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eis·news

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CAPACITY ENHANCEMENT PROGRAM FOR PHILADELPHIA INTERNATIONAL AIRPORT

The Federal Aviation Administration (FAA) has completed the analysis for the Philadelphia International Airport Capacity Enhancement Program (CEP) Draft Environmental Impact Statement (DEIS). FAA will be distributing the document to federal, state and local agencies and other interested parties during the last week of September. If you received this newsletter in the mail, then you are on the FAA's mailing list and will receive a copy of the Executive Summary and a compact disc of the full DEIS. If you received this newsletter another way you can get on the mailing list by following the directions on page 6 of this newsletter.

PUBLIC INFORMATION MEETINGS

The FAA will be hosting a series of four Public Information Meetings on September 8-11, 2008 to give the public an opportunity to review the results of the environmental impacts analyses in the DEIS and to speak with FAA representatives and their consultant team about the DEIS. See the box on page 4 for a list of the environmental analyses that will be presented in the DEIS.

Each meeting will include project posters, a presentation by the FAA and its consultant team, and a time for questions and answers. The format and content of each night's meeting will be the same.

Schedule:

6:00 PM

Doors open, project posters available for viewing and EIS team available for questions

7:00 – 8:00 PM

Presentation

8:00 – 9:00 PM

Question and Answer Session

Please note: Times and meeting content at each meeting will be the same.

Locations:

Monday, September 8, 2008 6:00 – 9:00 PM

Tinicum School, gymnasium
91 Seneca Street
Essington, PA 19029

Tuesday, September 9, 2008 6:00 – 9:00 PM

Hanby Middle School, auditorium
2523 Berwyn Road
Wilmington, DE 19810

Wednesday, September 10, 2008 6:00 – 9:00 PM

Eastwick at the Meadows
6630 Lindbergh Boulevard
Philadelphia, PA 19153

Thursday, September 11, 2008 6:00 – 9:00 PM

Paulsboro High School, auditorium
670 North Delaware Street
Paulsboro, NJ 08066

PLEASE NOTE: Arrangements can be made for those in need of special assistance who would like to attend the meetings or hearings by contacting Danielle Bower at (215) 751-1400 x207 or by e-mail to danielle.bower@chplanning.com. Requests should be made at least five business days before the meeting or hearing you would like to attend.

For directions to these locations and additional project information, please visit the Project website at www.phl-cep-eis.com.

PUBLIC HEARINGS

The FAA will host a series of four public hearings on October 20-23, 2008 to provide the public an opportunity to make formal comments to the FAA on the DEIS. A poster session will be held at which the FAA and its consultant team will be available to answer questions, followed by a formal public hearing. Participants are welcome to provide comments verbally at the hearing or written on comment forms. A stenographer will be in attendance to record all verbal comments at the hearing.

Schedule:

6:00 – 7:00 PM

Doors open, project posters available for viewing and EIS Team available to answer questions

7:00 – 9:00 PM

Public Hearing

Locations:

Monday, October 20, 2008 6:00 – 9:00 PM

Hanby Middle School, auditorium
2523 Berwyn Road
Wilmington, DE 19810

Tuesday, October 21, 2008 6:00 – 9:00 PM

Paulsboro High School, auditorium
670 North Delaware Street
Paulsboro, NJ 08066

Wednesday, October 22, 2008 6:00 – 9:00 PM

Tinicum School, gymnasium
91 Seneca Street
Essington, PA 19029

Thursday, October 23, 2008 6:00 – 9:00 PM

Eastwick at the Meadows
6630 Lindbergh Boulevard
Philadelphia, PA 19153



WHAT IS NOISE?

Aircraft noise has been a major concern expressed by residents in the neighborhoods and communities surrounding the Airport during the Project's public outreach process. This newsletter describes how aircraft noise is measured and evaluated. Other potential impacts of concern include those listed in the Environmental Analysis table to the right, and are also addressed in the DEIS.

Noise, as defined by Webster's New World Dictionary, is any kind of loud, discordant, or disagreeable sound or sounds, or a sound of any kind. Sound perception involves three basic physical characteristics: loudness (measured as intensity), pitch (measured as frequency), and duration. Commonly, loudness is the primary focus in aircraft noise studies.

Loudness is measured in decibels (dB). A decibel is a ratio that compares the pressure of the sound being measured to

the quietest sound we can hear. Changes in loudness less than 3 dB are not easily detected by the human ear. Furthermore, most individuals perceive a 6 to 10 dB increase to be about a doubling of loudness. A sound level of 0 dB is approximately the threshold of human hearing. Normal speech has a sound level of approximately 60 dB. Ambient, or background, noise in a quiet suburban residential neighborhood averages about 50 dB; in contrast, a noisy urban residential area typically averages from 65 to 70 dB. Sound levels above 120 dB may cause physical discomfort for the listener. Figure 1 shows some common outdoor and indoor sound levels.

Why and How is Aircraft Noise Measured?

Noise becomes an issue when its intensity exceeds the background sound levels. The sound of an aircraft taking off or landing can be particularly noisy (60 dB and up). Over the course of a day, hundreds of aircraft take off and

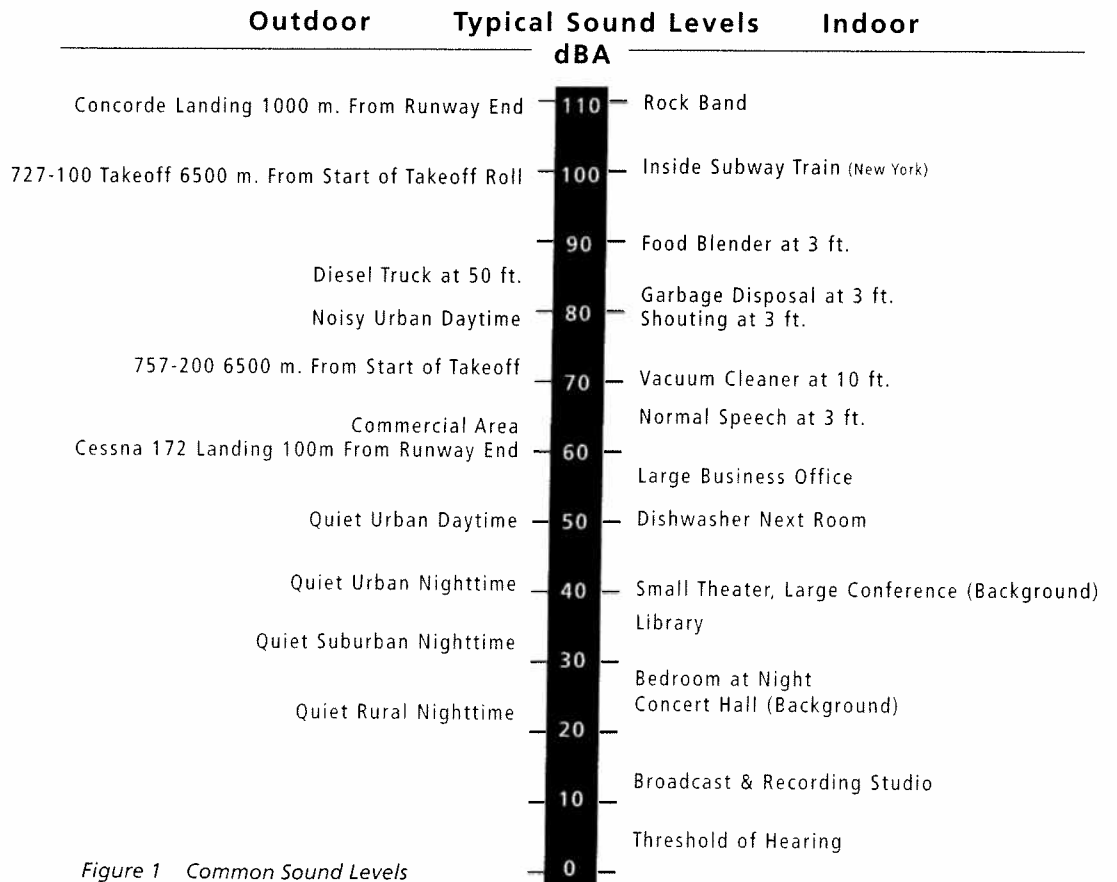
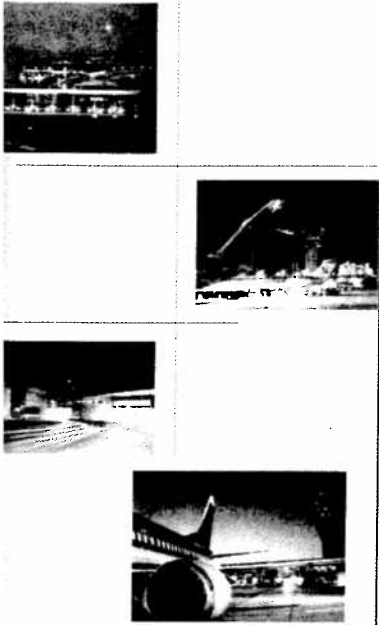


Figure 1 Common Sound Levels

ENVIRONMENTAL ANALYSIS IN THE DEIS

- Air Quality
- Biotic Communities (fish, wildlife, and plants)
- Coastal Resources
- Compatible Land Use
- Construction Impacts
- Department of Transportation Act Section 4(f) and Section 6(f) Lands
- Farmlands
- Endangered and Threatened Species
- Floodplains
- Hazardous Materials and Solid Waste
- Historical Architectural
- Archaeological, and Cultural Resources
- Light Emissions
- Noise
- Environmental Justice
- Children's Health and Safety
- Social and Economic Impacts
- Water Quality
- Wetlands
- Wild and Scenic Rivers

land at busy U.S. airports. The sounds from these aircraft can easily exceed the background noise levels, even in busy urban areas.

In 1969, Congress explicitly assigned FAA the responsibility to reduce aircraft noise. Congress did this because aircraft noise annoys people and can have a wide variety of effects on everyday activities, such as conversation and sleep. However, individual reactions to noise vary widely for a given noise level. What one person finds noisy or bothersome, another person may not notice as much.

Under the Noise Control Act of 1972, the United States Environmental Protection Agency (US EPA) created a task group to consider a way to characterize the impact of airport noise on surrounding communities and to develop a uniform measure of airport and aircraft noise. Before that time, there was no standard measure. The task

group came up with a measure known as DNL, or Day Night Average Sound Level (described below). EPA accepted DNL as the standard measure of airport noise in 1974. Following that, the use of DNL was adopted by the Department of Housing and Urban Development (HUD), the Department of Defense, and the Veterans Administration.

What is DNL?

Day-Night Average Sound Level (DNL) is used to describe the noise associated with cumulative (over time) exposure of aircraft overflights. The sound of aircraft taking off and landing is not constant; instead, it is intermittent over the course of any given day and even occurs at night. Therefore, DNL does not represent the sound level heard at any particular time. It represents an average sound level heard over the course of a day (24 hours). When averaging the sounds together to create DNL, additional weight is given to sounds that occur at night (between 10 PM and 7 AM). The nighttime sounds are given a penalty of 10 dB to reflect people's increased sensitivity to noise at night, when background noise levels decrease. In other words, an aircraft taking off during the day would produce the same sound as one taking off at night, but the sound seems louder at night because the background noise level is lower.

How is DNL Used?

The FAA uses a computer model, called the Integrated Noise Model (INM) to calculate DNL. The INM is the accepted method for measuring noise levels and impacts in areas surrounding an airport. The INM calculates DNL sound levels and plots them on a map, using lines to connect equal noise levels. These maps, called DNL contours, are similar to topographic maps that show elevation contours. Figure 2 shows an example of DNL contours.

DNL contour maps typically show sound levels in 5 dB increments, for example 65, 70, and 75 dB. As seen in Figure 2, the DNL contours generally follow the direction of the runways and as you get farther away from the airport, the sound levels decrease.

DNL 65 dB has been defined by the Federal government as a threshold for "significant" noise impacts. The FAA defines a "significant" noise impact as a DNL 1.5 dB noise increase over a noise sensitive land use located in the DNL 65 dB or higher noise contour when comparing the future build scenario to the future no build scenario. The designation of 65 dB DNL as the threshold of significant impact for noise exposure does not mean that people outside a 65 dB DNL contour are not bothered by aircraft noise. Also, certain land uses are considered to be

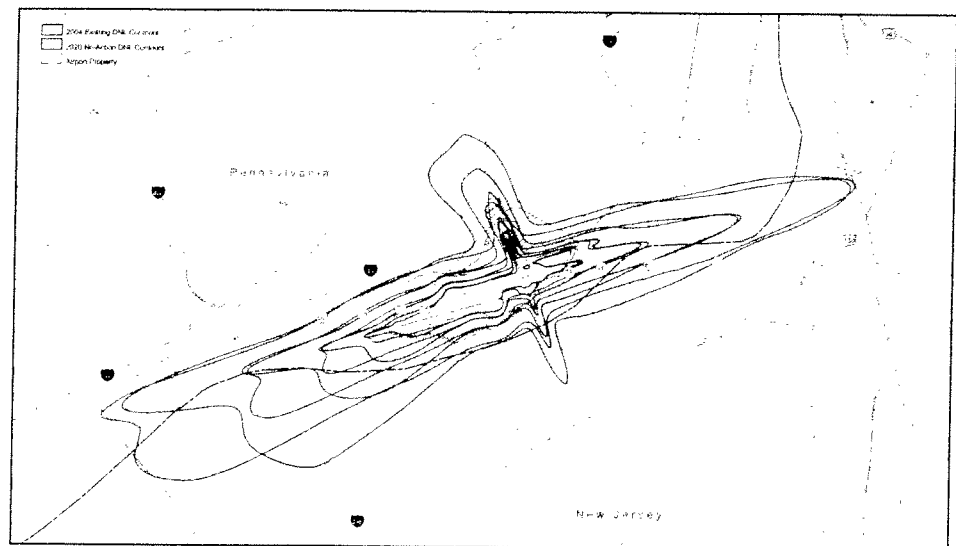


Figure 2 Sample DNL Noise Contours



Scientist conducting a study to analyze "noise" at the Philadelphia International Airport and in the surrounding communities.

"noise sensitive," such as residences, schools, libraries, parks, and places of worship. These are locations where aircraft noise could be particularly bothersome. Figure 3 shows how the DEIS evaluates changes in exposure levels that result from the alternative runway configurations being considered for the CEP. It also provides a characterization of the magnitude of those changes.

Future Noise Impacts

The INM can also be used to predict future noise levels around an airport. For example, if the number or type of aircraft were to change, this would cause noise levels to change. If a new runway were to be constructed, the flight tracks would change and this would change where the noise from takeoffs and landings would occur. Given any of these changes, the INM can be used to predict future sound levels and compare them to existing sound levels. This allows FAA and the airport to look at areas where sound levels would change (either increase or decrease) and determine if these changes are "significant." This analysis is part of the environmental process and has been performed for the CEP. The findings will be included in the DEIS and presented at the Public Information Meetings in September 2008.

Other Ways to Measure Airport Noise

DNL is a required measure for any FAA-funded study, but it is not the only way to measure and describe

airport noise. The FAA also uses other measures to help understand how loud aircraft noise can be (for example, the sound from a single, noisy source, rather than average daily sound) and how long the noise lasts. Some of these additional noise measures are described below:

Nighttime Day-Night Average Sound Level (NDNL) – NDNL

measures aircraft noise at night. It is the portion of DNL that occurs between the hours of 10 PM and 7 AM, including the nighttime 10 dB penalty.

Maximum Sound Level (L_{max}) –

L_{max} is used to measure the noisiest (maximum) sound heard at an airport. Unlike DNL, which is an average, L_{max} will describe the loudest sound.

Time Above (TA) – TA describes the amount of time that sound levels remain above a certain threshold. Typically, TA refers to the number of minutes within a 24-hour period that the threshold is exceeded.

These measures are not required in an EIS and are not used to determine whether aircraft noise is "significant." These other measures have been added to the CEP analysis in response to comments and concerns expressed during the public outreach for the Project.

AIRSPACE REDESIGN

The FAA Air Traffic Organization (ATO) has completed an EIS for the New York/New Jersey/Philadelphia Metropolitan Airspace Redesign Project and issued a Record of Decision (ROD) in September 2007. That EIS examined ways to develop viable air traffic control (ATC) alternatives to current operations to increase efficiency and reliability of the air traffic system through the adjustment of traffic flows in the New York, New Jersey, and Philadelphia areas to accommodate new technologies and reduce delays. In contrast to the CEP, which is designed to enhance the capacity of the airfield at PHL in order to accommodate current and future aviation demand in the Philadelphia Metropolitan Area during all weather conditions, the purpose of the Airspace Redesign Project is to improve the flow of air traffic once aircraft leave the immediate environment of the major airports in the New York, New Jersey, and Philadelphia areas. The Airspace Redesign Project will not alleviate all weather related delays at PHL, nor will it increase airport capacity or efficiency. Even with the airspace efficiency gains of the Airspace Redesign Project, additional airfield capacity is needed "on the ground" at PHL.

For more information on the FAA's Airspace Redesign Project, please see the FAA's web site (<http://www.faa.gov>).

Figure 3 Basis for Characterization of Changes in Noise

DNL Exposure Interval for a Proposed Action	Resulting Change in DNL	Characterization of Change
45 dB to less than 60 dB	5 dB or more	Slight-to-moderate change
60 dB to less than 65 dB	3 dB or more	Slight-to-moderate change; potential for mitigation should be considered
Greater than or equal to 65 dB	1.5 dB or more	Significant impact; mitigation must be considered

Note: Compiled from multiple sources

WHAT'S NEXT?

The DEIS will be released in late September 2008. It will be available for review at public libraries throughout the area, and available for viewing and downloading from the Project website, www.phl-cep-eis.com. After the DEIS is distributed, the FAA will hold public hearings in October 2008. These hearings will provide an opportunity for the public to comment on the DEIS. Members of the public may also submit written comments during the official public comment period, which will begin upon release of the DEIS and last for 45 days (estimated September 26 to November 10, 2008). All comments received at the public hearings and all written comments received during the official public comment period will be responded to in the Final EIS for the Project. The Final EIS will also identify the FAA's preferred alternative.

TO RECEIVE THE DEIS

Your participation in the EIS process is necessary and appreciated! If you are not on the project mailing list, you can sign up to receive a copy of the DEIS by visiting the EIS website (www.phl-cep-eis.com) or by writing to the FAA project manager listed below. The DEIS will also be available on the website when it is published at the end of September. Your ideas can also be e-mailed to smcdonald.faa.cep@vhb.com or mailed to the address below. We look forward to hearing from you!.

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