



The Ohio State University Airport

Part 150 Committee

Meeting #2 – SUMMARY¹

2-4 p.m.

April 24, 2008

MedFlight Training Room

2827 W. Dublin Granville Rd., Columbus, 43235

This is a summary of the second meeting of the Part 150 Committee, which is comprised of interested entities invited by the University to provide input into the OSU Airport FAR Part 150 Noise and Land Use Compatibility Study. The Study will quantify existing and future aircraft noise exposure and provide recommended measures on how to reduce incompatible noise levels on noise sensitive uses surrounding OSU Airport. Members of the Committee represent organizations that use the Airport as well as affected political jurisdictions, agencies and neighborhoods.

The following summarizes key informational and action items from the meeting.

Participants

Part 150 Committee Members Present

City of Columbus, Vince Papsidero

City of Dublin, Paul Hammersmith

City of Worthington, David Zoll

Village of Riverlea, Steven Mershon

Franklin County, Matthew Brown

Mid-Ohio Regional Planning Commission, Chris Gawronski

Northwest Civic Association, Bill Carleton

We Oppose Ohio State University Airport Expansion, Jane Weislogel

Columbus Regional Airport Authority, David Wall

Midwest (OSU) Air Traffic Control, Gary Bollinger

Port Columbus Air Traffic Control (FAA), Chris Lenfest

Ohio Highway Patrol, Lt. Mike Stein

Aircraft Owners & Pilots Association, E.J. Thomas

Columbus Flight Watch, Don Peters

¹ This Summary is intended to provide a paraphrased overview of presentations made, materials discussed, questions asked and comments made. It is not intended to be a word-for-word representation of the Part 150 Committee proceedings.

Labcorp, Austin Lanz
MedFlight, Mark Reynard
Cardinal Health, James Porterfield
OSU Flight Education, Charles Ventola
Columbus Chamber of Commerce, Chaz Fruetel
Worthington Industries, Lowell Dowler
Personal Aircraft Owners, Jay DuRiverage
Experimental Aircraft Association, Dick Wetherald

Part 150 Committee Members Not Present

Perry Township, Robert Myers
Sharon Township, John Oberle
Ohio Regional Business Aircraft Association, Doug Stewart
Thrifty Car Rental, Todd Greenleaf

OSU/Consultant Core Working Team Members Present

David Full and Don Andrews (RS&H); Steve Alverson and Ron Seymour (ESA Airports); Marie Keister (Engage); Nawal Taneja, Doug Hammon, Cathy Ferrari, Kathy Dillow and Michael St. Clair (OSU); Bill Habig and Latane Montague (consultants)

Public Observers

Mayor Mary Jo Cusack, Worthington Councilmen David Foust and Lou Goorey, Rich Belisle, Melanie Dickman, John Ehlers, Rosemarie Lisko, Vera Tedrick, Bob Tedrick, Scott Whitlock

Media Present

None

Materials Available/Reviewed at the Meeting

- Agenda (*sent in advance*)
- Part 150 Committee Goals and Objectives
- Frequently Asked Questions
- Draft Day-Night Average Sound Level (DNL) Contour Maps
- PowerPoint Presentation

Meeting Summary

Meeting Introductions

Marie Keister, the facilitator for the Part 150 Committee, convened the meeting at 2 p.m. Introductions were made and discussion ground rules were reviewed. Ms. Keister asked that Committee members save their questions and comments for the end of each segment of the presentation. Public comment would be allowed at the end of the meeting.

The meeting purpose was to update the Part 150 Committee on the technical analyses completed to date and to present the draft Day-Night Average Sound Level (DNL) contours for OSU Airport.

Review of Work Completed To Date

David Full, Reynolds, Smith & Hills (RS&H) Consultant Team and OSU Airport Part 150 Study Project Manager, reviewed the work that had been completed since the last Part 150 Committee meeting was held on September 19, 2007. Noise measurements had been conducted, extensive data collection had occurred and a Technical Subcommittee was formed to review the inputs to the Integrated Noise Model (INM). The Subcommittee met two times since September, and provided helpful review to ensure the accuracy of the inputs. (*See Technical Subcommittee meeting materials and the related Technical Memorandum at <http://www.osuairportpart150.com/previous.html>.*)

Mr. Full reviewed the meeting agenda, which included a review and discussion of:

- Aircraft Operations Inputs
- Flight Track and Runway Use Inputs
- Day-Night Average Sound Level (DNL) Contour Results
- Sound Exposure Level (SEL) Contours
- Noise Measurement Results
- Public Comment and Questions
- Action Items and Next Steps

Aircraft Operations Inputs

Don Andrews, RS&H Part 150 Study Project Officer, expanded on how the Technical Subcommittee process helped the consultant team review aircraft operations and other model inputs. He explained that there is no one single source of data available, and that the team used the following to develop inputs for the INM: based aircraft and hangar waiting lists and forecasts, FlightAware and Port Columbus Noise Office Standard Terminal Automation Replacement System (STARS) data, interviews with aircraft operators and air traffic control tower staff, industry best practices and professional judgment.

He noted that it was unusual to have access to the 55,312 flight records made available by the Port Columbus Noise Office. For security reasons, this data is restricted from public review by the FAA.

Mr. Andrews then explained how the consultant team followed these six, industry-standard steps to arrive at the aircraft operational fleet mix:

1. Prepared a first-level sort
2. Created a Master Look-up Table
3. Reassembled Table B-1 at “Model Combination” level
4. Equalized arrivals/departures
5. Prepared allocations for FY 2007

6. Prepared 2012/2027 fleet mix

Mr. Andrews went into extensive detail on steps 5 and 6, explaining how allocations are conducted; how law enforcement, military, single/multi-engine and helicopter flights are accounted for; and how the team arrived at its conclusions (*see Part 150 Committee Presentation*).

Questions and Comments (Responses in Italics)

1. WOOSE representative Jane Weislogel asked if the team used the actual number of touch and go operations from Port Columbus Noise Office data or if estimates were used. *Mr. Andrews said actual touch and go operations in the Port Columbus records were used. These were double-checked using OSU Air Traffic Control Tower records.*
2. Worthington representative David Zoll asked if it would have made a material difference in the total number of operations if unknown aircraft had been allocated to arrivals and departures before assigning them to various aircraft types. (In other words, would there have been a change in outcome had steps four and five been conducted in reverse order.) *Mr. Andrews said it would have not made a difference or affected the accuracy of the outcome.*
3. Cardinal Health representative James Porterfield shared that Santa Monica's airport is trying to restrict aircraft by size, but with modern business jets size has little to do with the noise generated. Some small aircraft generate more noise than larger jet aircraft.

Introduction to Aircraft Noise Modeling

Mr. Steve Alverson, Part 150 Study Task Manager, presented a series of slides that provided an introduction to aircraft noise modeling. He said that noise modeling must comply with Federal Aviation Regulation (FAR) Part 150 requirements, which include using:

- The current FAA-approved Integrated Noise Model (INM) Version 7.0
- Annual-average day aircraft operations
- Aircraft types from the INM's database
- FAA-approved aircraft substitutions
- The Day-Night Average Sound Level (DNL) metric to assess impact

The noise modeling must not alter standard INM departure and arrival profiles or create aircraft substitutions without FAA approval, and may not use noise measurements to modify the INM aircraft noise database.

Questions and Comments (Responses in Italics)

1. WOOSE representative Jane Weislogel asked if the model would account for the turn to the 50 degree heading (over Worthington that pilots make when they depart to the east of the airport) and whether it was allowed to show this turn. *Mr. Alverson said slides later in the presentation would show that the turn to a 50*

degree heading was reflected in the model. It was not necessary to ask for permission to show this, as it was in the data that was collected.

Flight Track and Runway Use Inputs

Mr. Alverson reviewed several slides showing sample flight tracks that occur today and that are forecast to occur in the future. He showed how the turn to a 50 degree heading was reflected in the 2007 flight tracks of jets departing to the east of the Airport. He said that the consultant team developed over 1,400 modeled flight tracks at OSU Airport – more than the number of modeled flight tracks developed for the FAR Part 150 Study at Atlanta Hartsfield-Jackson International Airport, the second busiest airport in the world. Mr. Alverson said that a sampling of flight tracks would be displayed at the public open house to be held later that evening, and would also be available for viewing after the meeting at www.OSU AirportPart150.com.

There were no questions or comments about this segment of the presentation.

Day-Night Average Sound Level (DNL) Contours

Mr. Alverson presented the draft 2007, 2012 and 2027 DNL contours. He said that the modeling indicates that the 65 DNL contour – the FAA’s threshold for determining noise impact -- falls mainly within Airport property. Land uses falling outside the 65 DNL contour are considered compatible according to FAA guidelines. While not required by the FAA, OSU Airport also asked the consultant team to look at the 60 DNL contours, which were also displayed on the maps shared with the Part 150 Committee.

Mr. Alverson said that variations of the contours during 2007, 2012 and 2027 are driven by jet noise. In 2007, the 65 DNL contours extend further to the west of the Airport than the east because prevailing winds are usually from the west, so aircraft take off in that direction most often. Helicopter operations add to the noise contours on the north end of the Airport property. In 2012, the noise contours shift to the north because jets are expected to use the north runway if it is extended as proposed in the OSU Airport Master Plan. The 2027 noise contour is similar to 2012. While noisier aircraft are expected to be retired by then due to their age, potential noise reduction would be expected to be offset by the increased number of jet operations.

Mr. Alverson also noted that City of Worthington representative David Zoll had asked at a prior meeting that the consultant team run the model to analyze noise contours under a “no build” scenario, which would assume that the north runway was not extended as assumed in the 2012 modeling forecast. While not required by the FAA, OSU Airport also asked the consultant team to look at this. Mr. Alverson then showed the draft 2012 noise contours with and without the north runway extension. He indicated the noise contour around the south runway would be longer than it would be if the north runway was extended, and the 60 DNL would also reach more of the surrounding community.

There were no questions or comments about this segment of the presentation.

Sound Exposure Level (SEL) Contours

Mr. Alverson showed the sound exposure levels (SEL) for several types of jet and propeller aircraft departures, demonstrating Mr. Porterfield's earlier comment that larger jets aren't always noisier than smaller aircraft. Showing these contours helps increase understanding on how noise affects sensitive areas. They will also be used during the noise compatibility phase of the Part 150 Study.

Questions and Comments (Responses in Italics)

1. Mr. David Zoll asked when SEL contours would be reflected on the noise contour maps. *Mr. Alverson said this would occur during Phase 2 of this study effort, when noise abatement strategies would be considered. Mr. Alverson also noted that there are no federal guidelines on SEL contours, but that the analysis would help everyone increase their understanding on how SELs affect the communities surrounding the Airport.*

Noise Measurement Results

Mr. Alverson displayed the 13 sites where noise measurements were taken for seven continuous days in October, when OSU Airport experienced heavier traffic during The Ohio State University's football homecoming week. Sites were chosen to capture information relating to OSU flight training operations, the turn to a 50 degree heading over Worthington, helicopter operations and other noise sensitive areas. Consultant team members monitored each noise measurement site, taking notes and observing operations. They also reviewed FlightAware data during the measurements.

Mr. Alverson showed the range of noise measurements at each location, which illustrated both the volume and duration of noise events. The measured levels fell within the range of the modeled levels, but modeled levels were generally higher than the measured levels. That is, the model erred on the side of assuming more noise impact.

Questions and Comments (Responses in Italics)

1. Worthington Industries representative Lowell Dowler asked if for the future cases the model takes into consideration anticipated changes in technology based on past experience, such as the elimination of Stage 1 jets and the introduction of the new Stage 4 standard. *Mr. Alverson said the model does not include aircraft that have not been developed yet. Currently, there is no legislation to retire Stage 3 jets, so the model does not assume they will be gone. However, in 2027 there were assumptions made that aircraft older than 40 years would be retired, just based on their age. Mr. Alverson added that there is nothing in the model that would predict what a Stage 4 aircraft would sound like. There is a chance that the contours could actually be smaller—but the modeling process takes a more conservative approach and shows a worst case scenario for the forecasted noise contours.*

2. Columbus Flight Watch representative Don Peters asked if the use of new navigation aids was assumed in the model, such as implementing a new glide slope to the west. Would these types of navigation aids and the north runway extension have a quieting effect? *Mr. Alverson said the team's profile research on the C560 and Beechjet aircraft arrivals found many hold downs further to the east of the Airport. These aircraft come into the Airport on a three degree glide slope starting at about five nautical miles. Mr. Alverson added that all noise forecasts assumed the extension of the north runway, as called for in the Master Plan.*
3. Ms. Jane Weislogel asked if the noise measurements were of single events. *Mr. Alverson said yes. Single events are 10 to 12 decibels higher than the maximum levels because both loudness and duration are accounted for.*
4. Experimental Aircraft Association representative Dick Wetherald commented that when Honda introduced its Very Light Jet (VLJ) at an air show two years ago, they told the crowd to be quiet so they could hear it. *Mr. Alverson agreed that these aircraft are very quiet, and are designed to travel to airports without current jet service.*

Public Comments and Questions

Facilitator Marie Keister invited the general public and other Committee members to make comments and ask questions.

1. Public observer Scott Whitlock asked Mr. Alverson to clarify whether one month of data was used to develop jet flight tracks, and whether Port Columbus data was used for this analysis. *Mr. Alverson said that seven days of data from four periods of the year were used to develop flight tracks, equaling 28 days of data for each segment of runway use type. Flight tracks for touch and go operations were based on actual operations on seven days throughout the year. AirScene data was used to develop flight track information.*
2. Mr. Whitlock commented that while developing the fleet mix, Mr. Andrews said he equalized the arrivals and departures at the group level. Could that have been done at the aircraft type level? *Mr. Andrews said the team reviewed this question and found with one aircraft type there would have been 20 more operations out of approximately 80,000 annual operations had it been done this way. To do this in all cases would have significantly increased the work without significantly increasing the accuracy of the outcome.*
3. Mr. Whitlock asked if the team could have equalized the arrivals and departures using the N (aircraft tail) numbers. *Mr. Andrews said the team could have done this, but it would have been much more work and not have changed the outcome of the modeling.*
4. Mr. Whitlock asked how the team knew that to be the case. *Mr. Alverson said the Cessna Citation, for example, has several engine types but under FAA guidelines on substitutions they are considered one equivalent type of aircraft in the model.*

Mr. Andrews commented that it is unusual to see this level of detail at a general aviation airport, having developed over 1,400 modeled flight tracks and reviewed 55,000 plus operations. The amount of digging for detail on the data is extraordinary.

5. Mr. Zoll asked if the runway use percentages for jets were based on wind direction, and were the percentages determined based on actual tower counts for the year? *Mr. Andrews said these percentages were based on tower counts for the entire year.*
6. Mr. Zoll asked if the runway use percentages for jets were consistent with runway headings had wind been the sole determining factor. *Mr. Alverson said the team hadn't looked at that yet, but during the next study phase might look at ways that runway use could be shifted to improve compatibility.*
7. Mr. Zoll asked that the team indeed look at this. He also asked if it was typical for SEL maps to be provided at this time, or to be provided during the next phase of study. *Mr. Alverson said there is no FAA requirement to produce SEL maps in a Part 150 Study. However, the SEL information was developed because OSU Airport and the consultant team knew the community would be interested in seeing them and that it would increase everyone's understanding of the development of the DNL contours. This provides people an opportunity to give more informed input.*
8. Mr. Zoll asked that, given that the noise contour maps don't show the 65 DNL past the perimeter of the Airport's property, will the FAA allow this effort to move into the proposed noise compatibility phase of the Part 150 Study? *Mr. Alverson agreed that the Airport is not required by the FAA to pursue noise abatement strategies when the 65 DNL noise levels do not reach into residential neighborhoods. However, the University understands that noise concerns continue to exist, and remains committed to further exploring noise abatement strategies. To that end, OSU Airport and the consultant team are actively working to secure the FAA's support and funding for Phase II of this study process. This next step would evaluate a broad range of aircraft operational procedures and land use practices to help further reduce aircraft noise exposure on surrounding neighborhoods.*
9. Ms. Weislogel thanked the consultant team for its extra work. She said OSU Airport is a busy airport, and expressed her opinion that (OSU) wants it to be busier with (additional) jet aircraft. As a result, more than the standard Part 150 Study was necessary.

Next Steps

Project Manager David Full reviewed the next steps, which included:

- Finalizing the draft DNL Contours. Comments should be provided to Marie Keister by May 24th.
- Finalizing the Noise Exposure Maps (NEM) Report and submitting them to OSU Airport to certify their accuracy before submitting them to the FAA
- Initiating the Noise Compatibility Program phase of the study upon approval of the FAA
- Developing preliminary noise mitigation measures, which would include both operational and land use alternatives
- Ongoing community outreach

Mr. Full explained that the noise compatibility aspect of the Part 150 Program was developed by the FAA to address non-compatible land uses within the 65 DNL noise contour. Any Noise Compatibility Program (NCP) must be formally approved by the FAA. While the FAA is reluctant to approve NCP measures that do not reduce impacts within the 65 DNL contour, OSU Airport is committed to working to obtain FAA approval of an updated Noise Compatibility Program.

Ms. Keister reminded everyone that the public open house would be held later that day, from 7 to 9 p.m. at the OSU Airport hangar, and that comment forms would be available at the meeting and could be turned in at the meeting or later by mail or e-mail. All materials presented or displayed at the public meeting would be posted on the project web site within one to two business days.

Adjourn

Ms. Keister adjourned the meeting at 3:45 p.m.