Agenda

• Welcome and Introductions
• Technical Advisory Committee (TAC)
  • Purpose and Objectives of the Technical Committee
  • TAC Charter and Participation Agreement
  • Role of the TAC Meeting Facilitator
  • Florida’s Sunshine Law
• Airport Overview
• Part 150 Study Overview
• Introduction to Aircraft Noise, Modeling, and Compatibility
• Project Schedule
• Questions
Welcome and Introductions – Consultant Team

Environmental Science Associates
- 500+ person environmental consulting firm
- Experience at more than 150 airports nationally
- Highly complex projects
  - Fort Lauderdale-Hollywood International Part 150
  - LaGuardia Part 150
  - John F. Kennedy International Part 150
  - Los Angeles International Part 150
  - San Francisco International Part 150
  - Hartsfield-Jackson Atlanta International Part 150
- 100+ airport noise-related studies in Florida

Garth Solutions
- 30+ person communications and management consulting firm
- Numerous marquis public and private sector projects including:
  - $2.3 billion Fort Lauderdale-Hollywood International Airport expansion program
  - Fort Lauderdale-Hollywood International Part 150
  - Broward Schools Capital Improvement SMART Program
  - $4 billion Public-Private Partnership SoLe Mia Development project in the City of North Miami
  - Metlife Stadium
  - Tropicana Field
Technical Advisory Committee
TAC Overview

- Naples Airport Authority (NAA) has formed a Technical Advisory Committee (TAC) for the Part 150 Study for Naples Airport (APF)
- NAA has invited a cross section of key stakeholders to serve on the TAC
- The TAC is composed of members who are authorized to represent their organization and/or constituents for the duration of the APF Part 150 Study, which is estimated at two years
- TAC meetings will be conducted in a professional and respectful manner
- TAC meetings will be open to the public, subject to space availability
TAC Membership

• Noise Compatibility Committee (NCC) Liaison
• NAA Liaison
• Community Representatives
  – NW, NE, SW and SE Quadrants
  – At-Large City of Naples
  – At-Large Collier County
• City Planning Department
• County Growth Management Division
• Greater Naples Chamber

• Naples Area Board of Realtors (NABOR)
• 5th Avenue Business Improvement District
• Naples Airport piston operator
• Naples Airport jet operator
• Naples ATCT representative
• FAA RSW TRACON representative
• FAA Airports District Office (ADO)
Purpose and Role of the TAC

• TAC members represent the interests of their organization and/or constituents

• The TAC’s role is to support the APF Part 150 Study
  – Review study assumptions
  – Provide technical feedback within the context of the Part 150 Study (noise exposure maps and noise compatibility program)
  – TAC members are encouraged to express their opinions and expected to respect the range of opinions expressed by their fellow TAC members

• TAC members are also expected to advise their organization and/or constituents of the TAC’s discussions

• NAA will respect and consider the TAC’s technical input, but retains responsibility for, and decision making authority on, the APF Part 150 Study
Role of the TAC Facilitator

- To ensure that the TAC meetings are effective they will be facilitated by a professional meeting facilitator.

- The meeting facilitator is responsible for ensuring that the TAC meetings adhere to the published meeting agenda.

- The meeting facilitator may extend or shorten the length of a discussion related to an agenda item at his or her sole discretion.

- The meeting facilitator, or NAA, may cancel or suspend a TAC meeting due to disrespectful or disruptive behavior.
Overview of Florida Sunshine Law

• The activities of the Technical Advisory Committee will be subject to the requirements of Florida Sunshine Law

• The Technical Advisory Committee will also be subject to public records law
Airport Overview
APF Overview

• APF began operating in 1943 as a military airfield and celebrated their 50th anniversary on July 3rd, 2019
• Fiscal Year 2019 the Airport had 112,800 operations
• $8 million invested in noise abatement efforts since 2000
• The Airport is home to:
  - Flight Schools
  - Aircraft Charter and Sales
  - Air Ambulance
  - Corporate Aviation
  - Civil Air Patrol
  - Mosquito Control
APF Overview

• Runway 5-23
  - 6,600' long X 150' wide
  - 800’ displaced thresholds at each runway end

• Runway 14-32
  - 5,000' long X 100’ wide
  - 128’ displacement at RW 14 end
  - 450’ displacement at RW 32 end

• SW-NE Turf Runway
  - 1,850’ long x 100’ wide

• Contract Air Traffic Control Tower
Roles of Key Entities

Three core organizations are involved in aircraft operations at APF:

• **Federal Aviation Administration (FAA)**
  – Directs the safe movement of aircraft in the air and on the ground

• **NAA**
  – Manages the airport(s), improves and maintains airport facilities
  – No control over where aircraft fly

• **Pilots**
  – The pilot in command has ultimate responsibility for the safe operation of his/her aircraft
Part 150 Study Overview
Part 150 Study Overview


• Issued in response to provisions contained in the Aviation Safety and Noise Abatement Act of 1979

• Establishes the methodology to be followed when preparing aircraft noise exposure maps and developing airport/airport environs land use compatibility programs

• Part 150 studies are voluntary, but…

• Part 150 studies must adhere to 14 CFR Part 150 guidelines to be considered and accepted and approved by FAA
The 14 CFR Part 150 process is the Airport Sponsor’s mechanism to improve the compatibility between the Airport and surrounding communities.
Goals and Objectives

Key Issues:

• NAA has strong history of industry noise leadership but a desire to examine whether any additional reasonable noise mitigation strategies can be implemented
• Jet activity has increased and will continue to grow
• Training activity is on rebound
• Seasonal variations are masked by DNL
• Quiet Hours voluntary curfew compliance remains above 98%
• APF noise exposure has generally decreased over time according to federal guidelines (14 CFR Part 150), but community concerns about aircraft noise continue
Goals and Objectives

Opportunities
• Brings stakeholders to the table
• Education
• Provides decision making structure
• Can strengthen community relationships

Challenges
• Seasonal variations in noise exposure are often not reflected in the DNL contours
• Regulatory process limits what can be approved
Part 150 Study Overview

Regulatory Framework

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

• **State law** sets forth compatibility planning guidelines and noise standards but aircraft are exempt.

• **Local noise ordinances** set noise standards and provide for compatible land use planning but aircraft are exempt.
Part 150 Study Overview

Who Can Regulate Airport Noise?

- **Federal Aviation Administration:**
  1. Controls aircraft while in flight
  2. Responsible for controlling noise at its source (i.e., aircraft engines)
  3. Certifies aircraft and pilots

- **Airport Proprietors/NAA:**
  1. Very limited authority to adopt local restrictions
  2. Responsible for capital improvement projects and infrastructure

- **Local Governments and States:**
  1. Promote compatible land use through zoning
  2. Require real estate disclosure
  3. Mandate sound-insulating building materials
Part 150 Study Overview

Analyze, Evaluate, Educate

• Determine existing and future noise conditions in the vicinity of an airport
• Identify incompatible uses
• Identify measures to improve compatibility
  – Evaluate the feasibility of possible flight procedure/land use changes
  – Submit locally-endorsed recommendations to the FAA regarding noise reduction measures
  – Approved measures may be eligible for Federal grant funding
• Educate communities on the Federal process and what can and cannot be done to address aircraft noise concerns

Part 150 Studies Must Adhere to 14 CFR Part 150 Guidelines to be Accepted and Approved by FAA
Part 150 Study Overview

**Noise Exposure Map Report (NEM)**
- Develop a comprehensive database of current conditions
- Noise contour development and impact analysis
- Prepare and submit Noise Exposure Map (NEM) Report

**Noise Compatibility Program (NCP)**
- Identify and evaluate noise abatement alternatives
- Identify and evaluate compatible land use alternatives
- Identify and evaluate administrative measures
- Prepare and submit Noise Compatibility Program (NCP) Report

**Stakeholder Outreach Program**
- Local Jurisdictions/Agencies
- FAA
- Public
Part 150 Study Overview

**Phase I: Noise Exposure Maps (NEMs)**
- Project Kickoff
- Define Key Issues
- Detailed Study Design
- Inventory
- Aviation Noise
- Noise Exposure
- NEM Submittal to FAA
- NEM Acceptance by FAA
- Technical Advisory Committee Meetings Public Workshop
- Technical Advisory Committee Meetings Public Workshop

**Phase II: Noise Compatibility Program (NCP)**
- Noise Abatement Alternatives
- Land Use Alternatives
- Programmatic Alternatives
- Noise Compatibility Program
- NCP Submittal to FAA
- FAA Approval
- Technical Advisory Committee Meetings Public Workshop
- Technical Advisory Committee Meetings Public Workshop Public Hearing
- Technical Advisory Committee Meetings Public Workshop Public Hearing
Noise Modeling and Compatibility
Introduction to Aircraft Noise - DNL

Day-Night Average Sound Level (DNL)

• 24-hour time weighted energy average noise level based on A-weighted decibels (dBA)

• Noise occurring between 10 p.m. to 7 a.m. is penalized by 10 dB to account for the higher sensitivity to noise during nighttime hours and for the expected further decrease in background levels that typically occur in the nighttime

• FAA requires the use of DNL for airport noise assessments

• Average Annual Day aircraft noise exposure is calculated over a broad area and then depicted using contour lines of equal noise levels
Introduction to Aircraft Noise - DNL

**Single Event Sound Level**
- $L_{max} = 64 \text{ dBA}$
- $L_{max} = 70 \text{ dBA}$
- Duration = 10 secs
- Duration = 5 secs

**One Hour of Events (Hourly LEQ)**
- Aircraft Flyovers
- LEQ Noise Level
- Time (one hour):
  - 00:00
  - 00:15
  - 00:30
  - 00:45
  - 01:00

**Twenty-Four Hours of Events (DNL)**
- 10 dB Nighttime Penalty
- DNL
- Hourly LEQ

**Identical DNL Levels**
- 1 Event/Day SEL 114.4 dBA = DNL 65
- 10 Events/Day SEL 104.4 dBA = DNL 65
- 100 Events/Day SEL 94.4 dBA = DNL 65
Introduction to Aircraft Noise - DNL

Noise Modeling

• Aircraft noise modeling allows:
  – Calculation of noise exposure at any point
  – Depicting annual average aircraft noise exposure
  – Predicting future aircraft noise exposure
  – Assessing changes in noise impacts resulting from runway configuration changes or new runways
  – Assessing changes in fleet mix and/or number of operations
  – Evaluating operational procedures

• Aviation Environmental Design Tool (AEDT) replaced the Integrated Noise Model (INM) when it was released in 2015. The current version, AEDT 2C, will be used for the APF Part 150 Study.
Part 150 Study Overview – Years of Analysis

Noise Exposure Maps – Baseline Conditions

- Base year and a future year which is at least 5 years into the future
- Basis of comparison for effectiveness of potential noise abatement measures
- Year of submittal must be consistent with base year
  - Existing Condition: 2020/2021
  - Future Condition: 2025/2026
- Existing Condition based on recent 12 months of operational data applied to 2020 projected activity level
Part 150 Study Overview – Modeling

Model Inputs

• The 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)

• The Noise Exposure Distribution is determined by:
  - Runway configuration and use
  - Flight track locations
  - Flight track use

• Other Factors
  - Meteorological Conditions

Aviation Environmental Design Tool (AEDT)
Version 3B
Part 150 Study Overview – Land Use Compatibility

Land Uses

- Existing and Future Land Use
- Land parcel data
- Zoning
- Jurisdictional boundaries and neighborhoods

Noise Sensitives Uses

- Residential
- Places of worship
- Schools, colleges and universities
- Libraries/cultural institutions
- Hospitals and residential healthcare facilities
- Daycare and assisted living facilities
- Historic properties
Part 150 Study Overview – Land Use Compatibility

Land Use Compatibility

• Table 1 in Appendix A of 14 CFR Part 150 provides noise and land use compatibility guidelines
• Deems levels below 65 dB DNL to be compatible with all land uses
• Allows for the adoption of appropriate local land use standards for land use compatibility planning purposes

The City of Naples and Collier County have adopted the 60 DNL contour as the threshold of significance.
Part 150 Study Overview – Sample Noise Exposure Map (NEM)
Part 150 Overview - FAQs

Frequently Asked Questions

• Will the study “fix” all the noise issues around the airport?
  – No, overflights of residential areas are unavoidable and sensitivity to noise varies by person

• What type of noise monitoring will be conducted?
  – None, all analysis is modeling based which allows consistency and evaluation of future conditions

• Will the Study address concerns about safety, soot, or other concerns related to aircraft operation?
  – The Part 150 process focusses exclusively on noise and land use compatibility
## DRAFT Project Schedule Summary - Noise Exposure Map Report

### 14 CFR Part 150 Study for Naples Airport

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<th>TASK</th>
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<td>NOISE EXPOSURE MAP (NEM) REPORT</td>
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<td>Project Initiation</td>
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<td>Develop Database of Current Conditions</td>
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<td>Prepare Aviation</td>
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<td>Collect Land Use and Operational Data</td>
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<td>Develop Noise Contours and Impact Analysis</td>
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<td>Conduct Initial Impact Analysis</td>
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<td>Prepare Draft NEM Report</td>
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<td>Prepare Responses to Comments</td>
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<td>Prepare Final Draft NEM Report</td>
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<td>Prepare Final NEM Report</td>
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<td>Address FAA Comments</td>
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<td>FAA Acceptance of NEMs and Final Report Publication</td>
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<td>PROJECT MANAGEMENT AND PUBLIC OUTREACH</td>
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<td>Project Management and Team Meetings</td>
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Updated January 13, 2020

- **Task Duration**
- **NAA Review**
- **Public Review**
- **Formal FAA Review**

- **TAC Meetings**
- **Project Team Meeting**
- **Public Meetings**
- **FAA Accepts NEMs**
Kickoff Public Workshops

1. Baker Park Sugden-Gomez Center
   100 Riverside Circle
   Naples FL 34102
   5:00 – 7:00 pm
   February 11, 2020

2. Moorings Presbyterian Church
   791 Harbour Drive
   Naples, FL 34103
   9:30 – 11:30 am
   February 12, 2020

3. Lorenzo Walker Technical School
   3702 Estey Avenue
   Naples, FL 34104
   6:00 - 8:00 pm
   February 12, 2020
Future Meetings

Technical Advisory Committee

• TAC Meeting #2 (Tentative)  April 23, 2020
• TAC Meeting #3 (Tentative)  November 5, 2020

• Reminder notices will be sent out in advance of each meeting
• All TAC Materials will be posted on the Project Website following the meeting
Public Website

Project Website (flynaples.com):
- Project Information
- Process
- Study Elements
- FAQ’s
- Noise History PowerPoint
- Public Draft and Final reports
- Schedule
- Newsletters (4)

Communication and Feedback:
- Upcoming meetings including location/dates/times
- Receipt of comments specific to Part 150 Study
- Links to other websites/resources
Questions?