CITY OF NAPLES AIRPORT AUTHORITY (NAA)
Board of Commissioners and Noise Compatibility Committee
Notice of Joint Special Meeting

FINAL AGENDA

City Hall Council Chambers
735 Eighth Street South
Naples, FL 34102

Thursday, June 28, 2018
9:00 AM

Commissioner Donna M. Messer – Chair and NCC Liaison
Commissioner Michael Lenhard – Vice Chair and Consultant Selection Committee Chair
Commissioner James Rideoutte – Audit Committee Chair, Consultant Selection Committee Member
Commissioner Ted Brousseau – Legal Liaison
Commissioner Kerry C. Dustin, Audit Committee Member
Executive Director: Christopher A. Rozansky
Authority Attorney: William L. Owens, Esq. of Bond, Schoeneck & King, PLLC

Welcome. If you wish to address the City of Naples Airport Authority Board of Commissioners and Noise Compatibility Committee regarding an item listed on the Agenda, please complete a Speaker Registration form (available at the rear of the room) and hand it to the Executive Assistant prior to consideration of that item. We ask that speakers limit comments to 5 minutes and that large groups name a spokesperson whenever possible. All written, audio-visual, and other materials distributed to Committee members or staff during this meeting will become the property of NAA and will be a public record. Thank you for your interest and participation.

NOTICE

No formal action may be taken on any item listed on the Agenda below, or added to the Agenda before or during the Workshop meeting. Also, the sequence of items may be changed as the meeting progresses. Any person who decides to appeal a recommendation made by the Board of Commissioners or the NCC with respect to any matter considered at this meeting may do so at the next NCC or City of Naples Airport Authority Regular Meeting.

Any person with a disability requiring auxiliary aids or services in order to participate in this proceeding for meetings at the City Council Chamber may call the City Clerk’s Office at 213-1015, or for meetings at the Airport Office Building, the NAA Executive Assistant’s Office at 643-0733, with requests at least two business days before the meeting.

Information which has been provided in advance of this meeting may be inspected at the office of the Executive Assistant, General Aviation Terminal Building, 2nd Floor, 160 Aviation Drive North. Minutes of this meeting will be prepared for Board and NCC approval, usually at the next Regular Meeting.

Two or more Commissioners or Committee members may be in attendance. Florida Statute 286.011 states, “any gathering, whether formal or casual, of two or more members of the same Board or commission to discuss some matter on which foreseeable action will be taken by the public Board or Commission must be conducted in accordance with the Sunshine Law.”
A. ROLL CALL

B. PLEDGE OF ALLEGIANCE

C. AGENDA (Add, delete or re-sequence items)

D. MINUTES

E. PRESENTATIONS AND TIME CERTAIN ITEMS
   1. Overview of Noise Programs at Naples Municipal Airport - HMMH
   2. Addressing Airport Noise – Kaplan, Kirsch and Rockwell

F. PUBLIC COMMENTS ON GENERAL TOPICS NOT ON THE CURRENT AGENDA

G. ACTION ITEMS

H. NEW BUSINESS
   1. Discussion and Consensus on Next Steps for the Noise Programs at Naples Municipal Airport

I. OLD BUSINESS

J. PUBLIC COMMENTS

K. CORRESPONDENCE/COMMISSIONER AND NCC COMMITTEE COMMENTS & REQUESTS/MEETINGS

L. ADJOURN
Overview of Noise Programs at Naples Municipal Airport

Presentation to NAA/NCC

June 28, 2018
Mary Ellen Eagan, HMMH
Agenda

- History of Naples Municipal Airport Noise Programs
- 2017 Master Plan Existing Noise Contours
- 2023 Master Plan Forecast Noise Contours
History of Naples Municipal Airport Noise Programs
### Noise Program History

#### Part 150s Lead to Part 161

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>First Part 150 Study</td>
</tr>
<tr>
<td>1995</td>
<td>First Part 150 Update</td>
</tr>
<tr>
<td>1998</td>
<td>Second Part 150 Update</td>
</tr>
<tr>
<td>2000</td>
<td>Part 150 Noise Exposure Map Update; NAA initiates Part 161 process</td>
</tr>
<tr>
<td>2002</td>
<td>NAA begins enforcement of Stage 2 ban</td>
</tr>
<tr>
<td>2003</td>
<td>FAA finds ban Stage 2 &quot;unreasonable, unjustly discriminatory, and preempted by federal law&quot;; NAA appeals to U.S. Court of Appeals</td>
</tr>
<tr>
<td>2005</td>
<td>Court rules in Naples' favor, grant eligibility restored</td>
</tr>
</tbody>
</table>
Noise Program History – 2008-2011 Part 150 Update

- Went significantly beyond Part 150 requirements
  - Extensive Technical Advisory Committee (TAC) process
  - Substantial noise measurement program
  - Official Noise Exposure Maps for 2010 and 2015
  - "Informational" contours for 2020, and March and August 2010
- Reviewed all existing noise program elements in detail
  - Particular focus on "single event" analyses
- Considered every alternative proposed by any party
  - No alternatives identified that would improve on existing program
  - Showed existing operational program represents optimal mix
- Runway 5/23 Extension Environmental Assessment (2011)
  - Showed improvements would complement existing measures
Noise Studies and Population Data

- Part 150 studies must provide population estimates residing within the DNL contours.
- Traditionally US Census Block level data is used
  - 2010 data currently available
  - Block level - Smallest level of data, equivalent to a neighborhood block defined by streets

<table>
<thead>
<tr>
<th>Geography</th>
<th>April 1, 2010 Census</th>
<th>US Census Population Estimates (as of July 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collier County</td>
<td>321,520</td>
<td>357,194 366,095 372,880</td>
</tr>
<tr>
<td>Increase Since 2010</td>
<td>11.1%</td>
<td>13.9% 16.0%</td>
</tr>
<tr>
<td>City of Naples</td>
<td>19,537</td>
<td>21,416 21,799 21,948</td>
</tr>
<tr>
<td>Increase Since 2010</td>
<td>9.6%</td>
<td>11.6% 12.3%</td>
</tr>
</tbody>
</table>

- US Census 2017 Population estimates show 12% to 16% increase since 2010 in Naples area.
- The next Census will be done in 2020 – available in 2021
Noise Studies and Population Data

- An NCP uses land use and population data to evaluate proposed measures.
- Population dataset developed for the 2010 Study went beyond typical practice:
  - 2000 Census used to develop # of people per housing unit.
  - Developed a detailed current land use parcel dataset within the study area (as of Dec. 2008).
  - Including windshield surveys to determine land use and number of residential units.
  - Applied # people per unit to current dwelling unit counts.
- For Naples, FAA considers approval of NCP measures based on the reduction or elimination of noncompatible land use within the DNL 60 contour.

Dataset Development Process:
- Original Parcel dataset
- Windshield survey
- Updated parcel dataset
  - Commercial land use
  - Zero housing units
  - Commercial on first floor
  - Upper levels new residential
  - Includes housing units on that parcel
Activities Since 2011

- NAA establishes “Action Plan” in 2012
- Immediate action items in four areas
  - Improve implementation of approved measures
  - Monitor implementation of approved measures
  - Pursue formal arrival and departure procedures
  - Maximize compliance with formal procedures
- Progress monitored and reported each year
- Objectives, goals, and action items revised and added as relevant
Recent Activities

- NAA continues to review
  - Operational data
  - Noise Comments
  - Part 36 Stage operational levels
  - Voluntary curfew compliance
  - Flight procedures

- 2018 NAA Strategic plan
  - GOAL #4 of the NAA strategic plan is “to be an engaged, responsive partner in service to our community.”
    - IMPROVE compliance with voluntary curfew
    - STRENGTHEN Naples Airport Authority’s position as a good corporate citizen and neighbor
    - REDUCE noise impacts
    - PARTICIPATE in industry and government issues and leadership
2017 Master Plan DNL Contours
2017 Master Plan Noise Contours

- Noise model overview
- Noise model input and assumptions
  - Runway Use
  - Operations
- Contours
Noise Model and Inputs

- Aviation Environmental Design Tool (AEDT)
  - New FAA model – First contours developed for Naples using AEDT

- Model Inputs
  - Runway layout
  - Flight tracks
  - Airport elevation
  - Airport weather

- Related requirements:
  - runway use rates
  - flight tracks and use rates
Runway Layout & Utilization Rates

<table>
<thead>
<tr>
<th>Arrival/Departure</th>
<th>Runway</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>05</td>
<td>23</td>
</tr>
<tr>
<td>Arrivals</td>
<td>42.1%</td>
<td>34.2%</td>
</tr>
<tr>
<td>Departures</td>
<td>48.7%</td>
<td>26.4%</td>
</tr>
<tr>
<td>Circuits</td>
<td>51.0%</td>
<td>28.1%</td>
</tr>
</tbody>
</table>

Note: Totals may not match exactly due to rounding.

Source: NAA, HMMH analysis, 2018
Operational Requirements

- Total operations
- Aircraft Type
- Day-Night Split
Existing Operational Fleet Mix

<table>
<thead>
<tr>
<th>Engine Category</th>
<th>2017 Annual Average Day Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jet</td>
<td>73.2</td>
</tr>
<tr>
<td>Turboprop</td>
<td>18.5</td>
</tr>
<tr>
<td>Piston Prop</td>
<td>163.5</td>
</tr>
<tr>
<td>Helicopter</td>
<td>5.0</td>
</tr>
<tr>
<td>Grand Total</td>
<td>260.2</td>
</tr>
</tbody>
</table>

Source: NAA, HMMH analysis, 2018
Revised 2017 Master Plan Existing DNL Contours

Note:
The 2017 Master Plan DNL contours were revised to reflect a correction in night turboprop runway usage.
Master Plan Forecast Contours
Master Plan Forecast

- FAA approval May 9, 2018
- Five year forecast (2023) used for modeling
- Forecast levels applied to 2017 fleet mix with adjustments for retiring aircraft
# Average Annual Daily Operations

<table>
<thead>
<tr>
<th>Operation</th>
<th>2017</th>
<th></th>
<th>2023</th>
<th></th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Day</td>
<td>Night</td>
<td>Total</td>
<td>Day</td>
<td>Night</td>
</tr>
<tr>
<td>Arrivals</td>
<td>104.9</td>
<td>3.4</td>
<td>108.3</td>
<td>115.5</td>
<td>3.8</td>
</tr>
<tr>
<td>Departures</td>
<td>104.3</td>
<td>4.0</td>
<td>108.3</td>
<td>114.7</td>
<td>4.6</td>
</tr>
<tr>
<td>Circuits</td>
<td>42.9</td>
<td>0.8</td>
<td>43.7</td>
<td>43.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Subtotal</td>
<td>252.0</td>
<td>8.2</td>
<td>260.2</td>
<td>273.5</td>
<td>9.3</td>
</tr>
</tbody>
</table>

Notes: Totals may not match exactly due to rounding; Circuits counted as two operations.
Source: HMMH, 2018
Comparison of Noise Contours: Revised 2017 vs. 2023

Note:
The 2017 Master Plan DNL contours were revised to reflect a correction in night turboprop runway usage.
Sample of AEDT SEL Contours

Lear 35
16.5%
Jet Operations

Cessna Citation X
12.3%
Jet Operations

Cessna Citation Excel
11.5%
Jet Operations

Gulfstream V
1.4%
Jet Operations

SOUND EXPOSURE LEVEL (dBA)
- 80 - 85
- 85 - 90
- 90 - 95
- 95+

Lear 35 type modeled represents:
- Lear Jet 35/45/55/60/75
- Hawker 750/800/850/900/1000
- Saberliner 65

Citation X type modeled represents:
- Citation X
- Falcon 50/7X/900/2000
- Gulfstream 200

Citation Excel type modeled represents:
- Citation Excel 560

Gulfstream V type modeled represents:
- Gulfstream 5/500/550/5SP
- Gulfstream 650

Note: Percentage shown represents modeled percent of 2017 Jet Operations
SEL vs DNL

- A given cumulative exposure level (DNL) can come from many different combinations of single noise events
- Hypothetical general aviation jet aircraft shown

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
Thank you!

Mary Ellen Eagan
meagan@hmmh.com
781.229.0707
ADDRESSING AIRPORT NOISE:

THE POWERS OF THE CITY OF NAPLES AIRPORT AUTHORITY

Peter J. Kirsch
June 28, 2018
Today's Presentation

I. Law on airport and aircraft noise
II. Possible approaches
III. Challenges and opportunities
IV. Discussion
Basic legal principles

- Naples Airport Authority does not have complete control over its airport
- Airports are subject to complex federal oversight
- Rules that apply to other government functions do not necessarily apply here
Relative authority over noise

- FAA
- NAA
- Local Gov'ts, etc.
Noise abatement vs. noise mitigation

Authority over noise **abatement**

Authority over noise **mitigation**
Primary sources of law

- U.S. Constitution
  - Supremacy Clause
  - Commerce Clause
- Statutes
- FAA Grant Assurances
  - Assurance 22
U.S. Constitution

SUPREMACY CLAUSE
- Federal law trumps state and local law

COMMERCE CLAUSE
- State and local governments cannot unduly burden or discriminate against interstate commerce
- Any airport restrictions must be:
  - Reasonable under the circumstances
  - Carefully tailored to local needs
  - Based upon data which support the need
Legal Authority - Statutes

1958
Federal Aviation Act

1968
Aircraft Noise Abatement Act

1979
Aviation Safety & Noise Abatement Act

1990
Airport Noise And Capacity Act
Legal Authority - Regulations

- Part 36 Noise Standards
- Part 91 Operating Limits
- Part 150 Land Use Planning
- Part 161 Noise and Access Restrictions
Aviation Safety & Noise Abatement Act / Part 150

- Directs FAA to establish a single system of measuring noise
- Requires FAA to issue regulations on "noise compatibility planning"
- Part 150 regulations
  - Selected the A-weighted sound level (dBA)
  - Selected the Day-Night-Average Sound Level (DNL)
  - Defined a voluntary noise compatibility planning process
Part 150 regulations

- Metric DNL
- Methodology AEDT
- Thresholds 65 dB
Part 150: noise compatibility planning

- Voluntary process for airport noise studies
- Participation allows FAA funding of some approved measures
- Formalized, rigid process
- Consultation requirements
Part 150: noise compatibility planning

- Noise Exposure Map (NEM)
  - Detailed description of airport layout, operations, noise, land uses, and noise/land use compatibility
  - FAA accepts the NEM

- Noise Compatibility Program (NCP)
  - Noise abatement measures to reduce noise exposure
  - Land use measures to address non-compatible uses
  - Program management/implementation measures
  - FAA approves the NCP
  - FAA generally only considers measures within 65 dB DNL contour
Airport Noise and Capacity Act / Part 161

- Required complete phase-out of Stage 2 aircraft over 75,000 pounds by end of 1999
- Required FAA to establish regulations regarding analysis, notice, and approval of airport noise and access restrictions
  - Part 161
- Note: remaining Stage 2 phased out in later statute
Part 161: airport noise and access restrictions

- Federal program for reviewing noise and access restrictions affecting stage 2 and 3 aircraft
  - Stage 2 restrictions are moot as of 2016
- FAA approval required for most restrictions as of 2016
- Comprehensive analysis required
  - Evidence of noise problem
  - Impacts analysis
  - Benefit-cost analysis
- Encourages voluntary agreements
Effect of Part 161

- Many, many pre-1990 restrictions
- NO new restrictions on stage 3 aircraft since 1990
- ONE new restriction on stage 2 aircraft since 1990
- Only small handful of attempts
Grant Assurances

- Contractual commitment to the U.S. government in exchange for grant funds
- Required by federal law
- Basic structure in effect since Federal Airport Act of 1946
- FAA enforces contractually many of the obligations of federal law
- FAA has administrative enforcement process
  - FAA as judge, jury and executioner
Grant Assurance 22.a

- Airport proprietor must:

"make the airport available as an airport for public use on reasonable terms and without unjust discrimination to all types, kinds and classes of aeronautical activities, including commercial aeronautical activities offering services to the public at the airport."
II. Possible approaches to addressing noise
Best approach: A stair-step process
STEP ONE

IDENTIFY THE PROBLEM IN THIS COMMUNITY
STEP TWO

IDENTIFY & IMPLEMENT LAND USE MEASURES
STEP THREE

IDENTIFY & IMPLEMENT
NON-RESTRICTIVE &
VOLUNTARY
MEASURES
(IF NECESSARY)
STEP FOUR

IDENTIFY & IMPLEMENT
RESTRICTIVE MEASURES
(IF NECESSARY)
Need to identify the *local* problem
Regulating enroute noise
Regulating arrival, departure noise
Regulating airport-related noise
III. Challenges and opportunities

- Part 150 study
- Use restrictions
- Other measures
Pros/Cons: preparing a Part 150 study

**PROS**
- Thorough planning
- Transparent, inclusive process
- Federal money to implement
- FAA cooperation

**CONS**
- FAA threshold of 65 dB DNL
- Lengthy process
- FAA approval requirements
- Limits on what can, cannot be studied and proposed
Use restrictions: brief history

- Many airports have use restrictions (e.g., curfews, noise limits)
- All but one were enacted before ANCA became law in 1990
- Since 1990, only handful of airports have even tried to adopt new use restrictions
- Only three airports have completed the ANCA process:
  - LAX/VNY – failed
  - BUR – failed
  - APF – succeeded (stage 2 only)
- FAA policy: no, no, no
Uncertainties with pursuit of use restrictions

- Efforts to impose restrictions since 1990 result in litigation
  - By FAA (Naples, Santa Monica)
  - By user groups (Naples, East Hampton)
- Lessons from Naples, Burbank, Santa Monica and East Hampton: Hurdles are –
  - Practical (detailed study)
  - Legal (litigation exposure)
  - Financial (cost of compliance; litigation costs)
- Low probability of success
Pros/Cons: pursuing use restrictions

**PROS**
- Certain effect
- Demonstrate commitment to community
- Tailored to this community

**CONS**
- Cost
- Mandated process
- Litigation
- FAA, industry antagonism (lack of cooperation)
Other measures: where from here?

Creative approaches
- Land use measures
- Tailored non-150 study
- Negotiated measures
- Aggressive but voluntary measures
- Legislation
Conclusion: no perfect, universal strategy

- Land use measures
- Noise abatement
- Noise mitigation
- Fly quiet and similar voluntary programs
- Flight tracks and departure procedures
- Use restrictions
Discussion

Peter J. Kirsch
pkirsch@kaplankirsch.com
To: Honorable Chair, Commissioners and NCC Members

From: Christopher A. Rozansky, Executive Director

By: Diane Jackson, Director of Communications and Business Development

Meeting Date: June 28, 2018

Re: NEW BUSINESS

1. Discussion and Consensus on Next Steps for the Noise Programs at Naples Municipal Airport

SUMMARY: Discussion and consensus on the next steps for the Noise Programs at Naples Municipal Airport.

BACKGROUND: The Board and NCC reviewed the current Noise Contours and forecasted 2023 Noise Contours in the Joint Workshop for the Master Plan on April 30, 2018. Subsequent to the Joint Workshop, it was decided to hold a Special Joint Meeting of the Board and NCC June 28, 2018.

Mary-Ellen Egan from HMMH in partnership with Peter Kirsch from Kaplan, Kirsch and Rockwell will provide a brief history of the Naples Airport Noise Programs, the 2017 Master Plan existing contours, the 2023 forecasted noise contours and the current regulatory environment. At the conclusion of the presentations, the Board and NCC will have the opportunity to discuss and reach a consensus on next steps for the Noise Programs at Naples Municipal Airport.

COMMUNICATIONS PLAN: N/A

FINANCIAL IMPACT: N/A