Abatement Hours
 - ESA recommends the Airport discourage flight training operations, including repetitive operations and touch & go's, between the hours of 5 p.m. and 8 a.m.
 4. Continue Education and Outreach with Flight Schools
 - ESA recommends the Airport continue to work with flight schools on noise abatement and related concerns.
 5. Regularly Discuss Noise in Airport Advisory Board Meetings
 - ESA recommends adding noise to the regular meeting agendas.
 6. Consider Implementation of a Disclosure or Notification Area
 - This strategy allows people to be more informed about aircraft overflight activities