

**Key West International Airport
Ad-hoc Committee on Airport Noise
Agenda for Tuesday, October 7th, 2014**

Call to Order 2:00 pm Harvey Government Center

Roll Call

A. Review and Approval of Meeting Minutes

1. For April 1st, 2014

B. Discussion of Part 150 Study Update -

1. Role of the FAA and the Part 150 Process

2. Noise Compatibility Program

3. Next Step - Mitigation Plan

C. Other Reports:

1. Noise Hotline and Contact Log

2. Airport Noise Report

D. Other Discussion

1. Meeting Schedule for 2014

February 4th	April 1 st	June 3rd
August 5th	October 7 th	December 2 nd

E. Next meeting: December 2nd, 2014

ADA ASSISTANCE: *If you are a person with a disability who needs special accommodations in order to participate in this proceeding, please contact the County Administrator's Office, by phoning (305) 292-4441, between the hours of 8:30 a.m. - 5:00 p.m., no later than five (5) calendar days prior to the scheduled meeting; if you are hearing or voice impaired, call "711".*

KWIA Ad-Hoc Committee on Noise April 1, 2014 Meeting Minutes

Meeting called to order by Commissioner Kolhage at 2:00 PM.

ROLL CALL:

Committee Members in Attendance:

Commissioner Danny Kolhage
Kay Miller
Sonny Knowles
Marlene Durazo
Harvey Wolney

Staff and Guests in Attendance:

Peter Horton, KWIA.
Deborah Lagos, URS Corp.
Dan Botto, URS Corp.
R. L. Blazevic, Resident
Ashley Monnier, NASKW
Robert Gold, Old Town Homeowners

A quorum was present.

Chairman Kolhage called the meeting to order at 2 p.m.

Review and Approval of Meeting Minutes for the June 4th and August 6th, 2013 Ad Hoc Committee Meetings

Commissioner Kolhage asked if there any comments or corrections of the June 4th, or August 6th 2013 minutes. There were no comments raised. Kay Miller motioned to approve the minutes and Marlene Durazo seconded. The minutes were approved as written.

Discussion of Part 150 Study Update

Role of the FAA and the Part 150 Process

Dan Botto discussed the role of the FAA in the Part 150 Study and process. A handout describing this role and the process was provided to the Committee at the behest of the FAA, and will be provided at each meeting. The Committee was

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reminded that the FAA does not automatically approve all recommended measures of the Part 150 Study.

Dan explained that the FAA also does not approve the NEMs, they strictly determine if the NEMs are in compliance with the Part 150 requirements, and will issue a Notice of Compliance in the Federal Register. They will make sure that URS and the Airport are following the rules and regulations that govern the Part 150 Process and that the public was included; additionally, they will provide guidance and instruction as to items that were not covered or covered improperly.

Dan further mentioned that the approval role of the FAA occurs during the Noise Compatibility Program [NCP] where recommendations are made for operational and/or land use mitigation measures, like the NIP. That is where the FAA will approve or disprove each recommendation based on the Part 150 requirements.

Noise Exposure Maps

Dan Botto explained that the FAA has officially accepted the NEMs and have published that fact in the Federal Register. He continued that KWIA is required to publish this in the local papers three (3) times and once URS gets the proof of publication from the newspaper, URS will publish the final NEM.

Noise Compatibility Program

Deborah Lagos informed the Ad Hoc Committee that the reason we have not had a meeting in six (6) months is because the NCP has been submitted to the FAA and we were awaiting comments. URS and KWIA felt it was unnecessary to continue the meetings as planned without having anything new to report or discuss.

Deborah continued that there were over 100 comments, and KWIA and URS went to Orlando to discuss these comments with the FAA to work out details on the FAA comments so the FAA would be ready to approve the NCP. Peter Horton added that there were 138 FAA comments that the FAA boiled down to four (4) primary comments, with the block rounding being the most significant issue.

Peter further explained what block rounding was and how the FAA did not want to include block rounding in the body of the document. There was a compromise

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worked out that the block rounding discussion will be maintained, but would be contained in the appendix. Peter continued discussing how the implementation of noise insulation programs has changed and that the FAA wants to be very careful when including any homes outside the DNL 65 dB contour.

Peter also praised the efforts of URS and the FAA to work out the compromises, and that the NCP is ready to move on and be resubmitted for FAA approval.

Peter then went on to discuss that the funding will be in the pre-application for the funding next January.

Deborah elaborated that the compromise worked out at the working meeting with the FAA at least maintained the proposed block rounding in the document.

Kay Miller asked if there is a final date for the submittal of the final NCP. Deborah explained that the FAA could provide comments on the next version of the NCP, and then there is still a 180-day review period for actual approval.

Other Reports

Noise Hotline and Contact Log

Dan Botto reported that there were only seven calls since August 2013, with one call regarding a helicopter operating locally. Peter Horton mentioned that this call came into the county website as well as the noise hotline, at which time Peter investigated the incident. Peter called the FAA to determine if the helicopter was flying improperly, and was informed that the helicopter was flying within proscribed regulations. The helo operator was contacted and determined that he was performing some aerial surveying and was a one-time occurrence. Peter then went on to mention that in the batch of Airport Noise Reports included with the agenda package, there were many mentions of the FAA looking into regulating helicopter operations.

Peter Discussed complaints of aircraft flying directly over homes on departure, and the public needs to remember that during the winter, winds shift and cause the use of Runway 27, but this only occurs about 20 percent of the time.

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Peter explained that while passenger traffic has increased at KWIA, but aircraft traffic has continued to decrease.

Robert Gold inquired as to what affect the pull out of Southwest airlines would have on the airport and what were the factors for their pull out. Mr. Gold felt that this event will cause a significant increase in operations as there are more passengers coming to Key West, but fewer 737s operating. Peter Horton explained that the operations numbers have been decreasing even before the pull-out was announced. Peter expects Delta to increase operations to fill the void. Peter also explained that he thought the SW decision was due to the poor performance of the EYW to New Orleans route, and he felt it was a poor route to start as it is a destination to destination route. Another reason for the pull-out is runway length according to Peter. Peter expects this to reduce pax numbers in the first year, but would rebound with Delta taking up the slack.

Robert Gold asked if the SW load factors were limited by the runway length issue, or poor sales, and also asked if American Airlines might change to the 737 to also pick up the SW passenger demand. Peter felt it was primarily the effect of the runway length and does expect the other airlines to change their operating model at EYW.

Airport Noise Report

Dan Botto mentions that the collection of Airport Noise Reports have many articles discussing the new research being funded for different noise metrics and different ways to measure and monitor noise. Dan also mentions there are a few articles about the FAA examining additional helicopter regulations.

Dan and peter both mention the article on NAS Key West.

Marlene Durazo pointed out the article about FAA funding.

Kay Miller asked about the new WebTrak MY Neighbourhood to provide accurate and current data for the local residents to obtain noise and operations information. Peter Horton explained that this system would only work if KWIA had its own radar system, but KWIA is dependent on NASKW's radar.

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Peter Horton asked everyone to look at page 61 of the agenda package. The article explains that the FAA is not going to back down on the ban of stage 1 and 2 jet aircraft under 75,000 pounds by December 31, 2015.

Peter then mentioned the funding for noise projects was on page 105 for last year [2013] and the FAA is still funding NIP projects.

Any Other Discussion

Next Steps

There were questions on NEXTGEN and Robert Gold mentioned he read where NETGEN is supposed to be fully operational by 2025.

Marlene Durazo asked when the next version of the NCP would be submitted to the FAA. Dan Botto explained the way the NCP will be revised with regards to the FAA comments and discussion and would take a few weeks. Marlene Durazo asked if all the information on Key West by the Sea would still be included. Dan explained that everything in the document would still be there, but if the property is outside the contour it will only be included in the appendix.

Deborah further explained that the next battle is the FAA is balking at replacing AC units in homes in a NIP.

Kay Miller moved to adjourn the meeting.

The Commissioner adjourned the meeting at 2:48 p.m.

PART 150 PROCESS

NOISE EXPOSURE MAPS

Existing Noise Exposure Map



Future Noise Exposure Map



Public Review

Noise Exposure Maps Report



FAA Review / Comments

FAA Notice of Noise Exposure Map Conformance

NOISE COMPATIBILITY PROGRAM

Operational Noise Abatement Alternatives



Land Use Noise Mitigation Alternatives



Public Review

Program Management Alternatives



**Implementation Plan / Noise Benefit Analysis /
Cost Estimate / Roles & Responsibilities**



Preliminary Noise Compatibility Program Report



FAA Review

Final Noise Compatibility Program Report



Public Hearing



FAA Review - 180 Days

FAA Record of Approval



The Role of the FAA in the Part 150 Process:

Noise Exposure Maps

- Indicates whether they are in compliance with applicable requirements,
- Publishes notice of compliance in the Federal Register, including where and when the maps and related documentation are available for public inspection.

Noise Compatibility Program

The FAA conducts an evaluation of each of the measures (operational, land use, and program management) included in the noise compatibility program and, based on that evaluation, either approves or disapproves each of the measures in the program. The evaluation includes consideration of proposed measures to determine whether they—

- May create an undue burden on interstate or foreign commerce (including unjust discrimination);
- Are reasonably consistent with obtaining the goal of reducing existing noncompatible land uses and preventing the introduction of additional noncompatible land uses;
- Include the use of new or modified flight procedures to control the operation of aircraft for purposes of noise control, or affect flight procedures in any way;
- The evaluation may also include an evaluation of those proposed measures to determine whether they may adversely affect the exercise of the authority and responsibilities of the Administrator under the Federal Aviation Act of 1958, as amended.

The Administrator approves programs under this part, if –

- Program measures to be implemented would not create an undue burden on interstate or foreign commerce and are reasonable consistent with achieving the goals of reducing existing noncompatible land uses around the airport and of preventing the introduction of additional noncompatible land uses;
- The program provides for revision if made necessary by the revision of the noise map;
- Those aspects of programs relating to the use of flight procedures for noise control can be implemented within the period covered by the program and WITHOUT –
 - Reducing the level of aviation safety provided;
 - Derogating the requisite level of protection for aircraft, their occupants, and persons and property on the ground
 - Adversely affecting the efficient use and management of the Navigable Airspace and Air Traffic Control Systems; or
 - Adversely affecting any other powers and responsibilities of the Administrator prescribed by law or any other program, standard, or requirement established in accordance with law.

Source: .Title 14 cfr part 150.

**Key West International Airport
Noise Hotline Log**

Date of call	Time of call	Caller	Contact information	Date rec'd	Message
3/31/2014	6:48 PM	Monica Munoz	KWBTS Unit 120C 305-797-0725	4/10/2014	There's been an aircraft at the end of the RW that's been sitting there running their motors for about 10 minutes now. I do not know the aircraft tail number but if you would like to give me a call my number is 305-797-0725.
4/14/2014	2:08 PM				hang up
4/14/2014	11:02 AM				hang up
8/19/2014	12:06 PM				hang up
9/17/2014	9:37 AM				hang up

**Key West International Airport
Contact Log**

Date of call	Caller	Contact information	Subject	Response
5/12/2014	Joy	305-304-3250	I live on Riviera on the water and one of my glass sliding doors shattered the other day after noise from a plane.	DTB spoke with her. She is in new contour and does not and did not want NIP, but would take easement now.
7/23/2014	Monica Munoz	305-797-0725	From KWBTs, wanted more information on the Part 150 Study.	DTB spoke with her and provided information and will invite to next AD Hoc

Airport Noise Report



A weekly update on litigation, regulations, and technological developments

Volume 26, Number 9

March 21, 2014

Sound Insulation PGL

SCIENCE-BASED TEST NEEDED TO EXPLAIN WHICH HOMES MEET 45 DNL INTERIOR LEVEL

A repeatable, science-based testing methodology is needed for airports to effectively communicate to the public which homes meet and do not meet the 45 dB DNL interior noise level criteria for airport sound insulation programs that the Federal Aviation Administration is now strictly enforcing.

That is the message Sjohnna Knack, program manager, Airport Noise Mitigation, San Diego County Regional Airport Authority, delivered to participants at the U.C. Davis Aviation Noise and Air Quality Symposium, held Feb. 23-26 in Palm Spring, CA.

Knack said she is finding it very difficult to explain the 45 dB DNL interior noise level requirement to homeowners who have already been told that they are within the 65 dB DNL contour and eligible for sound insulation.

In June, San Diego International airport will begin processing the first group of homes that will be subject to the 45 dB DNL interior noise level requirement, which was stipulated in FAA Program Guidance Letter (PGL) 12-09, AIP Eligibility and Justification Requirements for Noise Insulation Projects, issued in 2012.

(Continued on p. 35)

Technology

FAA PLANS TO LAUNCH CLEEN II PROGRAM IN MID-2014; CONSIDERS CLEEN I SUCCESSFUL

In mid-2014, the Federal Aviation Administration expects to issue a solicitation seeking industry partners for Phase II of the agency's Continuous Lower Energy, Emissions and Noise (CLEEN) Program.

The goal of CLEEN is to accelerate the development and commercial deployment of environmentally promising aircraft technologies and sustainable alternative fuels. The aircraft technologies focus on reduction of aircraft noise, emissions, and fuel burn.

FAA will fund the five-year CLEEN II program (2015-2020) at a level of \$100 million with industry partners contributing, at a minimum, an equal amount.

CLEEN II is a follow-on to the initial program, which also runs five years (2010-2015) and FAA funded at a level of \$125 million, with an equal or greater funding match by industry partners Boeing, General Electric, Honeywell, Pratt & Whitney, and Rolls-Royce. In May 2015, FAA expects to award agreements to its CLEEN II industry partners.

FAA considers Phase I of the CLEEN Program to be successful, Dr. James Hileman, FAA's chief scientific and technical advisor for environment and energy,

(Continued on p. 35)

In This Issue...

SIPS ... Airports need a repeatable, science-based testing methodology to communicate effectively with the public about which homes will meet the 45 dB DNL interior noise level requirement FAA is now strictly enforcing, symposium told - p. 34

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Sonic Boom ... NASA believes that SST design tools are now at a point where quiet, low-boom overland supersonic passenger service is achievable - p. 35

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Sound Insulation, from p. 34

It imposes a two-step eligibility requirement for Airport Improvement Program (AIP) funded noise insulation projects, including requiring that structures must have a noise level equal to or greater than 45 dB DNL prior to insulation, in addition to being in the 65 dB DNL contour.

Airports contend the interior noise level criteria is a new requirement; FAA says it is an existing requirement that was not uniformly enforced.

The PGL included a three-year transition period for meeting the 45 dB DNL interior noise level requirement in order to give airports time to complete sound insulation projects already in progress or planned through 2014.

“We are talking to FAA about what to tell the homeowners who will be subject to the 45 dB DNL noise level criteria, Knack said. “... We don’t know what FAA will allow us to do [beyond the transition period] because there is no clear directive [from the agency.] We can’t craft our plan until then.”

San Diego International Airport has approximately 8,000 homes remaining in its sound insulation program – the second most in the country beyond Los Angeles International Airport – and is concerned that some of its homes may not be able to meet the interior noise level requirement.

Knack was part of a working group comprised of airports, consultants, sound insulation manufacturers, and others that developed and submitted to the FAA an acoustical testing protocol for determining which homes comply with the 45 dB DNL interior noise level criteria that they believe is superior to the protocol outlined in the PGL and would not require acoustical testing of every home.

The FAA has not yet responded to their proposal.

Knack said that having to test interior noise levels in every home – as the PGL could be interpreted as requiring – would greatly increase sound insulation program costs and cut down on the number of homes that could be insulated. The proposed acoustical test plan submitted to FAA would allow noise modeling to determine interior noise level compliance. “We’ll have to see if FAA will allow that,” Knack said.

Asked what airports can do to prepare for the impact of the PGL, Knack said it was very beneficial for San Diego International to work with a public relations firm to script what airport staff would say to the public about the PGL. “We still use that [scripted] language to this day,” she said, stressing that only three members of her staff are allowed to talk to the public about the PGL.

Knack said one the biggest challenges San Diego International has faced in complying with the PGL is its “Buy America” requirement. “It’s close to impossible to get a waiver,” she said.

CLEEN II, from p. 34

told participants Feb. 24 at the UC Davis Aircraft Noise and Air Quality Symposium in Palm Spring, CA.

Green technologies focused on in CLEEN I include ceramic matrix composite engine nozzles, low NOx combustors, adaptive trailing edges that change wing aerodynamics in flight, and ultra-high bypass ratio geared turbofan and open rotor engines, which can reduce both fuel burn and noise.

The larger ultra-high-bypass geared turbofan engines can reduce aircraft engine noise by 25 EPNdB relative to Stage 4 noise limits, Hileman said. Open rotor engines can reduce engine noise 15-17 EPNdB below Stage 4 noise.

One of the CLEEN program goals is to reduce aircraft noise 32 dB cumulatively below Stage 4 by 2018 and 71 dB cumulatively below Stage 4 by 2025.

Ceramic matrix composites are a new material that combines the heat resistance of ceramics with the strength of metal.

As GE explains, “Jet engines require the use of materials that are very strong, light, and able to sustain high levels of heat. Adding ceramics – which are able to withstand very high temperatures and have a very low density – could have a significant impact on an engine’s energy efficiency, through reduced fuel cost and lower emissions. The key is taking a brittle material such as ceramics, and making it virtually unbreakable.”

“CLEEN I was an experiment and the response [from industry] has been very positive,” Hileman said. CLEEN I matured technologies now entering commercial service.

Sonic Boom**TWO NASA RESEARCH CENTERS TEAM UP TO TACKLE SONIC BOOM**

[Following is a March 17 NASA News Feature by Frank Jennings, Jr., NASA Glenn Research Center, and Karen L. Rugg, NASA Aeronautics Research Mission Directorate.]

Since the Concorde’s final landing at London’s Heathrow Airport nearly a decade ago, commercial supersonic air travel has been as elusive as a piece of lost luggage. However, this hasn’t stopped NASA from continuing the quest to develop solutions that will help get supersonic passenger travel off the ground once more. And, while aerospace engineers have made significant progress in their understanding of supersonic flight, one significant challenge remains: the loud sonic boom.

“There are three barriers particular to civil supersonic flight; sonic boom, high altitude emissions and airport noise. Of the three, boom is the most significant problem,” said Peter Coen, manager of NASA’s High Speed Project with the agency’s Aeronautics Research Mission Directorate’s Fundamental Aeronautics Program.

The level of concern over sonic boom annoyance became so significant that the Federal Aviation Administration prohibited domestic civil supersonic flight over land in 1973. This prohibition helped quiet the skies and reduce potential impacts on the environment. However, it also dashed hopes of introducing supersonic overland passenger service within U.S. airspace during the Concorde era.

Overcoming this sonic boom prohibition has kept engineers busy at the four NASA centers that conduct aeronautics research in California, Ohio and Virginia.

Acceptable Loudness Level

Since the maximum acceptable loudness of a sonic boom is not specifically defined under the current FAA regulation, NASA and its aviation partners have been researching ways to identify a loudness level that is acceptable to both the FAA and the public, and to reduce the noise created by supersonic aircraft. Using cutting-edge testing that builds on previous supersonic research, NASA has been exploring “low-boom” aircraft designs, and other strategies that show promise for reducing sonic boom levels.

Previous research by NASA, the military and the aircraft industry has determined that a variety of factors, from the shape and position of aircraft components to the propulsion system’s characteristics, determine the make-up of a supersonic aircraft’s sonic boom. Therefore, engineers are able to tune or “shape” a boom signature through design to minimize the loudness of the boom it produces in flight.

The most recent possible supersonic aircraft designs reflect what’s needed to meet NASA’s low-boom requirements. These requirements specify targets for boom loudness, aerodynamic efficiency, and airport noise for an N+2 – second generation beyond current technology – aircraft design that could be flying by the years 2020 through 2025.

Similar to designs of the past, the current concepts are characterized by a needle-like nose, a sleek fuselage and a delta wing or highly-swept wings. It’s the details of how those designs are shaped that result in the reduced sonic boom. One design, proposed by industry partner Lockheed Martin, mounts two engines under the wing in a traditional configuration with one additional centerline engine above the wing. The other industry partner currently working with the NASA High Speed Project, The Boeing Company, proposes two top-mounted engines in a departure from historical aircraft design.

“Engine installation is a critical part of achieving an overall low boom design,” said Coen, who is located at NASA’s Langley Research Center. “If we mount the engines in a conventional manner, we need to carefully tailor the shape of the wing to diffuse the shock waves. If we mount the engines above the wing, the shock wave can be directed upward and not affect the ground signature. However, such installations may have performance penalties.”

NASA’s recent focus on supersonic research testing began in November 2010 as part of the project’s Experimental Systems Validations for N+2 Supersonic Commercial Transport

Aircraft effort. Its goal was to capture boom-relevant data from supersonic scale models built by Boeing and Lockheed. In preparation for this research, industry engineers first designed full-sized aircraft on their computers, and then scaled down the designs to build wind tunnel models that exhibit the same flight characteristics during testing as do their full-size counterparts in actual flight. The scale models were then sent to NASA wind tunnel facilities at the Ames and Glenn research centers.

Once delivered to NASA, the project’s engineers focused on obtaining data from two distinct aspects of supersonic design – the measurement of the sonic boom pressure signature at various distances around the aircraft, and the measurement of engine inlet performance for the top-mounted engines. The data from NASA’s wind tunnels are being used to validate the computer-based design tools for continued use in future low-boom aircraft design research.

Wind Tunnel Tests

The series of wind tunnel tests began at Ames’ 9- by 7-Foot Supersonic Wind Tunnel in late 2010 and continued through mid-2012 with initial tests of Lockheed’s and Boeing’s Phase I supersonic aircraft concepts. These tests focused on the boom signature measurements and development of test techniques. Testing on the Phase I designs was also performed at Glenn’s 8- by 6-Foot Supersonic Wind Tunnel in late 2012.

Both companies then refined their designs for better boom characteristics and improved aerodynamic performance. Tests continued at Ames and Glenn on the Phase II designs through 2012 and 2013, focusing on the engine nacelle integration with the overall vehicle. (Nacelles are the parts of the aircraft that house the engines, and are usually mounted directly on the wings or fuselage of an airplane or on pylons attached to the aircraft.)

One of these Phase II tests was a propulsion integration test at Glenn’s 8- by 6-Foot supersonic wind tunnel, conducted in March of 2013. This test of a 43-inch long, 1.79-percent scale model built by Boeing focused on capturing performance data from the engine air inlets – the components through which air enters the aircraft engines. NASA tested this model both with the inlets integrated on the overall aircraft, mounted above the wings, as well as with one of the inlets by itself, measuring the inlet air flow and pressure recovery (the pressure level at the engine face after losses from the flow turning and shock waves in the inlet) each time. The measurements in the inlet were captured by a series of pressure and temperature probes deep inside the inlet, where the first set of blades for the engine would be. A remotely-controlled mass-flow plug assembly (a movable cone that varied the size of the nacelle exit area) was fitted behind the inlet, which gave engineers the capability to vary the rate of air flow through the inlet to capture data throughout the duration of the scale model’s test “flight” in the tunnel.

“Capturing this flow rate is important because it directly impacts a supersonic aircraft’s thrust performance in flight, as

well as cruise efficiency,” said Coen.

The part of the test consisting of a stand-alone air inlet, which was mounted on a support cone within the wind tunnel, enabled engineers to capture inlet performance data without the influence of the rest of the aircraft. By comparing the measured data of the two configurations, NASA and Boeing will be able to learn if the shape of the airframe has a big effect – good or bad – on the performance of the inlet.

High levels of inlet performance are desirable to keep the vehicle’s engines running smoothly and able to provide thrust,” said Raymond Castner, Glenn’s Inlet and Nozzle Branch Propulsion Technical Lead for the High Speed Project. “The inlet data collected was used to increase our knowledge and to validate both design and analysis tools. This knowledge was needed across a range of flight conditions at Mach numbers from 0.25 to 1.8, and at various angles occurring between the airflow and the aircraft as it flies.

Scale Models Tested

Once testing was completed at Glenn, a final test was done at Ames Research Center where engineers worked with the 43-inch as well as 16-inch scale models provided by Boeing, similar to a test the year prior with a 19-inch scale model provided by Lockheed Martin. During these tests, researchers sought to capture data that indicated how well the nacelles were integrated with the overall designs, and how they affected the aircraft’s boom characteristics and aerodynamic drag.

The Boeing scale models underwent testing using two different nacelle shapes, and also with the nacelles not installed. Lockheed Martin’s scale model underwent one set of tests with nacelles installed and one without. Engineers captured measurement data relating to the influence nacelle configurations had on the models’ overall boom signatures and aerodynamic performance.

“The purpose of our testing was to measure the impact of the nacelle configurations on the boom signatures,” said Don Durston, a High Speed Project engineer at Ames Research Center. “Preliminary results showed that as expected, with Boeing’s nacelles being on top of the wing, any small changes there had negligible effects on the boom, Lockheed’s model having the two of the nacelles under the wing, did show a measurable impact on boom; however, that effect was predicted, and could be accounted for in the design process Lockheed used.”

Using Ames’ 9-by 7-Foot supersonic wind tunnel, engineers subjected each scale model to a series of tests designed to capture the design’s overall boom signature, or sound personality.

Over the coming months NASA engineers will pore through the test data with industry partners, in preparation for future research and additional testing, which will also involve NASA’s Armstrong Flight Research Center. In the near term, the attention will be on how shock waves in the engine exhaust flow impact the overall boom signature.

As additional boom research discoveries are made,

NASA will add these findings to the growing repository of supersonic data that’s available to the civil aviation community to help foster further innovation.

In the meantime, Coen thinks the research over the past year brings engineers one step closer to realizing a viable low-boom, civil supersonic aircraft transport design.

“We’ve convinced ourselves that we have the design tools and we’ve validated the level we need to design to,” said Coen. “We’ve reached a point where quiet, low-boom overland supersonic passenger service is achievable.”

ADS-B

SPACE-BASED ADS-B WILL AIDE FUTURE SEARCH AND RESCUE

As long as an aircraft’s on-board transponder is not turned off – and, unfortunately, that was not the case with missing Malaysia Airline’s Flight 370 – Aireon’s space-based air traffic surveillance system, set to launch next year, will greatly expedite aircraft search and rescue efforts.

Aireon is a joint venture between Iridium Communications, Inc., NAV CANADA, and others, that was formed to launch the surveillance system by hosting ADS-B receiver payloads on Iridium NEXT, Iridium’s second-generation satellite constellation, scheduled for launch in 2015.

ADS-B technology is one of the key components of FAA’s NextGen air transportation system.

On March 5, Aireon announced that the receiver payload for its space-based aircraft surveillance system had successfully completed qualification testing for operation in the harsh environment of space.

That led ANR to ask the company whether its system, if already operating, could have helped locate the missing Air Malaysia flight. Following is Aireon’s answer:

In current oceanic airspace, pilots reports in to ATC every 10-15 minutes on what their position is – it isn’t in real-time. This means that there is a period of time in between updates in which the precise location of the aircraft is unknown. Based on these methods and the lack of frequent updates on an aircraft’s locations can mean larger distances are flown between messages or voice transmissions of latest aircraft position.

However, that’s about to change. As you likely know, aircraft are currently being equipped with ADS-B responders (due to NextGen mandates) that will report their location to ATC authorities through ground-based ADS-B systems. Aireon will expand that capability on a global scale, specifically over oceans or remote areas, without any additional equipage costs to the airlines.

As long as the aircraft’s on-board transponder is transmitting data, and that is really the part that is key, that signal will be able to be picked up and ADS-B information such as precise location, velocity and ICAO number would be available in near real-time. If the transponder is turned off, either inten-

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tionally or because of a malfunction in the communications system, Aireon wouldn't be able to pick up the signal either.

We can't say that if Aireon was available then the outcome of Malaysian Airlines 370 would have been different, because no one knows for sure what happened on the flight in relation to the transponder. What we can say is that the capability to be able to identify the last known coordinates of the plane would aide in search and rescue situations, such as the Malaysian Airlines Flight 370, in ways that couldn't be possible through the ground-based infrastructure available today.

Space-based ADS-B (such as that provided by Aireon) will greatly expedite search and rescue efforts through near-real time, highly-accurate GPS location reporting from the aircraft, substantially reducing the time to locate planes that are no longer transmitting ADS-B signals. Without a precise location for the last known coordinates of an aircraft, the search area can span hundreds or even thousands of miles, which is what we're seeing today.

In Brief...

New ASCENT COE Holds First Meeting

A meeting of the Advisory Committee for the Federal Aviation Administration's new ASCENT (Aviation Sustainability Center) Center of Excellence was held in Washington, DC, on March 11-13.

Although the name for the new COE in FAA's solicitation for it was the FAA Center of Excellence for Alternative Jet Fuels and Environment, it will be known as ASCENT.

While PARTNER, which ASCENT replaces, was led by the Massachusetts Institute of Technology, ASCENT will be co-led by MIT and Washington State University.

The ASCENT COE has a website (www.ascent.aero) that lists the university members of the COE and the members of its Advisory Committee.

At its D.C. meeting last week, which was closed to the press, the ASCENT Advisory Committee likely began the process of determining which projects the new COE should focus on during its 10-year life.

NetJets Meets London City Airport Noise Limits

NetJets, a Berkshire Hathaway company that offers fractional ownership and rental of private long-range jets, announced March 4 that the London City Airport, which has one of the most stringent noise management schemes at any UK airport, has certified its aircraft to operate at the noise-sensitive inner-city airport.

AIRPORT NOISE REPORT

Anne H. Kohut, Publisher

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

Volume 26, Number 10

March 28, 2014

PANYNJ

PANYNJ ORDERED TO DO PART 150 STUDIES, SET UP ROUNDTABLES, DOUBLE MONITORS

On March 24, New York Gov. Andrew Cuomo (D) ordered the Port Authority of New York and New Jersey to conduct separate Part 150 noise compatibility studies for JFK and LaGuardia airports, to establish community roundtables for those airports, to double the number of portable noise monitors, and to establish a new Aviation Noise Office.

In a separate announcement on March 28, the Port Authority addressed its New Jersey airports, saying a roundtable would be established for Newark International, in addition to a long-standing noise group already in existence for Teterboro, and that it will explore conducting Part 150 studies at Newark and Teterboro.

“Airport noise is rightly an important concern for residents of Queens, the Bronx, and Nassau County and that is why I am directing the Port Authority to open a full and thorough dialogue with the impacted communities while also pursuing a noise study to better address the issue,” Gov. Cuomo said. “We will listen to local residents and ensure their input is used to make both JFK and LaGuardia airports better neighbors.”

(Continued on p. 39)

Santa Monica Airport

CITY COUNCIL APPROVES PLANNING FOR CLOSURE OF ALL OR PART OF AIRPORT

Despite a recent legal setback, the Santa Monica City Council voted 6-0 on March 25 to begin contingency planning for the possible closure of all or part of Santa Monica Airport after July 1, 2015, when federal airport grant agreements expire.

City staff was directed to prepare a “preliminary conceptual plan” for a smaller airport that excludes a 35-acre “Western Parcel,” effectively cutting in half the runway length of one of the busiest general aviation airports in the country.

That would achieve the city’s long-sought goal of preventing larger, faster business jets from operating at SMO, which has been consistently stymied by FAA.

The Western Parcel of airport land was not transferred to the federal government for use in World War II, and, therefore, is not subject to being reclaimed by the FAA under the legal Instrument of Transfer (IOT) that returned the land to the city in 1948 after the war, the City staff said. But it noted that FAA will argue that the obligations entered into in the IOT extend to all airport land and obligate the City to operate the airport into perpetuity.

City Council members and City Attorney Marsha Moutrie acknowledged that

(Continued on p. 40)

In This Issue...

PANYNJ ... NY Gov. Andrew Cuomo orders Port Authority to conduct Part 150 studies, set up community roundtables at JFK, LaGuardia airports and double the number of portable noise monitors.

Not leaving its New Jersey airports out, PA says it also will set up a roundtable for Teterboro, explore conducting Part 150 studies at Newark, Teterboro - p. 38

Santa Monica ... City Council directs staff to begin contingency planning for closure of part or all of general aviation Santa Monica Airport after federal grant agreements expire in 2015.

Partial closure would cut runway length in half, preventing biz jet ops - p. 38

Bob Hope Airport ... Airport Authority approves \$1.06 million contract for residential sound insulation - p. 41

News Briefs ... FAA approves imposition of PFC to fund sound insulation of school near O’Hare - p. 41

PANYNJ, from p. 38

Said Port Authority Executive Director Pat Foye, “Catalyzed by Governor Cuomo’s directive to the Port Authority on this issue, the Port Authority has taken big steps in addressing noise surrounding our airports. We are committed to working with all communities we operate in to address their concerns, while bringing JFK and LaGuardia airports into the 21st Century and maintaining the viability of our airports as major economic engines for the metropolitan region.”

“The Port Authority understands it must strive to be a good neighbor in the communities where its airports are located and we will seek noise mitigation with the FAA where feasible,” said Port Authority Aviation Director Thomas Bosco.

Communities around the PANYNJ’s airports have complained about aircraft noise for decades. But FAA’s implementation of an RNAV departure procedure from LaGuardia in mid-2012, which moved aircraft over parts of Queens, sparked the formation of Queens Quiet Skies (QQS), a community group that has been extremely effective at galvanizing political support for its goals.

In recent years, communities on Long Island have noticed a sharp increase in operations at JFK International, which reactivated their noise mitigation efforts.

In announcing his orders to the Port Authority, Gov. Cuomo commended the efforts of a long list of elected officials who have been involved in getting the Port Authority to address the concerns of communities near its airports, including members of the NY congressional delegation and State Assembly and Senate, Queens Borough and New York City Council members, and Long Island elected officials.

Community Roundtables

The PANYNJ will begin operating community roundtables for JFK, LaGuardia, and Newark this spring. They will include community representatives and FAA officials.

Establishing a community roundtable was one of the major goals of Queens Quiet Skies. The PANYNJ has been out of step with most proprietors of large U.S. airports who have set up roundtables as a way to address community concerns about noise and other airport issues.

“We thank Governor Cuomo for his vision and leadership, as well as all our elected officials who helped realize these essential initiatives for aviation in New York City metro area,” QQS founder Janet McEneaney told ANR.

“We look forward to working with community leaders, municipalities, elected representatives, the Port Authority, the FAA and the airlines as problem-solving partners in aviation decisions that affect New Yorkers.”

Rep. Grace Meng (D-NY), who represents Queens, said she was “Thrilled that our efforts to establish an airport advisory committee and install more noise monitors are finally moving forward. When airplane noise increased over the borough, we created our own noise about the need for these critical initiatives, and I am proud to have helped lead the initial

conversation about them.”

She noted that 12 members of NY’s congressional delegation, including its two senators, sent a letter to the PANYNJ last year requesting formation of the roundtable.

Queens Quiet Skies has been negotiating with the FAA and Port Authority on how the roundtables will be constituted and operated but those details have not yet been announced.

Part 150 Studies

Late last year, the Port Authority committed to Gov. Cuomo’s request that it conduct Part 150 studies to better evaluate noise impacts to the communities surrounding JFK and LaGuardia airports. The Port Authority will now hire an aircraft noise-consulting firm to assist with the studies.

The Part 150 studies will take up to \$6 million and three years to complete, Edward Knoesel, Port Authority environmental services manager, explained at a March 24 meeting of the Town of Hempstead, Long Island’s Town-Village Aircraft Safety and Noise Abatement Committee.

“The cost is going to be greater than any other airport that has done this,” Knoesel said. “No other airport operator has conducted two studies at the same time,” *Newsday Long Island* reported him saying.

A committee member told the Port Authority official, “We’re not looking for a sloppy job but I think you hear us when we say, ‘we don’t want to wait five years,’” the paper reported.

Cuomo noted that mitigation efforts taken at other airports that have done Part 150 studies include revamping of flight routes and approach procedures, encouraging airlines to use quieter aircraft and installing soundproofing to eligible properties.

“The overall goal is to provide noise relief to communities where possible and practical, while ensuring the continued regional economic benefits of air travel,” he said.

More Noise Monitors

The Port Authority committed to doubling the existing portable noise monitors collecting data over flight paths for JFK, Newark, LaGuardia, and Teterboro airports.

Additionally, the PANYNJ is establishing a new Aviation Noise Office that “will be staffed by a dedicated team that will be responsible for collecting and reviewing the noise data, while also responding on an enhanced basis to community complaints,” Gov. Cuomo said.

The Port Authority has also streamlined its noise complaint hotline system, making it easier for residents to lodge specific complaints about aircraft noise.

Gov. Cuomo noted communities near JFK and LaGuardia airports now can track planes and flight patterns on the Port Authority’s new WebTrak system, which provides graphics identifying aircraft, decibel noise levels, altitudes, airspace location and origin and destination airports.

Santa Monica, from p. 38

the city was facing a legal battle with FAA that will last for years if it acts to shrink or close the airport.

“A Council decision to try to close the entire Airport or the Western Parcel would likely provoke a complaint by the FAA and the aviation community. However, the legal battle over a closure of the Western parcel could be somewhat less legally complex because the Western Parcel was not transferred via the Instrument of Transfer and therefore is apparently not subject to the reversion clause in that document,” which stipulates that title to the airport reverts to FAA if the city closes the airport, the city staff report noted.

On Feb. 13, a federal judge dismissed a City lawsuit seeking to clarify that it holds title to the airport land transferred back to the City after World War II on the ground that the City missed its opportunity to file such litigation (26 ANR 22). Santa Monica has until April 14 to appeal that ruling.

City Still Retains Zoning Authority

But, even if FAA would regain title to Santa Monica Airport, the City still retains zoning authority over airport land, a fact not lost on the City Council. It approved a staff report recommending that the airport land be rezoned for uses compatible with the surrounding area.

The airport commission recommended rezoning the airport land for light industrial use, which would likely bar much current aviation activity.

The City Council also approved a staff recommendation to increase efforts to ensure that the use of Airport leaseholds is compatible with surrounding uses by, for instance, notifying flight schools that flight school leases will be conditioned or will not be renewed after July 1, 2015, and evaluating whether and how fuel sales should be prohibited or limited to curtail adverse environmental impacts.

Will FAA Risk Court Ruling?

By some estimates, the Federal Government leased hundreds of airports in World War II and transferred them back via the same legal Instrument of Transfer that applies to Santa Monica Airport.

FAA has studiously avoided any litigation that would clarify what happens if it does regain title to an airport under the IOT reversion clause because a ruling going against the agency also would apply to all the other airports subject to the clause. And a court could determine that the agency owes those airport proprietors for the improvements they have made to those airports.

The recent district court ruling did not clarify whether title to Santa Monica Airport would revert to the FAA after 2015 if the city moves to close the airport or what the extent of FAA’s interest in the airport is. A legal challenge to any action by Santa Monica to close the airport would clarify those issues. So, legal experts are closely watching to see if FAA will risk that clarification at Santa Monica or, in an ef-

fort to avoid it, will cut a deal with the city allowing it to limit jet operations.

And, if FAA does cut a deal with Santa Monica, other airports subject to the IOT may begin letting their grant assurances expire as a negotiating strategy to pressure FAA to allow them to impose operational restrictions because they cannot impose them under the FAA’s onerous Part 161 regulations on notice approval of airport noise and access restrictions.

NBAA Vows to Fight

The National Business Aviation Association (NBAA) vowed to fight efforts by Santa Monica to close or shrink Santa Monica Airport.

In a letter to Santa Monica City Mayor Pam O’Connor and testimony at the City Council hearing, NBAA disputed the City’s position that the airport could be closed in 2015, asserting that other federal obligations will remain in effect.

Seizing the Western Parcel of airport land not subject to the IOT would close half of the current 4,970-foot runway, essentially preventing operations by turbine business jets, NBAA said.

“It is clear that, despite a significant, recent legal setback, the council has voted to renew its efforts to restrict services at an important general aviation airport,” NBAA President and CEO Ed Bolen said. “For decades, NBAA and others in the general aviation community have fought to preserve access to this airport, in the face of ongoing opposition by the City Council. This is a battle we must and will continue to fight.”

Benefits of Partial Closure.

The City Council staff report noted that advocates of closing the Western Parcel of Santa Monica Airport and continuing to operate a much smaller and different airport note several possible benefits of that potential approach:

- Adverse impacts on airport neighbors would likely be reduced because the shorter runway would impact airport usage;
- Shortening the runway would create a buffer between the runway end and the residential neighborhood [which have long complained about aircraft noise and emissions];
- The continued existence of an airport, albeit much smaller, would continue to afford opportunities for the aviation community and would honor the airport’s history;
- The smaller airport would constitute a relatively low density land use;
- Maintaining a smaller airport could continue to avert the possibility of commercial aircraft, inbound to LAX from the north being routed lower over Santa Monica.

Correction: ANR incorrectly reported earlier that Santa Monica is the busiest GA airport in the country. It is one of the busiest.

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Bob Hope Airport

**AIRPORT AUTHORITY APPROVES
\$1.06 M SOUND INSULATION CONTRACT**

The Burbank-Glendale-Pasadena Airport Authority on March 17 approved a \$1.068 million contract for sound insulation of 30 single-family homes near Bob Hope Airport.

They will receive door and window replacements, additional attic insulation and weather stripping.

NSA Construction Group, Inc., Tarzana, CA, will do the installations, which are expected to take about 210 days to complete.

Bob Hope Airport’s sound insulation program has installed acoustical insulation in about 2,300 homes since 1997.

About \$92.8 million of mostly federal money has been spent on improving homes, while \$11.9 million was spent on schools near the airport, said Victor Gill, an airport spokesman.

There are 698 single family residential units that are still eligible for sound insulation out of 2,780 units that were eligible for insulation at the start of the airport’s sound insulation program. However, only 194 of those remaining homeowners have expressed interest in receiving sound insulation treatments.

There are 1,494 eligible multi-family residential units remaining to be sound insulated out of 1,857 eligible units at the start. Owners of those units will not be contacted until airport received FAA approval of its updated Part 150 airport noise compatibility program.

The airport expects to submit to the FAA later this year its plans for future sound insulation efforts, which are part of an update to its Part 150 program.

In Brief...

PFC for O’Hare School Insulation Approved

On March 12, FAA announced its approval of the imposition and use of a \$4.50 Passenger Facility Charge by the City of Chicago Department of Aviation from Nov. 1, 2038, to Dec. 1, 2038, for a total revenue of \$2,484,000 to fund sound insulation of St. Tarcissus School near O’Hare International Airport.

FAA also announced that Broward County Aviation Department withdrew on Aug. 16, 2013, a “noise monitors” project from its application seeking approval of PFC revenue collection for various airport projects.

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FAA

COMPLAINTS MAY NOT BE SUFFICIENT BASIS FOR NOISE RESTRICTIONS IN ALL CASES

At the recent UC Davis symposium on aviation noise and air quality in Palm Springs, Elizabeth Lynn Ray, VP of Mission Support Services for the Federal Aviation Administration's Air Traffic Organization, was asked to comment on FAA's use of noise complaints as the basis for noise restrictions.

The question was prompted by the U.S. Court of Appeals for the D.C. Circuit's ruling last July in *Helicopter Association International, Inc., v. FAA* that noise complaints – if substantiated by names and dates – can be used by the FAA instead of noise levels as the basis for enacting aircraft noise restrictions (25 ANR 86).

The ruling, which upheld FAA's imposition of a mandatory helicopter noise abatement route off the North Shore of Long Island, is thought to be the first ever by a court affirming the use of complaint data as the principal basis for an FAA noise decision.

In response to the question she was asked, Ray said, "The court talked about balance; not one thing. Noise complaints are part of available data; complaints are a

(Continued on p. 43)

NextGen

SW AIRLINES AIDING DEVELOPMENT OF RNP PROCEDURES AT DENVER INTERNATIONAL

Southwest Airlines is flying fuel efficient and environmentally friendly Required Navigational Performance (RNP) approaches at Denver International Airport that can reduce flying by three to five miles during a visual approach and up to 20 miles during an instrument approach each time they are flown at DIA.

These flights follow highly predictable paths and allow descents at idle power from high altitude cruise, which is the quietest and most fuel-efficient way for an aircraft to arrive, Southwest explained.

The airline said that working closely with local and regional Federal Aviation Administration and DIA officials, major contributions have been made to the development of RNP procedures as part of an ongoing major redesign of the airspace at DIA.

"We are very grateful to Southwest for their partnership with us, the FAA and others who were instrumental in the design and implementation of this essential phase of NextGen at DIA," said Denver's Manager of Aviation, Kim Day.

"In fact, our team composed of representatives from Southwest and other airline partners, consultants, DIA, and FAA was recently honored by the Air Traffic

(Continued on p. 45)

In This Issue...

Complaints ... Noise complaints can, but do not necessarily, provide sufficient evidence of a noise problem that warrants alteration of flight paths, FAA said in interpreting the D.C. Court of Appeals ruling last summer in HAI case - p. 42

NextGen ... Southwest Airlines is flying fuel-efficient and quieter RNP approaches into Denver International Airport and plans to employ them at all 96 airports it flies into - p. 42

Technology ... The German Aerospace Center is in the process of testing a cockpit display that aids pilots in flying every phase of quieter descent procedures - p. 43

Grant Assurances ... FAA seeks public comment on various modifications to AIP grant assurances the agency made recently. One removes unnecessary language regarding disposal of land from Grant Assurance 20 for non-airport sponsors doing noise compatibility projects - p. 44

Complaints, from p. 42

data point but not the only one.”

Ray appeared to be saying that noise complaints alone may not be a sufficient basis for a noise restriction in all cases.

ANR asked FAA to clarify Ray’s comment and received, after some weeks and several requests, the following statement:

FAA Statement

The Long Island rule reflects the FAA’s position that noise complaints can, but do not necessarily, provide sufficient evidence of a noise problem that warrants alteration of flight paths.

The DC Circuit Court of Appeals agreed and found that Helicopters Association International failed to show that, under the circumstances, the FAA’s exercise of its authority was unreasonable.

This does not mean that noise complaints always warrant regulation of flight paths.

As the FAA explained in the preamble to the final Long Island rule, there were “a number of unique characteristics that, taken together, made development of an alternative over-water route along the north shore of Long Island appropriate and feasible and consistent with the FAA’s safety mandate.” 77 FR 39912.

These unique aspects include the fact that the FAA was maximizing the use of an existing offshore helicopter route. The court reasoned: “So long as the FAA balances safety concerns appropriately, as it did here, its rulemaking decisions will not conflict with other statutory safety requirements.”

Ruling Opens Avenue for Communities

Last summer, when the ruling in *Helicopter Association International v. FAA* was issued, Denver airport attorney Peter Kirsch predicted it would be cited by those pressing FAA to consider noise impacts when designing RNAV/RNP routes into and out of airports as well as those seeking mandatory helicopter routes.

Asked to comment on FAA’s interpretation of the ruling, Kirsch said, “At issue in the case was the propriety of whether FAA can rely on noise complaints as the basis for its decision. FAA said ‘yes we can’ and the court agreed.”

It was the challenger in the case, HAI, that asserted the FAA cannot rely on noise complaints as the principal basis for noise restrictions, Kirsch explained, and FAA argued that it could.

The *HAI* ruling, he said, was significant for two reasons: the principal basis of the noise restriction was complaints, and the noise benefits of the rule were felt entirely outside 65 dB DNL.

FAA said it can use both those criteria in enacting noise restrictions but airports cannot. But, asked Kirsch, is there a legal basis for having a different standard for what FAA can do and airports can do?

FAA would argue the it can use different data on the ground that it can better balance safety concerns with noise restrictions, as the court requires. But one cannot assume that airport proprietors cannot also do that balancing, Kirsch commented.

The risk FAA faces in light of the *HAI* ruling, Kirsch said, is that airport sponsors will want the same kind of flexibility that FAA gave itself in imposing the Long Island North Shore Helicopter Route.

“The case opened up a new avenue for communities to argue that airports should address noise complaints. It makes it harder for airports because they cannot say ‘our hands are tied’.

In the past, the FAA has taken the position that airports cannot use complaint data as a basis for decision making because such data are not a reliable indicator of a noise problem. The agency reversed itself in this case.”

Technology

DISPLAY HELPS PILOTS IN EVERY PHASE OF QUIETER DESCENTS

[Following is a recent press release from the German Aerospace Center.]

For new, quieter descent procedures, pilots must adhere precisely to a predetermined sequence of actions during the landing phase.

The German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt; DLR) has developed a pilot assistance system that optimizes landings, making them safer, quieter and more fuel-efficient. The system was tested by a number of pilots in flight simulations, and the results assessed.

Landing an aircraft involves the full commitment of the crew; it is one of the flight phases with the highest pilot workload. Speed and height must be adjusted, and the flaps and undercarriage deployed.

“If the pilot does all this at the precisely calculated times, part of the landing phase can be completed with the engines at flight idle,” explains Sven Oppermann from the DLR Institute of Flight Systems. “This makes the aircraft much quieter and saves fuel.”

In reality, things can be quite different. Weather conditions, visibility, the weight of the aircraft and instructions from air traffic control all influence landings, with the result that no one landing is like any other – the pilots have to decide at which point to carry out what action on the basis of their experience.

The new assistance system developed by DLR supports the pilots through every step of the landing phase. Taking into consideration external factors, it indicates when the speed should be adjusted and the flaps or undercarriage deployed via a display in the cockpit; this optimizes the descent.

Simulator Tests

To see how the system works in practice, trials were held in the moving flight simulator at the DLR Institute of Flight Systems.

Four external professional pilots from Air Berlin and Volkswagen and three DLR test pilots each carried out 11 descents into Frankfurt Airport in the A320 cockpit under varying conditions, such as different wind speeds and glide slope angles.

This was the first research carried out using the Air Vehicle Simulator (AVES) in the simulator centre, which was opened in the summer of 2013.

“Besides making numerous interesting suggestions for integrating the system into everyday flight operations, the pilots provided primarily positive feedback,” Oppermann is pleased to say of the reports following tests in the simulator.

“They felt the system and the display were a great help, especially during difficult tailwind situations, and they regard it as a useful aid for assessing the entire approach phase.”

Initial evaluations have demonstrated that using the newly developed assistance system during the test approaches can yield an average fuel saving of up to 11 kilograms [24.2 lbs] per descent. Furthermore, the approaches are more precise and the potential for reducing noise levels during descent was demonstrated in the simulator tests. The use of speed brakes, which occurs frequently in practice and generates a great deal of noise, could be avoided altogether by using the assistance system.

The system will undergo further tests in flights with the DLR Advanced Technology Research Aircraft (ATRA) during the summer of 2014.

HINVA Project

In related news, the German Aerospace Center (DLR) said it has joined with Airbus and the European Transonic Wind Tunnel (ETW) in a three-part project called HINVA (High lift INflight VALidation), consisting of wind tunnel experiments, flight tests, and computer simulations of slower landing approaches.

The goal of the project is to combine computer models and wind tunnel tests to substantially improve predictions of high-lift performance and hence pave the way for slower and quieter approach flights.

Slower landing approaches by aircraft lead to less noise, the DLR explained.

“How slow, steep and hence quiet a modern commercial aircraft can arrive at a destination airport is determined by the performance of the high-lift system with its retractable slats and flaps on the wings. Another advantage of reduced landing speeds is that shorter runways can be used.”

In early February, the project performed unique wind tunnel experiments at cryogenic temperatures in the ETW in Cologne, Germany.

Equipped with laser measurement technology and other advanced measurement systems, the researchers achieved “hitherto unknown precision in detecting the flowfield around

an Airbus A320 with extended landing flaps and slats under flight-representative conditions,” the DLR said.

The researchers constructed a high precision wind tunnel model specifically for the tests, based on flow measurements performed during in-flight tests with the DLR’s A320 ATRA research aircraft.

A flight campaign with the DLR’s ATRA is planned for autumn 2014, within which flight tests are scheduled to measure flow velocity around the wings and flaps during flight.

AIP

UNNEEDED LANGUAGE DELETED FROM LAND DISPOSAL ASSURANCE

The public has until May 5 to comment on several modifications to Airport Improvement Program grant assurances, one of which pertains to Assurance 20 for Non-Airport Sponsors Undertaking Noise Compatibility Program Projects.

The modifications will be in effect for grants issued in fiscal year 2014 and beyond, the Federal Aviation Administration said in an April 3 announcement.

“Paragraphs b and c of Assurance 20, Disposal of Land, have been deleted because these two paragraphs deal expressly about land that is acquired for airport development,” FAA explained.

“Non-Airport Sponsors undertaking noise compatibility projects cannot undertake airport development projects and these two paragraphs were deleted. Paragraph d has been renumbered paragraph b.”

So, the modified Assurance 20 now reads:

20. Disposal of Land.

a. For land purchased under a grant for airport noise compatibility purposes, including land serving as a noise buffer, it will dispose of the land, when the land is no longer needed for such purposes, at fair market value, at the earliest practicable time. That portion of the proceeds of such disposition which is proportionate to the United States’ share of acquisition of such land will, at the discretion of the Secretary, (1) be paid to the Secretary for deposit in the Trust Fund, or (2) be reinvested in an approved noise compatibility project including the purchase of nonresidential buildings or property in the vicinity of residential buildings or property previously purchased by the airport as part of a noise compatibility program.

b. Disposition of such land under (a) will be subject to the retention or reservation of any interest or right necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with operation of the airport.

Grant Assurance 20 is available at http://www.faa.gov/airports/aip/grant_assurances/media/non-airport-sponsor-assur-

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FAA announcement detailing all the modifications it made to its AIP grant assurances is at http://www.faa.gov/airports/aip/grant_assurances/

Directions for submitting comments to the agency on its grant assurance modifications and a contact for further information on the announcement are included in FAA's announcement.

Southwest, from p. 42

Association for the unprecedented partnership that redesigned Denver's airspace. Many thanks to Southwest for their continued collaboration and support!"

Southwest said that RNP procedures at DIA have the potential to save the airline an estimated 20 gallons of fuel per flight on visual approaches and more than 90 gallons of fuel per flight on instrument approaches.

"Southwest is playing a major role in supporting FAA development of RNP procedures, which benefit the industry as a whole, as well as the communities we serve," said Rick Dalton, Southwest Airlines Director of Airspace and Flow Management.

"These efficient RNP approaches reduce noise and carbon emissions, allowing carriers to pass on efficiencies to their Customers, and the current successes of this program could not have been achieved without the support and leadership of the Denver TRACON, the Denver Air Route Traffic Control Center, and Denver International Airport."

Southwest said it "is a nationally recognized leader in RNP implementation and is working alongside the FAA, airport officials, and industry stakeholders as the lead carrier to develop and implement more than 150 RNP procedures for public use at 40 airports across the nation."

RNP Authorization Required (AR) procedures are high-performance, GPS-based, continuous-descent approaches that improve safety, reduce carbon emissions, and are designed to conserve fuel characteristics that exist in an airline's fleet.

"Cooperation between carriers and the FAA is vital for the success of NextGen across the system," Dalton said. "Southwest looks forward to continued partnerships with the FAA and airport officials as we work toward a modernized air traffic control system by continuing to develop RNP procedures."

In 2011, Southwest Airlines began flying RNP routes at 11 airports across the country after retrofitting 345 737-700 Boeing aircraft with advanced avionics and training nearly 6,000 Pilots and 200 Dispatchers.

The airline said it continues to support the development of RNP procedures, with the goal of operating RNP approaches at all 96 airports it currently serves.

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East Hampton Airport

TOWN MOVING FORWARD WITH NOISE STUDY TO IDENTIFY POSSIBLE USE RESTRICTIONS

The Town of East Hampton is moving forward with a noise study to determine what kind of use restrictions it might pursue at East Hampton Airport when federal grant assurances expire at the end of 2014.

Unlike Santa Monica Airport, whose federal grants assurances expire in 2015, East Hampton Airport was not taken over by the federal government in World War II. Therefore, it is not subject to the terms of the legal Instrument of Transfer returning airports to local control after the war, which stipulates that such airports cannot be closed.

The East Hampton Town Board hopes to issue a Request for Proposals and select a consultant for the noise study by early June.

The narrow purpose of the study is twofold, according to Town of East Hampton Councilwoman Kathee Burke-Gonzalez.

First, she explained in a statement presented to the Board, “we want to measure in a useful and scientifically sound manner airport noise as it affects the community.

(Continued on p. 47)

Santa Monica Airport

AOPA BACKS BALLOT INITIATIVE LETTING CITY RESIDENTS DECIDE AIRPORT’S FUTURE

The Aircraft Owners and Pilots Association (AOPA) said it supports three Santa Monica residents who are seeking a ballot initiative that would give city residents a say in the future use of Santa Monica Municipal Airport property.

The paperwork to begin the ballot initiative process was filed on March 27, just two days after the Santa Monica City Council voted unanimously to begin preliminary planning to close either all or part of the airport after federal grant assurances expire in 2015 (26 ANR 38).

City officials published the title and summary of the ballot measure on April 7. The residents now can begin the six-month process of collecting the 6,100 signatures needed to place their initiative on the November ballot.

The group is proposing an amendment to the City Charter that would require voter approval before the city can make airport land available for non-aviation uses or can close or partially close the airport.

The amendment also would require the City to continue fuel sales and prevent it from phasing out pilot schools – two tactics the City Council is considering using to bring about closure of the airport.

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“Second, we want to determine the relief – in terms of noise reduction – that could plausibly be achieved with a variety of measures singly or in combination.”

This will be done via a computer model using the electronic data that the Town has been collecting at the Airport. Specifically, AirScene has recorded flight tracks; Vector has recorded landings for billing and collection purposes; and PlaneNoise has recorded noise complaints.

The Town also has data regarding flights and noise complaints that occurred both before and after a seasonal air traffic control tower began operation, as well as data that were collected from seasons during which various voluntary flight tracks were adopted for use by helicopter operators.

In weighing whether to adopt measures that would reduce airport-related noise, the Town seeks to:

- Quantify the current noise in a meaningful and useful way that effectively captures the adverse effects experienced by residents; and
- Quantify the reductions in noise that could plausibly be achieved by various measures, including, but not limited to access restrictions by time of day, day of the week, season, number of airport operations, types of operations, classes and types of aircraft, and route and altitude controls.

It is important to understand, the Councilwoman said in her statement to the Board, that this study is preliminary and would have to be refined in order to support a final decision as well as to defend adopted rules against any court challenge.

“Clearly, it is the Town’s intent to complete the Airport Noise Study within a reasonable time so that we may make policy decisions about potential airport access restrictions soon after the relevant FAA grant assurances expire on Dec. 31, 2014,” the statement stressed.

The study will include both DNL analysis and a tally of noise events above the noise standard in the Town’s noise ordinance, side-by-side. This will allow the two metrics to be compared directly.

The impact of restrictions on helicopter operations both during the day and night will be separately modeled. Helicopter noise is a particular concern in communities around the airport.

*European Parliament***TRANSPORT COMM. ENDORSES DEAL ON NOISE RESTRICTIONS**

Noise-related operating restrictions at EU airports will continue to be set by regional and national authorities but people living nearby will be better-informed and noise-related health problems given more consideration, under a deal between the EU Parliament and the Council of Ministers of EU national governments endorsed by the Transport and

Tourism Committee on April 10.

Under the new rules governing decision-making on aircraft noise abatement measures – which bring EU law into line with International Civil Aviation Organization principles – national and regional authorities would continue to have the final say in setting noise-related operating restrictions at EU airports.

“The European Commission does not have the right to block or change anything – it is the solution we wanted,” said rapporteur Jörg Leichtfried (of the Austrian progressive alliance S&D), echoing most Transport Committee members’ concerns that increasing the European Commission’s right to scrutinize aircraft noise abatement measures could have undermined regional mediation agreements between airports, regions, and citizens, many of which are reached only after lengthy negotiations.

However, if the process by which airport operating restrictions are negotiated does not comply with the rules, the Commission may notify the relevant authority, “which shall examine the notification and inform the Commission of its intentions,” the text of the rule states.

In talks with the Council, Parliament’s negotiators ensured that the draft rules on deciding operating restrictions include requirements to ensure that people living near airports are better informed of them and more consideration be given to the effects of aircraft noise on public health.

The agreed text of the regulation now needs to be approved by the European Parliament as a whole at its April 11 plenary session.

Agreed to ICAO Balanced Approach

The rules are based on principles agreed by the International Civil Aviation Organization (ICAO), known as the Balanced Approach to noise management. They are designed to identify the most cost-efficient way of tackling aircraft noise at each individual airport, with operating restrictions being a last resort option only.

“The purpose of the regulation is to ensure consistent application of the Balanced Approach at EU airports. It aims to strike a balance between citizens’ quality of life in terms of protection from aircraft noise, and the needs of air transport. It will make the noise assessment process more robust and put competent authorities in a better position to phase out the noisiest aircraft in the fleet. Incorporation of the international rules should also reduce the risk of international disputes in the event of third country carriers being affected by noise abatement measures,” the EU Parliament said.

The regulation only applies to larger airports, with more than 50,000 civil aircraft movements per year. It covers aircraft engaged in civil aviation, while military, customs and police aircraft are excluded. The regulation includes the following provisions:

- Right of review: Before introducing an operating restriction, the competent authorities will have to inform the other member states, the Commission and interested parties. The Commission may, within three months, review the planned

process. If it finds that the process does not satisfy the rules, it may notify the competent authority, which must examine the Commission notification and inform the Commission of its intentions before introducing the operating restrictions.

- **Health considerations:** The regulation's aim to facilitate noise abatement includes health aspects. Common European rules in this area should be respected, in particular the environmental noise directive, which is currently being revised.

- **Noise performance information:** As decisions on operating restrictions are based on the aircraft's noise performance, aircraft operators must provide certain information free of charge for each aircraft using an EU airport. That information will comprise the aircraft's nationality, registration mark and a necessary minimum of noise documentation.

- **Information to the citizens:** The competent authorities are to ensure that information related to operating restrictions is made available free of charge and is promptly accessible to people living near airports and to the local authorities.

- **Phasing-out of noisier aircraft:** The measures to deal with a noise problem may include the withdrawal of marginally compliant aircraft, if deemed necessary. The competent authorities will decide on the annual rate for reducing the number of movements by marginally compliant aircraft for each operator at a given airport, within a maximum annual rate of 25 percent.

Marginally compliant aircraft means aircraft with a noise level only slightly lower than the maximum permitted noise levels defined by the ICAO.

The new definition gradually extends the margin so as to include aircraft that previously would have been considered fully compliant: while under the current rules the margin is 5 EPNdB (effective perceived noise in decibels) or less, it will be extended to 8 EPNdB during a period of four years, and after that to 10 EPNdB.

- **Setting specific noise thresholds** remains within the remit of national or local authorities.

The noise regulation is part of the airport package, a set of three legislative proposals aimed at increasing the capacity of European airports and improving the quality of their services. The other two relate to groundhandling services, on which the Council adopted a general approach in March 2012, and to slots, on which the Council reached a general approach in October 2012.

The regulation will enter into force two years after its publication in the EU Official Journal.

Webinar

ACRP HOSTING WEBINAR IN MAY ON EFFECTS OF AVIATION NOISE

The Transportation Research Board's Airport Cooperative Research Program (ACRP) will host a webinar on May 29 from 2 p.m. to 3:30 p.m. ET, on the potential effects of aviation noise on hearing, sleep, health, annoyance, and learning

environments.

"Webinar presenters will discuss the noise concerns that present potential barriers to airport operations and expansion, and how those concerns can contribute to delays in both facility and capacity improvements," TRB said in an April 8 announcement.

At the end of this webinar, participants will be able to discuss the known effects of aviation noise and where further research is needed and explain how this information may affect aviation noise policy, TRB explained.

Participants must register in advance of the webinar, which is free.

The webinar will be presented by Vincent Mestre of Landrum and Brown and Ben Sharp, who recently retired from Wyle Laboratories. The moderator of the webinar will be Roger Johnson of Los Angeles World Airports.

Their presentations will be made during the first hour of the webinar, following by 30 minutes that will be reserved for audience questions.

The webinar will focus on two Airport Cooperative Research Program (ACRP) documents:

- **ACRP Synthesis Report 9: Effects of Aircraft Noise**, which addressed health effects, annoyance, sleep disturbance, speech interference, and the effect of noise on schools and learning environments, parks, and wildlife. It was published in 2008 (20 ANR 121); and

- **ACRP Web-Only Document 16: Assessing Aircraft Noise Conditions Affecting Student Learning**, which addresses the association between chronic exposure to noise and children learning, conditions under which aircraft noise affects student learning, and alternative noise metrics and was published in 2014 (26 ANR 26).

The American Association of Airport Executives (AAAE) is making 1.5 Continuing Education Units (CEUs) available for A.A.E. If you are an A.A.E. and would like to apply for CEUs for this webinar, visit www.aaae.org/ceu. For questions about A.A.E. continuing education units, please contact accreditation@aaae.org.

To register for the webinar, go to <http://www.trb.org/main/blurbs/170120.aspx>

FAA Postpones SIP AC Webinar

In related news, on April 8 FAA postponed a webinar, set for the following day, that was being held to let airports know the agency is starting to draft an update to its Sound Insulation Program Advisory Circular.

FAA wants to kick off the update process with an industry webinar to brief airports on the basic components, process, and timeline of the AC update and to gather feedback from airports.

FAA said it postponed the webinar because it is still briefing internal leadership on the proposed process for updating the Sound Insulation Program Advisory Circular.

No new date for the webinar has been set yet.

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In their filing, the initiative proponents asserted that closing the airport would likely lead to higher density development, thus framing their initiative around one of the most controversial issues facing the city.

“This political game by politicians and special interests who hope to profit from redeveloping 227 acres of Santa Monica has gone on too long. It is clear from their statements and their actions – that the politicians can’t be trusted to maintain a low density land use and therefore it is left to the people to express their vote before the City of Santa Monica takes any action to redevelop Airport land,” proponents of the charter amendment wrote.

“We’re pleased to see the citizens of Santa Monica moving to put these issues in the hands of the voters,” said AOPA Vice President of Airports Bill Dunn. “Support for the airport is strong, but some city leaders seem intent on doing everything they can to close the field and redevelop the property, regardless of what it costs taxpayers, business owners, working families, and the community as a whole.”

Santa Monica Mayor Pam O’Connor said the City has no plans to put high-density development on the airport land and called such claims “alarmist.”

Former Santa Monica Mayor Mike Feinstein told the *Santa Monica Lookout*, “One of the most sinister parts of the [ballot] measure is the poison pill it contains that would prevent our community from pursuing any further litigation to assert authority on land we own.

“Santa Monica residents bought and paid for [airport] land with a park bond in 1926,” said the former mayor who is a member of Airport2Park.org, a coalition of anti-airport activists who want to turn airport land into a park.

FAA contends that Santa Monica must operate its airport in perpetuity under the terms of a legal Instrument of Transfer the federal government used to transfer the airport back to the city after World War II.

In Brief...

SW Florida Int’l Part 150 Approved

On April 11, FAA announced its approval of the Part 150 Airport Noise Compatibility Program for Southwest Florida International Airport.

The agency approved five of the proposed 11 elements of the program. The remaining measures were disapproved because they did not meet Part 150 program goals. FAA did not define these measures but said they could be implemented on a voluntary basis. The measures will be identified in a Record of Approval to be published at a later date.

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Research

TRB 2014 CRITICAL ISSUES IN AVIATION, ENV. CIRCULAR DEFINES NOISE RESEARCH NEEDS

On April 22, the Transportation Research Board issued Circular E-C184: "Critical Issues in Aviation and the Environment 2014," which focuses on the current state of science and priority research needs in the areas of aviation noise, air quality, climate change, and water quality.

The document, which is available online at <http://www.trb.org/main/blurbs/170577.aspx>, also addresses sustainable solutions to aviation environmental challenges.

Following is an excerpt from the Circular that identifies noise research needs in the following areas:

Annoyance

Currently available evidence shows that aircraft noise is perceived as more annoying than noise from other modes of transportation. Since the last annoyance data was collected in the United States, not only has operations changed such that

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Hillsboro Airport

CITIZENS GROUP ASKS NINTH CIRCUIT TO REVIEW FAA'S FONSI ON NEW RUNWAY

On April 21, the citizens group Oregon Aviation Watch (OAW) asked the U.S. Court of Appeals for the Ninth Circuit to review the Federal Aviation Administration's finding that a new third runway at general aviation Hillsboro Airport near Portland, OR, would have no significant environmental impact.

In February, FAA issued a Finding of No Significant Impact (FONSI) on the project in a Final Supplemental Environmental Assessment of the runway project that FAA was required to conduct after the citizens group challenged the agency's original Final Environmental Assessment of the project issued in 2010.

In August 2011, a panel of the Ninth Circuit remanded that Final EA to the FAA for further consideration after finding that the agency had failed to discuss the impact of a third runway on aviation demand at Hillsboro Airport. The Court ordered the FAA to consider the environmental impact of increased demand resulting from the runway expansion project.

In its Supplemental EA, FAA prepared a "Remand" forecast "specifically in response to the Ninth Circuit's finding that the standard FAA forecasting methodology might not include increases in airport activity caused (induced) by the addition

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LAX ... L.A. Board of Airport Commissioners approves \$9.2 million for sound insulation of homes in El Segundo - p. 52

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the quieter, more frequent operations are occurring, but there is also evidence that communities' tolerance for aviation noise has decreased.

New social surveys data is needed to update the scientific evidence of the relationship between aircraft noise exposure and its effects on community. An active ACRP project, Research Methods for Understanding Aircraft Noise Annoyance and Sleep Disturbance, is aimed at development and validation of the research protocol for a large-scale study of aircraft noise exposure-annoyance response relationship across the United States. This protocol will be utilized in a follow-up national survey study, which was initiated by the FAA at the end of 2012.

This extensive data acquisition campaign has the following objectives: (a) data collection to gain a better understanding on how aviation noise is perceived by communities around airports and (b) creation of a new dose-response curve based on updated data collected by a national survey in a scientific, systematic way to represent the wide breadth of airports in the United States.

During this project, residents around a wide variety of U.S. airport types and geographic location will be surveyed. Approximately 20 civilian airport surroundings will be surveyed using the same methodology.

Health

There is a need to understand the relationship between aviation, noise, and health outcomes. Studying this relationship in the United States is a challenge that needs a nationwide health database with high-resolution data. Since impacts do not result in health problems immediately, a longitudinal, multiyear medical cohort is needed.

A cost-effective option of conducting such a study is to use preexisting medical data sets. Therefore, several initial attempts have been made to investigate applicability of existing medical cohorts including a pioneering attempt to investigate the relationship between airport noise and existing self-reported insufficient sleep for the entire United States was conducted jointly by the Centers of Disease Control and Prevention and FAA. The research methodology developed during this work serves as a basis for a continued study of noise health impacts.

Another attempt included looking at health risks associated with noise in the vicinity of each airport by employing national data on Medicare enrollees and noise contours for the same airports as in the earlier study. Here noise metrics are linked with zip code-level data on air pollution exposure, population demographics, socioeconomic factors, and other individual-level and zip code-level covariates.

Sleep

Aircraft noise disturbs sleep, interferes with residents' rest, and may contribute to long-term health consequences. The last U.S. study on effects of aircraft noise on sleep was

performed in 1996. Up-to-date exposure response relationship data is critically needed to assess the validity of current nighttime noise policy and better mitigate effects of aircraft noise on sleep. The research was tasked to:

- Develop an optimal study design for the U.S. field study;
- Develop models that can predict changes in total sleep structures based on traffic volume and patterns, and
- Generate awakening maps for airports.

The research protocol for the initial U.S. field study of sleep disturbance due to airport noise has been developed within the PARTNER project, Noise Exposure Response: Sleep Disturbance.

The proposed combination of actigraphy (watch-shaped sensors that measure accelerations of body movements) and electrocardiography would allow a cost-effective and methodologically less-invasive sound investigation of large subject cohorts. The developed protocol will be implemented and validated within a pilot study near one U.S. airport in the near future.

Exposure-response relationship between noise characteristics of single aircraft event and physiological reaction (e.g., awakening) will be the primary outcome of field studies.

Effects of Noise on Children's Learning

Children's learning is an emerging area of potential noise impacts investigation. There is evidence that chronic exposure to noise is associated with learning deficits in children. The effectiveness of sound insulation for schools is analyzed using the student test scores as a metric. However, this research does not examine the effects of aircraft noise on student and teacher interaction.

Classroom observations are needed to determine at what level noise events cause interruptions and how student and teacher communication and behavior is affected by aircraft noise. In addition to noise at school, noise exposure leading to interrupted sleep at night potentially can affect children's health and cognitive development.

NextGen

FAA COMPLETES INSTALLATION OF NATIONWIDE ADS-B NETWORK

On April 14, the Federal Aviation Administration announced the completion of a nationwide infrastructure upgrade that will enable air traffic controllers to track aircraft with greater accuracy and reliability, while giving pilots more information in the cockpit.

The nationwide installation of the Automatic Dependent Surveillance-Broadcast (ADS-B) radio network supports a satellite-based surveillance system that tracks aircraft with the help of GPS. This provides more accurate aircraft location information than the current radar system, FAA explained.

“The installation of this radio network clears the way for air traffic controllers to begin using ADS-B to separate equipped aircraft nationwide,” FAA Administrator Michael Huerta said. “It will also provide pilots flying aircraft equipped with the proper avionics with traffic information, weather data, and other flight information.”

“This upgrade is an important step in laying the foundation for the NextGen system, which provides controllers a much more precise view of the airspace, gives pilots much more awareness and information, and as a result strengthens the safety and efficiency of our system,” said U.S. Transportation Secretary Anthony Foxx.

Of the 230 air traffic facilities across the country, 100 are currently using the ADS-B system to separate traffic. It is expected to be connected and operating at all 230 facilities by 2019. All aircraft operating in controlled airspace must be equipped with ADS-B Out avionics that broadcast the plane’s location, by Jan. 1, 2020.

With the upgraded surveillance and broadcast system and aircraft equipped with ADS-B Out transponders, aircraft positions on controller screens update almost continuously, compared to every 4.7 seconds or longer with radar.

Airplanes equipped with ADS-B In, which is not currently mandated, will give pilots information through cockpit displays about location in relation to other aircraft, bad weather and terrain, and temporary flight restrictions.

Research

EMBRY-RIDDLE PARTNERS ON ELECTRIC PROPULSION PROJECT

Embry-Riddle Aeronautical University and Powering Imagination LLC entered into an agreement to create an electric flight program focused on reducing aircraft emissions and noise through the development of electric propulsion systems.

In announcing their agreement on April 22, Erik Lindbergh, CEO of Powering Imagination, and Dr. Richard Anderson, Director of the Eagle Flight Research Center at Embry-Riddle, noted that commercial aviation power plants emit a significant amount of pollutants into the atmosphere, and that aircraft noise is increasingly an issue around the world, restricting access to airports and inconveniencing the surrounding communities.

Electric and hybrid-electric power systems offer the potential to significantly reduce both noise and emissions.

Powering Imagination’s Quiet Flight Initiative will partner with the Green Flight Program at Embry-Riddle’s Daytona Beach, FL, campus, where students and faculty will convert a Diamond HK36 motorglider to electric power for testing in noise-sensitive areas.

The aircraft will also be used for assessing new components of electric propulsion systems to provide real-world evaluation under flight conditions. This airborne lab will en-

able more efficient R&D on electric power systems by creating an aircraft that can be reconfigured to test new innovations from different companies and development teams. Embry-Riddle and Powering Imagination estimate that the aircraft will make its first flight in mid-2015 at the Daytona Beach Campus.

Both Powering Imagination and Embry-Riddle are currently raising funds for this multiyear initiative to enable the purchase of the HK36 airframe, the conversion of the aircraft to electric power, and the operation of the plane for testing methods of reducing emissions and noise.

They invited corporations and individuals interested in supporting their research program and the development of the electric flight industry to contact Bartsch at ericb(at)poweringimagination(dot)com or Embry-Riddle Director of Development Lyndse Costabile at lyndse(dot)costabile(at)erau(dot)edu.

LAX

BOARD APPROVES \$9.2 MILLION FOR EL SEGUNDO INSULATION

On April 21, the Los Angeles Board of Airport Commissioners authorized staff to enter into a Letter of Agreement with the City of El Segundo for its Residential Sound Insulation Grant Program and to release \$9.225 million for an eligible noise-mitigation project.

The LAWA grant, combined with a \$5-million grant from the Federal Aviation Administration (FAA) will enable the City of El Segundo to execute Grant Implementation Plan 6, which calls for soundproofing 287 single and multifamily dwellings that are impacted by operations at Los Angeles International Airport.

The project cost covers all acoustical, architectural, engineering, construction and administrative activities. Construction contractors typically install double-paned windows, solid-core doors, fireplace doors and dampers, attic baffles, insulation, and other elements to achieve a targeted interior noise level of 45 decibels.

Completion of these units will result in the City of El Segundo having sound insulated 2,160 units, or 38 percent, of its 4,537 eligible dwelling units.

The grant is in accordance with the Los Angeles International (LAX) Airport Master Plan Stipulated Settlement Agreement reached in February 2006. The agreement calls for Los Angeles World Airports (LAWA), the Los Angeles City department that owns and operates LAX, to provide up to \$22.5 million annually through 2015 to the cities of El Segundo and Inglewood, and the County of Los Angeles for noise-mitigation grants.

El Segundo began accepting LAWA sound insulation grants in 2006. To date, it has received LAWA grants totaling \$40.6 million and FAA grants totaling \$48.1 million for an overall total of \$88.7 million in combined funding.

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of a new runway.”

FAA explained in a footnote in the Supplemental EA, “Consistent with FAA’s standard methodology, which represents a conservative approach, the unconstrained forecast in the Final Supplemental Environmental Assessment assumed no artificial or physical constraints at the airport. As such, the unconstrained forecast inherently included a portion of the demand that would be attracted to the airport because of the availability of the new runway. However, the 9th Circuit required clearer evidence that induced demand, if any, was considered in the analysis. Out of an abundance of caution and to specifically address the court’s decision, the FAA prepared a remand forecast that incorporated additional activity attributable to the new runway based on the results of a pilots’ survey into the unconstrained forecast.”

But even with this additional analysis, FAA still concluded that the addition of a 3,600-foot third runway at Hillsboro would not result in significant environmental impact, including noise and air quality.

Oregon Aviation Watch wants the FAA to prepare a full Environmental Impact Statement (EIS) on the new runway project because that would require the agency to “take a hard look” at the environmental impacts of expanding the airport, the group explained on its website.

“In consideration of the significant health effects posed by the noise and multiple toxins generated by HIO aviation activity, a full Environmental Impact Statement is in order. Neither the Port of Portland (Port) nor the FAA has ever engaged in an EIS at HIO despite the fact that this airport started out as a grassy airstrip in 1928 and is now the largest general aviation facility in the state,” OAW said.

It noted that the airport is surrounded on three sides by residential communities and primarily serves a private, for-profit flight training school and, to a lesser extent, recreational pilots, corporate jets, and air taxis.

“In arriving at their decision [to issue a FONSI], the FAA and Port chose to ignore crucial environmental information and demonstrated once again their willingness to recklessly compromise the health and well-being of the residents of Hillsboro and the surrounding area,” OAW said.

It noted that HIO is the largest facility source of lead pollution in the state of Oregon and ranks 21st nationwide among nearly 20,000 airports in lead emissions.

According to research by petitioner Blaine Ackley, OAW board member and Professor Emeritus of Education from the University of Portland, nearly 16 percent, 3,204 of the 20,723 school children in Hillsboro, live within 2.5 miles of the Hillsboro Airport. These children are routinely exposed to lead emissions and other toxins released by the Hillsboro Airport, OAW said.

AIRPORT NOISE REPORT

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Environmental Review

FAA TO SEEK COMMENT ON NAC METHOD FOR COMPLYING WITH CATEX 2 PROVISION

The Federal Aviation Administration's Office of Environment and Energy is preparing a *Federal Register* notice seeking public comment on recommendations made by the NextGen Advisory Committee (NAC) for complying with the controversial CatEx 2 provision in Section 213(c)(2) of the FAA Modernization and Reform Act of 2012, which seeks to accelerate the implementation of NextGen performance-based navigation procedures.

The agency expects the notice to be published "within the next couple of months," an FAA spokesman told ANR.

The NAC noted on its website that members at its March meeting "expressed some dismay over what is perceived as a too-lengthy process [by FAA] to reach closure on this issue."

FAA has not yet formally accepted the NAC's "Net Noise Reduction Method" for complying with CatEx 2, which the committee approved and submitted to FAA almost a year ago in June 2013 (25 ANR 74).

In a March formal response to the NAC, the FAA said it "is appreciative of the
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Chicago O'Hare Int'l

BALLOT MEASURE ASKS WHETHER FAA SHOULD REVISIT CRITERIA FOR MITIGATION

On April 30, the Chicago City Council approved a ballot measure asking city voters the following question:

"Should Congress pass a law that requires the Federal Aviation Administration to revisit the criteria it uses to create the 'noise contours' that determine which residences near airports across the country are eligible for noise mitigation?"

The ballot measure, which is only advisory in nature, will be placed on the city's November general election ballot.

It was proposed by Chicago Aldermen Margaret Laurino (D) and Mary O'Connor (D) who represent districts on the northwest side of the city that have been newly impacted by aircraft noise due to the major realignment of runways at O'Hare International Airport in October 2013.

The runway realignment put aircraft on an east-west arrival and departure path, which brings aircraft noise, for the first time, over residents of the City of Chicago.

"The people in my community did not move next door to the airport," Ald. Laurino told the Chicago Tribune. "They moved a \$40 cab ride away from the airport, only to find out that they have planes flying over their homes now."

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Chicago O'Hare Int'l ... Ballot measure will ask whether Congress should require FAA to revisit criteria for determining which homes are eligible for airport noise mitigation - p. 54

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NAC's contribution to the consideration of how the Section 213(c)(2) CatEx may be implemented with respect to the noise determination. The NAC Task Group undertook a considerable amount of technical work and collaboration among diverse stakeholders.

"In view of the unusual nature of the Section 213(c)(2) CatEx and issues it raises, the presentation to FAA of a new noise methodology, and the amount of public interest, the FAA has decided to solicit additional public comment on the NAC recommendation via a *Federal Register* notice to inform the FAA's decision," FAA told the NAC.

Prospect of Legal Challenge

The NAC's Net Noise Reduction Method for complying with CatEx 2 was called "legally indefensible" by ex-FAA Attorney Steven Taber (25 ANR 118) because it relies on legislative history, rather than legislative language, to justify the use of FAA's preferred DNL noise metric to assess noise impact from PBN procedures.

The method also was sharply criticized by Rebecca Bratspies, City of New York (CUNY) environmental law professor and Director of CUNY's Center of Urban Environmental Reform, for allowing increased concentrations of aircraft noise over smaller areas (25 ANR 155).

Taber has potential clients who might challenge the method FAA chooses to comply with CatEx 2. He told ANR they "are waiting to see what FAA has to say and offer their comments based on what the FAA recommends. If the FAA recommendation is based on an incorrect reading of legislative history, then the comments will focus on that issue since that will make any ensuing regulations legally suspect."

So, FAA must very carefully consider the prospects of a legal challenge of the method it adopts for complying with CatEx 2 and it may be seeking public comment on the NAC recommendations in order to give the agency cover for either accepting or rejecting the Net Noise Reduction Method or for adopting its own method of complying with CatEx 2.

The problem with the CatEx 2 provision is that it is not well-crafted legislative language.

It categorically exempts from environmental review any performance-based navigation procedure (RNAV/RNP) that "would result in measureable reductions in fuel consumption, carbon dioxide emissions, and noise, **on a per flight basis**, as compared to aircraft operations that follow existing instrument flight rules procedures in the same airspace."

FAA had a problem in developing a method to comply with CatEx 2: it could not stay within the language of the statute, which requires noise reductions from PBN procedures to be measured 'on a per flight basis' and still use its preferred DNL noise metric, which does not measure noise on a per flight basis but aggregates it over time and numbers of aircraft operations.

The NAC Task Group that developed the Net Noise Reduction Method found a solution to this problem. While the

language in the legislation required noise to be measured 'on a per flight basis,' language in the Conference Report accompanying the legislation referred to noise reduction "on an average per flight basis."

The Task Group said that the language in the Conference Report allowed it to develop a method of determining compliance with CatEx 2 that is based on DNL and "allows for averaging the noise impact on a representative basis over flights undertaking a particular procedure."

But Taber – who now heads his own law firm, the Taber Law Group – asserted that the Task Force's assumption that the language in the Conference Report could replace the language in the legislation is "legally indefensible."

"If Congress meant 'noise on an average per flight basis,' it would have included the word 'average' in the statute instead of leaving it out ... The Task Group cannot read the word back into the statute without congressional action," Taber asserted. And he does not think it likely that a court would even consider the language in the Conference Report.

"... from a legal perspective, it is highly unlikely that a court would look past the clear and plain language of the statute to conclude that Congress meant to allow averaging the noise impact on a representative basis undertaking a particular procedure," he wrote in a blog post.

Nancy Young, co-chair of the NAC Task Group that developed the Net Noise Reduction Method, refuted Taber's assertion, arguing that the method endorsed by NAC "is an important, technically and legally sound way forward in implementing the direction of Congress to facilitate approval of new procedures under NextGen" (25 ANR 122).

CUNY Law Professor Bratspies told the FAA that before it will be in a position to implement CatEx 2, the agency must develop "new, more appropriate" metrics for assessing noise. "The FAA currently has no such metrics, has no way of assessing whether PBN procedures reduce or increase noise on a per flight basis," she told the agency.

Net Noise Reduction Method

The NAC's Net Noise Reduction Method computes the net reduction in noise by comparing the number of people who would experience a reduction in noise to the number of people who would experience an increase in noise, at noise levels greater than DNL 45 dB, with a proposed PBN procedure implemented, as compared with the existing instrument procedure in place.

"This method also includes a recommended step to assess whether, despite a projected reduction in the net number of people exposed to noise under a PBN procedure, there might be an increase in the DNL 65 dB population that would pose a significant impact (DNL 1.5 dB or greater) that could call into question the use of CatEx 2, to enhance the acceptance of this method by the community," the NAC Task Group that developed the method explained.

The Net Noise Reduction Method consists of three steps:

- Determine noise-sensitive "area of concern" with threshold down to DNL 45 dB.

- Determine the change in number of people exposed to noise in DNL bands (greater than 65 dB, between 60-65 dB, and 45-60 dB) on an average per-flight basis, comparing the existing procedure to proposed procedures.

- Apply a two-part test to determine whether the PBN procedure results in noise reduction deemed to meet the terms of CatEx2.

Under the Net Noise Reduction Method, if the overall number of people exposed is reduced, the CatEx 2 Task Group said it believes “this reasonably demonstrates noise reduction as intended in CatEx 2.”

However, if the overall number of people exposed is reduced, but the net number of people exposed within the DNL 65 dB noise exposure band increases, the Task Group said “this may call into question whether it is reasonable to conclude that noise has been reduced.”

“Arguably, the fact that there is a net reduction in the number of people exposed to noise should satisfy the terms of CatEx 2. However, the CatEx 2 Task Group observes that, in such a case, FAA might also consider whether the noise exposure in the DNL 65 dB noise exposure band for the proposed PBN procedure has a significant impact [1.5 dB DNL].

“If the noise increase in that noise exposure band does not exceed 1.5 dB and overall there is a net reduction in the number of people exposed to noise across the noise exposure bands, this would appear to further confirm that use of CatEx 2 is reasonable,” the NAC Task Group said in its report.

But CUNY Law Professor Bratspies offered the following critique to FAA of the NAC Net Noise Reduction Method: “Given that the major noise impact of PBN procedures is noise focusing – concentrating increased levels of noise over smaller areas – this technique is virtually guaranteed to find a noise reduction if measured by the number of people exposed. Under this approach, certain communities could have their noise burden increased to intolerable levels even as the agency announced that noise had been reduced.”

A question that ANR would like to see answered is how many additional aircraft overflights could be added to a concentrated PBN flight track before the 1.5 dB DNL significant increase in noise impact is reached.

Winglets

SW DEBUTS FIRST AIRCRAFT WITH SPLIT SCIMITAR WINGLETS

Southwest Airlines said April 15 that it has operated its first revenue flight utilizing a Boeing 737-800 equipped with Aviation Partner’s Boeing Split Scimitar Winglets.

The newly designed winglet differs than those currently installed on the carrier’s fleet of Boeing 737s, with aerodynamic scimitar tips and a large ventral strake on the bottom of the blended winglet structure.

By upgrading the 737-800s with Split Scimitar Winglets, annual fuel savings are estimated to increase from approxi-

mately 3.5 percent per aircraft from Blended Winglets to approximately 5 to 5.5 percent per aircraft annually. In addition, the new winglet will reduce emissions, supporting Southwest’s commitment to the environment.

Southwest said the Split Scimitar Winglets will be installed on 33 new 737-800s once they are delivered to the airline this year. The airline also plans to retrofit 52 additional 737-800s currently in the fleet. The retrofits are expected to be completed by early 2015.

All of the carrier’s Boeing 737-700s and 737-800s, as well as a majority of its 737-300s, are equipped with Blended Winglets saving the company roughly 55 million gallons of fuel annually. Blended Winglets were first installed on Southwest Airlines Boeing 737s in 2007.

Part 150 Program

FAA APPROVES MAPS FOR LAREDO, INDIANAPOLIS, HAWTHORNE

On April 16, the Federal Aviation Administration announced its determination that noise exposure maps submitted by the City of Laredo, TX, for Laredo International Airport are in compliance with federal requirements.

For further information, contact Dean McMath, Regional Environmental Team Leader in FAA’s Fort Worth, TX, Office; tel: (817) 222-5617.

On April 18, FAA announced that updated noise exposure maps submitted by the Indianapolis International Airport meet federal requirements.

For further information, contact Amy Hanson, and Environmental Protection Specialist in FAA’s Chicago Airport District Office; tel: (847) 294-7354.

On April 30, FAA announced its determination that noise exposure maps submitted by the City of Hawthorne, CA, for Hawthorne Municipal Airport meet federal requirements.

For further information, contact Victor Globa, and Environmental Protection Specialist in FAA’s Los Angeles Airports District Office; tel: (310) 725-3637.

O’Hare, from p. 54

Homes in Laurino and O’Connor’s northwest Chicago districts will not become eligible for residential sound insulation until the O’Hare Modernization Program is completed, which is expected to occur in 2020 or possibly later. That means they will have to wait six years or more to find out if they are eligible for sound insulation and longer for their residences to be treated.

Currently, the 65 dB DNL noise contour estimated for 2013 on the airport’s 2005 noise exposure map serves as the official contour for determining eligibility for O’Hare’s residential sound insulation program.

The Fair Allocation in Runways (FAiR) Coalition, which

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represents communities on the northwest side of Chicago newly-hit by aircraft noise, said it supports the referendum but believes that soundproofing is only a part of what is needed to properly address the increase in airplane noise. FAiR “wants every community to have a real say in how O’Hare uses its runways.”

To that end, the coalition is seeking a meeting with Chicago Mayor Rahm Emanuel. To date, six different letters have been sent to his office without any response.

In Brief...

ESA Seeks Expert in Noise Modeling

Environmental Science Associates (ESA) is a 350-person environmental consulting firm with over 40 years experience specializing in all aspects of project planning, environmental analysis and assessment, natural resource management, and regulatory compliance. Ranked one of the Best Environmental Firms to Work For, our skilled managers, scientists, planners and engineers provide the kind of critical thinking, objectivity, dedication and responsiveness that is essential to a sustainable future, good environmental stewardship and successful project completion in an increasingly sophisticated regulatory and community interest context.

ESA is seeking a professional with technical expertise in aircraft noise modeling. All skill levels are encouraged to apply. Successful candidate will have experience in aviation with CEQA, NEPA, and FAR Part 150 noise modeling, noise section writing, and with the INM. Experience with the AEDT, SOUND32, and TNM is desirable, but not required. Experience with air quality models such as AERMOD, URBEMIS, OFFROAD, EmFAC, SCREEN, EDMS, and ISC is a plus. Noise modeling position requirements also include familiarity with aircraft operations, aircraft performance, flight tracking systems, and published departure and arrival procedures.

Candidates must have a Bachelor’s Degree or higher with strong computer skills, a minimum of two years of practical experience and excellent written/oral communication skills. Position located in San Francisco or Sacramento, California or Tampa or Orlando, Florida.

Please click the link below to apply:

<http://ch.tbe.taleo.net/CH05/ats/careers/requisition.jsp?org=ESA&cws=1&rid=153>

EOE

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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Philadelphia Int'l

AGREEMENT PAVES WAY FOR EXPANSION; AVOIDS DEMOLISHING HOMES IN TINICUM

On May 5, the City of Philadelphia, Delaware County, PA, Tinicum Township, and Interboro School District announced an agreement in principle to move forward with the multi-billion expansion of Philadelphia International Airport while not demolishing homes and businesses in Tinicum Township in which two-thirds of the airport is located.

The Federal Aviation Administration is expected to review the tentative agreement, which settles four lawsuits and advances the airport's expansion while minimizing its impact on its closest neighbors, the people of Tinicum Township, the City of Philadelphia, proprietor of the airport, said.

The original proposal to expand the airport called for the acquisition of 72 homes in Tinicum and the relocation of 300 residents. But with this tentative deal, that's now off the table. The airport will now expand onto large undeveloped parcels of land rather than into the community.

The proposed agreement provides for funding to ensure continuity of tax rev-

(Continued on p. 59)

Trenton-Mercer Airport

GROUP SUES FAA FOR FAILURE TO CONDUCT EA BEFORE ALLOWING COMMERCIAL SERVICE

Residents impacted by noise from Trenton-Mercer Airport filed suit in U.S. District Court in Trenton, NJ, on April 28 asserting that the Federal Aviation Administration violated the National Environmental Policy Act and its own environmental orders by allowing the introduction of commercial airline service at the airport without first conducting an Environmental Assessment.

The plaintiffs contend that FAA acted arbitrarily and capriciously in granting a Categorical Exclusion for the "major Federal action" of approving Frontier Airline's operational specifications for use of Trenton Mercer Airport "without consideration of the environmental impact of the airline's expanded and expanding low-cost/high frequency passenger service" at the airport.

The lawsuit seeks to enjoin Frontier Airlines from expanding commercial service beyond current levels until the FAA prepares an Environmental Assessment of the carrier's environmental impact.

Frontier began service at Trenton-Mercer Airport in November 2012 with two flights a day, which increased to 50 flights a week in April and is expected to increase to 60-70 flights per week by June as the carrier expands its destinations.

(Continued on p. 60)

In This Issue...

Philadelphia Int'l ... Tentative agreement between City of Philadelphia, Delaware County, Tinicum Township allows airport to expand with no homes razed; ends four lawsuits - p. 58

Trenton-Mercer Airport ... Community group sues FAA for failure to conduct EA before allowing first commercial service to begin at the airport; agency approved change in Frontier Airline's op specs with CatEx - p. 58

Midway Airport ... Noise Compatibility Commission approves sound insulation for 1,800 more homes - p. 59

Research ... Long-term exposure to aircraft noise may affect metabolism; Swedish study finds link between airport noise exposure, increased waist size - p. 60

Chicago O'Hare Int'l ... Three homeowners under new flight path over northwest Chicago win property tax appeals - p. 61

PHL, from p. 58

issues for the airport's Delaware County neighbors as the airport expansion project moves forward.

Since 2007, airport payments of up to \$1.3 million per year to Delaware County stakeholders had been stalled due to the litigation. The new agreement restarts those payments.

The airport will make an annual payment of \$1.86 million to Delaware County, Tincum Township, and Interboro School District that will be split among them. In addition, the airport will make a one-time payment of \$500,000 to be split by the three entities and will pay Tincum Township \$1 million a year for 20 years or until the airport expansion project is completed.

The airport also will lease from the township part of a road on the airport's periphery for a fee of \$391,000 per year and pay \$5 million for 8.6 acres of the roadway property on which part of a new runway will be constructed.

Residents' Interests Protected

"Tincum Township is home to most of Philadelphia International Airport and our residents have been patient while we have worked to form a relationship with the Airport and its governing bodies that is mutually beneficial," said Thomas J. Giancristoforo Jr., president of Tincum Township's board of commissioners.

"We believe the proposed terms provide for that. The airport will be able to grow while the interests of the Tincum Township residents, whose daily lives are directly impacted by the airport and its operations, will still be protected."

Philadelphia Mayor Michael A. Nutter called the agreement "historic" and said it would expand the airport and lead to growth of the regional economy.

Said Airport CEO Mark Gale, "This agreement was brought about through a great deal of hard work and collaboration, which is good for all parties involved and integral to the Capacity Enhancement Program (CEP) and the vitality of the entire Philadelphia region."

Under the tentative agreement, UPS would have to move its 681,000-square-foot sorting facility on the Delaware River away from Tincum and toward the airport interior.

UPS said it is reviewing the proposed agreement but would prefer to stay at its current site and is concerned about increased landing fees.

The merged US Airways and American Airlines, the dominant carrier at Philadelphia International, said it supports the expansion but not construction of a fifth runway.

In addition to a new runway, the expansion plans call for lengthening two existing runways and adding a new terminal and parking facilities.

The estimated cost of the expansion is \$6.4 billion but the airlines, which will foot much of the cost, contend it would cost about \$10.5 billion and could require them to cut operations at PHL.

A spokesman for American told the *Philadelphia Inquirer*, "We remain concerned about the cost of the Capac-

ity Enhancement Program, and continue to question whether a new runway is needed now or in the future."

UPS and American Airlines contend that a new runway would not solve the congestion and delay problem at Philadelphia International, which they believe is caused by airspace congestion between New York and Washington, DC; not a lack of runway capacity at PHL.

The airport is one of the nation's busiest. It served more than 30 million passengers last year and accommodated more than 400,000 takeoffs and landings.

In 2002, the U.S. Department of Transportation identified improvements to PHL as one of 13 high-priority projects nationwide.

The PHL expansion program will occur in phases over a 12-15 year period. It will be funded through airport revenue bonds, passenger facility charges, federal Airport Improvement Program grants, and other airport revenues.

Midway Airport**COMMISSION APPROVES SOUND INSULATION OF 1,800 MORE HOMES**

The Midway Noise Compatibility Commission passed a resolution at its April 24 meeting approving the sound insulation of 1,800 homes.

With 900 homes already approved for soundproofing last October, the 2,700 total represents the most homes approved under the Midway Residential Sound Insulation Program (RSIP) since the commission was founded in 1996.

At a cost of approximately \$25,000 per home, the total for sound insulating all 2,700 will be nearly \$70 million.

The Midway RSIP is now mainly financed through the Federal Aviation Administration's Airport Improvement Program rather through Passenger Facility Charges. Chicago will fund the insulation work with approved airport revenue sources and then seek reimbursement of up to 80 percent of those costs through AIP program discretionary grants.

"The Aviation Department would like to go faster, and we would like you to pass this to help us go faster," Aaron Frame, Chicago Department of Aviation assistant commissioner in charge of noise abatement, told the Commission. "We would like to do as many this year and early next year as possible. This will make it much more efficient and streamlined."

Originally the Midway RSIP was open only to single-family homes in the airport's 65 dB DNL contour. Then buildings with up to four units were included, as long as the owner lived in one. Last year, the program was expanded to include condos and apartments of any size that met zoning requirements and were in the 65 dB or greater contours estimated for 2018.

In mixed-use buildings, residences are eligible for sound insulation but not businesses. New construction, such as multi-unit properties built after June 2013, when new rules

for RSIP eligibility were passed, are not eligible.

Frame said that Chicago aviation officials have already begun holding informational meetings for the 900 homes approved for sound insulation last fall and soon will notify the additional homeowners approved for insulation.

“Our goal is to be done in about 18 months,” Frame said. “We will be contacting architects shortly and will have more information” in July.

Since 1996, the CDA and its airlines partners have invested \$325 million in noise mitigation projects at Midway, including sound insulation of 41 schools and 8,040 homes.

When this next phase of the insulation program is completed. A total of 10,740 homes around Midway will have been insulated.

Trenton-Mercer, from p. 58

Prior to Frontier’s arrival, the airport served only business jets and some general aviation and military aircraft.

The lawsuit was filed by Bucks Residents for Responsible Airport Management (BRRAM) along with several individuals residing in Pennsylvania and New Jersey. BRRAM members reside less than two miles from the end of the airport’s main run in the communities of Yardley and Lower Makefield, PA, which lie just across the Delaware River from New Jersey and directly under the flight path.

Defendants in the lawsuit are the FAA, the Mercer County, NJ, Board of Chosen Freeholders (proprietor of the airport), and Frontier Airlines. The lawsuit is *BRRAM, Inc., et al v. U.S. FAA, Mercer County Board of Chosen Freeholders, and Frontier Airlines, Inc.*

At its April 15 meeting, the Yardley Borough Council approved a motion directing its attorney to file a “Friend of the Court” brief in support of BRRAM’s litigation but will not join the lawsuit.

FAA Eastern Regional Administrator Carmine W. Gallo told BRRAM’s attorney in a May 28, 2013, letter attached to the lawsuit, “At the time Frontier’s Ops Specs were amended to add Trenton Airport, the FAA believed that the approval was subject to a Categorical Exclusion. Once an airport has been added to the airlines’ Op Specs, under the Airline Deregulation Act of 1978, the airline is free to determine the level of service provided at that airport without any further FAA Approval.”

But Gallo’s letter “does not provide a citation to any of the possible Categorical Exclusions provided in FAA regulations ... Nor does the FAA letter explain how the FAA reached its conclusion that its approval of amended Ops Specs for Frontier was properly excluded from any environmental impact analysis; nor was a copy of any such Categorical Exclusion ruling provided,” BRRAM’s attorney R. William Potter, of the Princeton, NJ, law firm Potter and Dickson, argued in the complaint.

He told the court that Gallo’s statement “implies that even though the FAA has determined that the Ops Specs amendment for Frontier is a “major federal action,” presumptively

subject to NEPA, Frontier Airline’s operations are exempt from any NEPA review no matter how many flights into or out of TTN airport are added by Frontier.”

The FAA did prepare an Environmental Assessment before allowing the introduction of commercial service at Paine Field in Washington state (25 ANR 16). However, the EA resulted in a Finding of No Significant Environmental Impact, which the cities of Mukilteo and Edmonds, WA, are challenging in the U.S. Court of Appeals for the Ninth Circuit.

Also, FAA Draft Order 1050.1F on policies and procedures for compliance with NEPA, which was issued for comment on Aug. 14, 2013, states in Section 3-1.2 (b) (11) that among the actions normally requiring an EA are:

“Approval of operations specifications or amendments that may significantly change the character of the operational environment of an airport, including, but not limited to:

(a) approval of operations specifications authorizing an operator to use aircraft to provide scheduled passenger or cargo service at an airport that may significantly increase noise, air emissions, or other environmental impacts; or

(b) amendment of operations specifications authorizing an operator to serve an airport with different aircraft that may significantly increase noise, air emissions, or other environmental impacts.”

FAA has not announced when it expects to issue the final version of FAA Order 1050.1F.

Research

LIVING NEAR AIRPORT INCREASES WAISTLINE SIZE, SWEDES FIND

Long-term exposure to aircraft noise may be linked to metabolic outcomes, in particular increased waist size, a study of residents near Stockholm Arlanda Airport done by researchers at the Swedish Karolinska Institute found.

“Chronically high levels of stress hormones, primarily cortisol, induce hypertonic and diabetogenic effects and may lead to alterations in the adipose tissue metabolism,” the researchers speculated.

Their study was the first to examine long-term aircraft noise exposure and metabolic outcomes, including body mass index (BMI), waist circumference, and Type 2 diabetes. It also assessed the modifying effects of several factors, in particular sleep disturbance.

The study followed 5,156 participants with normal baseline oral glucose tolerance tests for up to 10 years. Exposure to aircraft noise was based on residential history. Aircraft noise exposures ranged from 50 to 65 dB(A) Lden (A-weighted 24-hour equivalent continuous sound pressure level, with a 5 dB evening penalty and 10 dB night penalty).

As a consequence of the introduction of quieter aircraft, noise exposure around Arlanda continually decreased during the study period. So, the average aircraft noise levels for 1997 – 2002 were used as the exposure for the entire study.

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The study found that the average increase in the size of the waistline was 1.5 centimeters (0.59 inches) after factoring in stress and lifestyle choices.

That association was particularly strong for those subjects who did not change their home address during the study period, “which may be a result of lower exposure misclassification,” the authors speculated.

“If you are highly exposed to noise then it means an increase of six centimeters (2.36 inches) in stomach size compared to no exposure to noise at all,” Charlotta Eriksson, lead author of the study, told Swedish television.

However, the study found no statistically significant correlation between aircraft noise exposure and an increase in BMI or Type 2 diabetes. Sleep disturbance did not appear to modify the association of waist size with aircraft noise.

But the researchers said their findings “provide evidence of a link between aircraft noise and metabolic outcomes, especially central obesity.”

“Long-Term Aircraft Noise Exposure and Body Mass Index, Waist Circumference, and Type 2 Diabetes: A Prospective Study,” was published in the May issue of the journal *Environmental Health Perspectives* <http://ehp.niehs.nih.gov/1307115/>

Chicago O’Hare Int’l

HOMEOWNERS UNDER NEW O’HARE FLIGHT PATH WIN PROPERTY TAX APPEAL

Cook County, IL, recently notified three homeowners on the northwest side of Chicago that they have won their property tax appeals, of up to almost 12 percent, after asserting that their home values had dropped due to a major change in flight patterns at Chicago O’Hare International Airport.

Both Cook and DuPage counties are currently studying whether other homes in neighborhoods newly-impacted by aircraft noise qualify for similar property tax reductions.

Last fall, in a major change at O’Hare, aircraft arriving and departing were moved onto an east-west alignment and off of the former diagonal runway pattern. For the first time, residents of the City of Chicago were subjected to overflights and accompanying noise.

The northwest Chicago residents are using the property tax appeal tactic to pressure Chicago Mayor Rahm Emanuel to spread the traffic at O’Hare onto runways equally to reduce the impact on them. Thousands of Chicago residents could seek similar property tax reductions based on aircraft noise impact which, if approved, would make a significant dent in the city’s tax revenue.

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ACRP

NEW LEGAL DIGEST WILL HELP AIRPORTS SATISFY NEPA, 'MINI NEPA' REQUIREMENTS

A new legal digest published by the Airport Cooperative Research Program (ACRP) explores the legal requirements that airport sponsors and the Federal Aviation Administration must satisfy under the National Environmental Policy Act (NEPA), related "special-purpose" environmental laws, and state "mini-NEPA" statutes.

Prepared under ACRP Project 11-01, "Legal Aspects of Airport Programs," the report was prepared by Timothy R. Wyatt, Conner Gwyn Schenck, PLLC.

The legal digest "explores the relationship between the airport sponsor and the FAA in fulfilling such legal requirements, and the role played by each at different stages in the environmental review process, or based on the type of NEPA action (e.g., Categorical Exclusion, Environmental Assessment (EA), or Environmental Impact Statement (EIS)) required for a given development project," the authors explain.

"The digest summarizes relevant statutes, regulations, FAA Orders and Advi-

(Continued on p. 67)

UK

IF INDUSTRY DOESN'T TACKLE NOISE BETTER, IT WON'T BE ABLE TO GROW, CAA ASSERTS

On May 29, the UK Civil Aviation Authority (CAA) published a series of recommendations to help drive improvements in the way the aviation industry manages and mitigates aircraft noise, including offering financial compensation and tax breaks to noise-impacted residents near airports.

The guidance comes as the UK's Airports Commission considers where to add new runway capacity in the London area: with a new third runway at Heathrow, a second runway at Gatwick, or a new airport in the Thames Estuary on the edge of London. The Commission will announce its decision next summer.

More people in the UK are affected by aviation noise than any other country in Europe, the CAA said.

"Very many people in the UK are already affected by aviation noise and it's clear that unless the industry tackles this issue more effectively, it won't be able to grow," said Iain Osborne, Group Director for Regulatory Policy at the CAA.

"The recommendations we're making will help the industry to reduce and mitigate its noise impact, whilst also making sure the communities affected by aircraft noise are fairly compensated and feel much more involved in the way their airport

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ACRP ... Legal digest explores legal requirements airports, FAA must satisfy under NEPA, state "mini-NEPA" laws - p. 66

UK ... The Civil Aviation Authority says that aviation won't be able to grow in UK unless industry does a better job at tackling noise mitigation; recommends airports consider financial compensation to airport neighbors in report outlining ways to reduce noise impact - p. 66

Chicago O'Hare ... Coalition of city residents impacted by noise from major runway reconfiguration demands that Chicago Aviation Commissioner Rosemarie Andolino resign - p. 67

Helicopters ... New York Sen. Charles Schumer, and Rep. Tim Bishop urge DOT, FAA chiefs to renew FAA rule requiring helicopters to fly over-water route off Long Island to reduce noise impact and to make the rule, which is set to expire on Aug. 6, permanent - p. 67

ACRP, from p. 66

sory Circulars, and case law related to these legal issues. Additionally, a survey was prepared and sent to the 400 airports or airport sponsors who received the largest amounts of FAA grant funding under the Airport Improvement Program (AIP) from 2004 through 2011.

“The survey is available at the end of the digest. Fifty-five survey responses were received. In some cases, one survey response was received on behalf of multiple AIP grant recipients (e.g., from regional aviation authorities or block grant states who oversee multiple airports). Survey results are provided throughout the digest.

Section II of the digest “explores the roles and responsibility of the airport sponsor and FAA in addressing substantive environmental review requirements, such as formulating the proposed development project’s ‘purpose and need’, assessing its environmental impact, evaluating the feasibility of alternatives, and formulating mitigation measures.

Section III addresses “more logistical issues, such as the responsibility of the airport sponsor and FAA to coordinate the activities of other parties (such as environmental consultants, the interested public, and other government agencies with jurisdiction over specially-protected environmental resources). Section III also addresses the roles and responsibility of the airport sponsor and FAA to hold public hearings, to make certain NEPA documents publicly available, and to respond to public records requests for other documents.

ACRP Legal Research Digest 22: The role of the airport sponsor in airport planning and environmental reviews of proposed development projects under the National Environmental Policy Act and state mini-NEPA laws,” can be downloaded at <http://www.trb.org/main/blurbs/170718.aspx>

Chicago O’Hare Int’l**COALITION DEMANDS THAT CITY AVIATION CHIEF RESIGN**

The Fair Allocation in Runways (FAiR) Coalition of residents in northwest Chicago is demanding that Rosemarie Andolino immediately step down as Commissioner of the Chicago Department of Aviation (CDA) or that Chicago Mayor Rahm Emanuel fire her.

FAiR was formed last fall in response to the change in noise impact that occurred after takeoff and landing patterns were changed at O’Hare International Airport and a new runway was opened in October 2013.

“Residents of Northwest side Chicago neighborhoods and near Northwest suburbs impacted by round-the-clock, unceasing, and increased airplane noise have repeatedly demanded that elected and appointed officials work directly with FAiR on finding community-based solutions to the noise and air pollution caused by the recent runway changes,” the Coalition said in a May 19 statement.

“Yet, despite a clearly worsening reality for the lives of tens of thousands of residents, the response from the Chicago Department of Aviation has been worse than silence. Commissioner Andolino has already made up her mind that there will be no change at O’Hare no matter how many citizens demand change, no matter what solutions are proposed, and no matter how devastating the impact of her decisions on families, children and seniors, and even entire neighborhoods,” said Jac Charlier, FAiR co-founder and leadership team member.

“Time and time again whether in regards to making Fly Quiet mandatory, considering flight path changes or even meeting with FAiR, Commissioner Andolino’s motto clearly is ‘no change, no way, no how’. You cannot stay in a leadership position in a democracy with that kind of attitude. It’s past time for her to go,” added Mr. Charlier.

FAiR notes that even in response to the January 2014 public hearings requested by Chicago Alderwomen Margaret Laurino and Mary O’Connor, and supported by Congressman Michael Quigley (D-IL), Commissioner Andolino was not supportive or responsive.

“It is now clear that listening to constituents, working with citizens and accepting dissent are clearly not allowed in this sadly unfolding version of Chicago. FAiR wants leadership at O’Hare that will work with the people, not govern by fiat.”

Neither the Chicago Department of Aviation or the mayor’s office issued a statement in response to FAiR’s demand that Andolino go.

Helicopters**SCHUMER WANTS OVER-WATER ROUTE OFF L.I. MADE PERMANENT**

NY Sen. Charles Schumer (D) and Rep. Tim Bishop (D) are urging Secretary of Transportation Anthony Foxx and Federal Aviation Administration Administrator Michael Huerta to renew the North Shore over-water helicopter route off Long Island – which is set to expire at the beginning of August – and to make the rule permanent.

They also urged the FAA to expand its regulation mandating the route to require that helicopters follow a total water route and go past Orient Point and Shelter Island over water when landing at airports on the South Fork of Long Island.

As the route currently stands, there is an issue with the North Shore Route when helicopters cross over land on the North Fork in order to land at South Fork airports, Sen. Schumer said. He and Rep. Bishop urged the FAA to require helicopters to continue over water and go around Orient Point to address this concern.

On July 6, 2012, under strong pressure from Sen. Schumer, the FAA issued a final rule making mandatory an existing voluntary off-shore helicopter route designed to reduce noise impact on communities on the North Shore of

Long Island.

The helicopter noise problem on Long Island is mainly caused by wealthy executives being ferried by helicopters from Manhattan to vacation homes during weekend shoulder hours in the summer.

FAA's rule allows pilots to deviate from the mandatory off-shore route when necessary for safety, weather, or when transitioning to or from a point of landing.

The North Shore Helicopter Route, which was designed to keep helicopters one mile off shore at a minimum altitude, went into effect on Aug. 6, 2012. The FAA said it would sunset the rule in two years "in the event the agency concludes that the rule does not reduce or alleviate noise concerns or is otherwise unjustified."

During the time the rule is in effect, FAA said it would review and monitor its implementation and work with stakeholders to ensure that the rule addresses the noise problem and is otherwise justified. If not, the FAA said it would allow the rule to lapse on Aug. 6, 2014.

FAA has given no indication yet whether it will renew or sunset the North Shore helicopter route rule.

Sen. Schumer asserted in a May 27 release that the rule has been successful. "For the last two years, residents on Long Island have finally had some relief from the onerous helicopter noise that once interrupted dinners, disrupted people enjoying their backyards and had an effect on property values throughout Long Island.

"However, the over-the-water North Shore Route that provided that long-sought relief is about to expire in early August, and we are urging that the FAA not only extend that rule but also make it permanent, so that thousands of residents are not back to square one when it comes to the deafening drone of helicopters," said Senator Schumer.

In 2013, the Helicopter Association International (HAI) challenged the authority of the FAA to issue the "North Shore Route" in the U.S. Court of Appeals for the D.C. Circuit.

"The federal court denied HAI's petition for review and, therefore, the FAA has the authority and reasonable expectation to protect Long Islanders from low-flying helicopter noise," Sen. Schumer said.

UK, from p. 66

operates," Osborne added.

"We believe these measures could make a real difference to people living near airports today, as well as ensuring any future decisions on aviation capacity increases take full account of the impact of aviation noise on people's quality of life."

The recommendations cover changes airports and airlines could make now, as well as improvements policy-makers and industry could make ahead of any future increases in capacity. There is a strong focus on making sure airports work with their local communities more closely, as well as operational changes and ideas for incentivizing airlines to reduce the noise impact of their flights.

Key recommendations for the aviation industry include:

- Airports and airlines should ensure that operational approaches to mitigate noise are incentivized and adopted wherever feasible. The CAA will work with industry to consider, trial and promote novel operational approaches to noise minimization.

- When looking to expand, airports should do more to ensure local residents see benefits from additional capacity – whether through funding community schemes, direct payments, or tax breaks.

- Airports seeking expansion should significantly increase spending on noise mitigation schemes to get closer to international competitors – including full insulation for those most affected.

- Airlines should focus on noise performance when purchasing new aircraft.

- Airports should structure their landing charges to incentivize airlines to operate cleaner, quieter flights.

In addition, the document proposes creating a new Airport Community Engagement Forum bringing together local residents, the aviation industry, policy makers and planners focused on how new capacity can be developed and operated to minimize noise impacts and maximize community benefits, rather than whether it should be built.

Measures that Government and local authorities could consider include tax breaks for local people and businesses and, if other methods are not successful, a future noise tax to incentivize airlines to procure and operate fleets in the most noise efficient fashion possible and to internalize noise impacts in consumer decision making, CAA said.

Status Quo Not Acceptable

In its report, the CAA said that a noise roadmap issued in April 2013 by Sustainable Aviation, a UK aviation industry group, is not sufficiently ambitious.

The roadmap focused on applying the International Civil Aviation Organization's 'Balanced Approach' to the UK, and concluded that aircraft innovations and engine technology, operational advancements and better land-use planning offer the potential to reduce UK aviation noise output by 2050 compared to 2010, despite a forecast growth in flights.

The roadmap highlighted the potential for flight numbers across the UK to double without an increase in noise from today.

"The road-map identifies demand increases and the potential for technological improvements and operational mitigations combining to allow flight numbers to increase, but does not focus on the requirement for additional runway capacity and the associated issues for local residents," the CAA report noted.

"In presenting the case that flights can double without an increase in noise, there is a danger that the perception of complacency could lead to local communities around airports, who today feel significantly negatively affected by aviation noise, feeling marginalized and continuing to oppose any expansion," the report said.

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“In addition ... although the 57 dBA Leq is the Government’s accepted measure for significant aviation noise annoyance, many people challenge its relevance in reflecting their experience of noise, so simply aiming to maintain noise at today’s levels within that contour may be unhelpful if it leads to increased noise as measured by other metrics.

“With noise from Heathrow alone affecting significantly more people than any other airport in Europe, the CAA believes that the status quo is not acceptable, particularly if airport expansion is to occur.

“As such, the CAA believes that while Sustainable Aviation is an effective forum to coordinate efforts to manage and mitigate noise, industry’s ambition must be to actively improve noise performance before, during and after expansion so as to ensure that in future, fewer people are significantly affected by aircraft noise than today.”

Community Reaction to Report

Regarding the Community Engagement Forum proposed by the CAA, the UK Aviation Environmental Federation – a coalition of community and civic groups – said it “would welcome constructive engagement between airports and local communities, as many of our members have concerns about the effectiveness of the ‘consultative committees’ that currently fulfill this role.”

But, AEF stressed, “any forum based on the idea that local communities must accept expansion in order for airports to work constructively with them is unlikely to be widely supported by the people already affected by unacceptable noise levels.”

John Stewart, chairman of the Heathrow anti-noise group HACAN Quiet Skies, called the CAA’s report “disappointing.”

“Although the report is packed with useful ideas on how to reduce the impact of aircraft noise on residents, it is on the whole a disappointing report as it says very little about how the number of planes flying over communities can be cut, which is the big issue for local residents.”

The CAA said in its report that it “is committed to leading the debate around aviation noise – driving changes that reduce noise, and challenging the aviation industry to do more to work to manage its noise impact and engage those communities who feel that impact the most.

“Without this focus, we do not believe that attempts to build a new runway in the south east will succeed, so we look forward to discussing our recommendations with the aviation industry, local communities, government, and the Airports Commission themselves, before ensuring that all parties are united in the common goal of cutting aviation’s noise impact on communities.”

The report, “Managing Aviation Noise,” is available online at <http://www.caa.co.uk/docs/33/CAP%201165%20Managing%20Aviation%20Noise.pdf>

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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Boston Logan Int'l

PEOPLE NEAR LOGAN INT'L HAVE MORE LUNG DISEASE, LESS HEART DISEASE, STUDY FINDS

A landmark study of the health of people living within a five-mile radius of Boston Logan International Airport found increased prevalence of lung disease in both adults and children but lower prevalence of cardiovascular disease than observed statewide, and no signs of increased damage to hearing.

Children living near the airport were up to four times more likely to show signs of undiagnosed asthma than children in communities farther away, even considering socioeconomic and other factors, according to the study, which was conducted by the Massachusetts Department of Public Health (MDPH).

Adults living for three years or more in areas bordering the airport with the highest concentrations of five air pollutants (CO, NO_x, PM_{2.5}, Sox, VOCs) were found to be almost twice as likely to have chronic obstructive pulmonary disease (COPD) as those living farther away.

The findings about lung disease are statistically significant and take into account vehicle emissions and socioeconomic factors, including poverty and smoking rates. However, the study was observational, meaning that it was only able to show
(Continued on p. 71)

Noise Monitoring

AIRSERVICES AUSTRALIA SIGNS \$25 MILLION CONTRACT WITH B&K FOR MONITORING

Airservices Australia said that it has signed a five-year, \$25 million contract with Bruel & Kjaer as part of the organizations ongoing commitment to the environment and aircraft noise management, including providing accurate, useful and timely information to communities and the industry on aircraft noise.

Airservices Executive General Manager, Safety, Environment and Assurance, Dr. Rob Weaver said that Airservices already strong international reputation for commitment to the environment would be significantly enhanced by the new contract.

The contract includes short and long term noise and flight path monitoring, as well as the web-based noise information tool, WebTrak.

"This system collects noise and flight path data from every aircraft operating to and from nine of our busiest airports, 24 hours a day, seven days a week, using noise monitors strategically placed in suburbs and areas most impacted by aircraft noise," Dr. Weaver said.

"This data helps us to determine the contribution aircraft noise makes to the overall noise to which a community is exposed, and can assist government and
(Continued on p. 72)

In This Issue...

Health Effects ... A landmark study of the respiratory, cardiovascular, and auditory health of people living in a five-mile radius of Boston Logan Int'l finds they have higher incidence of lung disease, lower incidence of heart disease, no increase in hearing damage - p. 70

Noise Monitoring ... Airservices Australia signs \$25 million contract with B&K for noise and flight path monitoring and WebTrak; B&K deploys new WebTrak MyNeighbourhood software for first time at airport in The Netherlands - p. 72

News Briefs ... Updated FAA environmental order 1050.1F due out this fall ... L.A. Airport Commissioners approve \$10 million for sound insulation of schools in Lennox School District near LAX ... City of El Segundo issues RFQs for two contracts related to its Residential Sound Insulation Program ... FAA approves PFC funding sound insulation at Louisville Int'l - p. 72

Boston, from p. 70

an association between airport emissions and increased risk of lung disease but could not prove a causal link.

“The chief takeaways are that we do see some respiratory effects associated with living in the areas of highest impact, but Logan itself represents a smaller contribution to the overall urban air pollution picture than expected,” said Suzanne Condon, director of the MDPH’s Bureau of Environmental Health, who managed the study.

However, her conclusion is at odds with a study also reported last week by researchers at the University of Southern California’s Keck School of Medicine and the University of Washington, which found that “air quality impact areas of major airports may have been seriously underestimated.”

The Keck study found that aviation emissions at Los Angeles International Airport extend more than five times farther than previously assumed and may be as important to L.A.’s air quality as its freeway system.

The \$1.8 million Boston health study was commissioned by the state Legislature 14 years ago and only completed this year due to years of funding delays and revisions of statistical models used in the research.

The Massachusetts Port Authority (Massport) called the study “ground-breaking,” noting that it “is the first of its kind to use airport data on emissions, flight tracks, noise, wind and weather, and combine that with 2005 telephone survey information from more than 6,000 residents within five miles of Boston Logan International Airport.”

The study was based on telephone interviews with 6,072 adults and 2,215 children in 17 communities.

The goal of the study was to determine whether residents living in areas with greater potential for airport-related exposures were more likely to experience respiratory, cardiovascular, or auditory effects compared to those residents living in areas with lesser potential for airport-related exposures.

Cardiovascular Findings

The study found no adverse cardiac issues related to airport activity.

The prevalence of two cardiovascular outcomes was evaluated in adults, myocardial infarction (MI) and coronary heart disease (CHD).

For MI, survey respondents were asked to report having ever been told by a medical doctor that they had a “heart attack or myocardial infarction.” For CHD, they were asked whether they had ever been told by a medical doctor that they have “angina or coronary heart disease.”

“Although exposure to air pollution, particularly PM, has been associated with MI and CHD, more studies have reported associations with mortality rather than morbidity. Given the fact that this study measured self-reported health outcomes, only persons who survived to report their MI or CHD were included in this study,” the MDPH noted.

To address this limitation, MDPH analyzed mortality data from the state Registry of Vital Records for differences in the

crude 5-year average annual MI mortality rate (2001- 2005) between the state of Massachusetts as a whole and each of three airport-related air pollution exposure areas, which were based on increasing levels of exposure to airport emissions.

However, no statistically significant differences were observed in the average annual MI mortality rates for each of the study exposure areas and the state as a whole.

Despite the lack of an association between potential airport-related air pollution exposure and CVD morbidity or mortality in this study, it is well established that both long- and short-term exposure to ambient air pollution increases risk of CVD, the study said.

“Therefore, the lack of an association in this study suggests that airport-related exposures were not high enough to cause detectable impacts on CHD or MI morbidity in the LAHS area. This does not rule out the possibility that small effects are present and undetectable with the current study’s sample size and/or measures of outcome.”

Auditory Findings

The study found no hearing loss or tinnitus (ringing in the ears; a sign of auditory damage) in adults or children and speculated it was because noise levels in communities near the airport were not loud enough to cause damage to hearing.

“Another reason for not observing auditory health effects among residents living in the high noise exposure area may be due in part to the implementation of Massport’s noise abatement program, which provides soundproofing of homes and apartments within the 65 dB noise contour. Analysis of survey results indicated that 44 percent of residents in the high noise exposure area [the 65 DNL contour] had received Massport soundproofing and 24 percent of residents in the medium [the 60-64 DNL contour] exposure area had received the soundproofing,” the study reported.

It continued, “Although adverse auditory outcomes associated with airport-related noise exposure were not observed, other health and quality of life endpoints may be influenced by exposure to airport-related noise. Some of these effects include annoyance, interference with speech and communications, sleep disturbance, stress, and cardiovascular impacts. This study did not evaluate these endpoints.

“Regarding cardiovascular effects, only recently have studies begun to understand the potential impact of noise exposure on CVD health. For example, the Schiphol airport study (Franssen et al. 2003), a multi-airport retrospective study of older people (65 years and older) in U.S. (Correia et al., 2013), a study of residents living near Heathrow airport (Hansell et al., 2013) and a study in Switzerland (Huss et al., 2010) have reported emerging evidence of increased incidence of noise-related cardiovascular effects.

“A review of the literature of these studies for the U.S. FAA/NASA/Transport Canada sponsored Center of Excellence concluded that a pattern of increased incidence of cardiovascular effects, hypertension, and ischemic heart disease associated with noise appear to have emerged (Swift, 2010).”

Massport Will Work with Health Centers

Massport said that it will work with the East Boston Neighborhood Health Center and other health centers and the state Department of Public Health to support respiratory health in neighborhoods.

“Studies have found that Logan contributes one percent or less of the carbon monoxide and particulate matter that is found in urban areas, and the airport-generated emissions are mostly concentrated near the airport perimeter and rapidly dissipate,” Massport said.

“While Logan contributes a modest amount of emissions into the neighboring urban environment, we want to be part of the solution, not the problem,” said Massport CEO Thomas P. Glynn.

“We appreciate the work done by DPH and we will work with the agency and local health organizations such as the East Boston Neighborhood Health Center, and other neighborhood health centers to make sure residents are screened, educated and have tools to reduce respiratory irritants in their homes.”

In the coming days, Massport said it will work with officials and health groups to formalize the outreach and prevention efforts now that the study findings are public.

Massport has contacted and is meeting with neighborhood health centers to develop community-specific partnerships to address local needs. The partnerships will include:

- Health Centers conducting a needs assessment survey to determine cases of adult COPD and cases of pediatric asthma;
- Based on the needs assessments, development of targeted strategies that could include healthcare provision by nurse practitioners, home visits and education by case managers and community health workers, healthy home kit distribution, tracking of care, and referrals as needed.

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local authorities with their decision-making processes.”

As well as maintaining the 40 permanent noise monitors located under or near flight paths at major airports, the new contract also provides for greater flexibility and increased short-term noise monitoring.

Short-term monitoring allows data to be obtained from locations where a permanent monitor cannot be installed and gives Airservices the ability to respond to community concerns.

WebTrak is a community information tool which allows residents to see detailed data on take-offs and landings at major airports up to three months ago. It also allows for expanded coverage by the tool around the major airports as well as the potential introduction of WebTrak to other locations from 2015.

Airservices existing WebTrak tool and Noise and Flight Path Monitoring system was previously provided by Bruel & Kjaer under an existing contract which commenced in 2008.

First Deployment of ‘MyNeighbourhood’

In a related announcement, Eindhoven Airport, the Netherlands’ second busiest airport, said it is ready to grow while maintaining good community relations.

In order for the airport to grow, it made an agreement at the Netherlands’ ‘Alderstafel’ advisory committee on airport noise to enhance communications with the local community about airport operations, complaint handling, and noise measurements.

As part of this project, Eindhoven Airport and the working group under the ‘Alderstafel’ created a website (<http://samenopdehoogte.nl/>) featuring Brüel & Kjør’s WebTrak and its new WebTrak MyNeighbourhood tools, which provides the community with accurate information about their local airport, answers to frequently asked questions and a better understanding of airport operations.

B&K said this is its first deployment of its WebTrak MyNeighbourhood, which enables the public to investigate noise and flight information, including long-term trends and seasonal changes, for themselves. Drill down capabilities reveal further information about flights and noise - and WebTrak also provides an easy way for people to lodge complaints, B&K said.

“Brüel & Kjør was selected for its long experience of airport noise management and our successful working relationship so far,” said Joost Meijs, CEO at Eindhoven Airport. “Brüel & Kjør’s Airport Noise and Operations Monitoring System (ANOMS) and WebTrak represent the latest in available technologies and we are looking forward to using them to work more directly with our stakeholders.”

In Brief...

FAA Order 1050.1F Due Out in Fall

FAA expects to issue the latest update to its environmental order in early Fall 2014, an agency spokesman told ANR. It will be designated Final Order 1050.1F on Policies and Procedures for Considering Environmental Impact.

A draft of the updated order was issued for public comment in August 2013.

Board Approves \$10 M for School Insulation

The Los Angeles Board of Airport Commissioners on June 2 authorized a \$10-million grant to the Lennox School District – in Inglewood, CA, near Los Angeles International Airport – for construction of sound-mitigation elements in its Classroom Sound Insulation Program. This is the second installment for the district’s \$35.3-million overall program.

In this second work program, the Board authorized immediate payment of \$4,079,000 to reimburse for expenses already accrued. The remaining \$5,921,000 will be released to the district once additional reports are submitted showing need for those funds.

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This second work plan calls for completion or initiation of sound insulation at the following school campuses: Buford, Felton and Jefferson elementary schools; new school construction north of Jefferson; and Lennox Middle School.

Sound-insulation construction will include: replacing standard doors with thicker, solid doors; installation of interior insulation as needed; installation of interior acoustic ceiling tiles; framing and insulation of top floors; replacing standard windows with sound-rated windows; installing sound-rated windows that were once replaced with dry wall; and replacing/installing heating and air-conditioning systems as needed.

In addition to classroom sound insulation, the program also provides for other construction necessary to mitigate classroom noise caused by aircraft as part of the Los Angeles International Airport (LAX) Settlement Agreement between Los Angeles World Airports (LAWA) and the Lennox School District.

The insulation program, approved by the Federal Aviation Administration, will be financed by Passenger Facility Charges generated by operations at LAX.

El Segundo Issues RFQs for Sound Insulation Program

The City of El Segundo, CA, located near Los Angeles International Airport, recently issued two Requests for Qualifications (RFQs) seeking consulting services for its Residential Sound Insulation Program (RSIP).

RFQ 14-06 seeks architectural and drafting design services.

RFQ 14-07 seeks acoustical testing and supplemental design services.

Interested parties may request information or copies of either RFQ by contacting City of El Segundo, Residential Sound Insulation Program, 333 Main St., Unit A, El Segundo, CA 90245; e-mail losborne@elsegundo.org; tel: (310) 524-2384; fax: (310) 662-4084.

Proposals must be submitted in accordance with the requirements set forth in the RFQs and must be received in the City Clerk's Office, 350 Main Street, El Segundo, CA, 90245, no later than 11:00 a.m., July 8, 2014.

The City's RSIP utilizes funding from the Federal Aviation Administration and Los Angeles World Airports and all work must adhere to applicable FAA and LAWA grant regulations.

Louisville Int'l PFC Approved

On June 2, FAA announced that it has approved the imposition and use of a \$4.50 Passenger Facility Charge (PFC) by the Louisville Regional Airport Authority from April 1, 2015, to Jan. 1, 2016, for a total estimated revenue of \$5,203,144 to fund phases 3B through 7 of the sound insulation program at Louisville International Airport and for various other projects (jet bridge acquisition, rehabilitation and installation of pre-conditioned air units).

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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Research

AQ IMPACTS OF MAJOR AIRPORTS MAY BE ‘SERIOUSLY UNDERESTIMATED’, STUDY SAYS

Health scientists at the Keck School of Medicine of the University of Southern California (USC) said they have shown, for the first time, that aircraft activity at Los Angeles International Airport worsens air quality over a far larger area than previously assumed.

Their study will be closely scrutinized by the aviation community because its findings indicate that aircraft emissions are a much greater contributor to urban air quality than previously thought.

“Most previous research on the air quality impacts of airports focused on measuring air quality near where jet takeoffs occur. Takeoffs produce immense plumes of exhaust but only intermittently, and pollution concentrations downwind have been observed to fall off rapidly with distance. The assumption has been that total airport impacts also fall off rapidly with distance. The new research finds that this assumption is wrong,” the Keck health scientists asserted.

They said their study findings suggest that airport emissions are a major source of particulate matter concentrations in Los Angeles “that are of the same general
(Continued on p. 75)

Bob Hope Airport

AMENDMENT ALLOWING CURFEW ADOPTION AT BOB HOPE AIRPORT FAILS BY FOUR VOTES

On June 10, the House of Representatives came within four votes of passing an amendment to the Transportation, Housing, and Urban Development (THUD) Appropriations Act that would have allowed Bob Hope Airport to impose a nighttime curfew without going through FAA’s onerous Part 161 process.

The amendment was proposed by California Reps. Adam Schiff (D), Brad Sherman (D), and Henry Waxman (D), who represent communities around the airport.

The amendment was defeated by a narrow vote of 208 to 212. This issue previously was voted on in 2011 and failed then by 65 votes (178 to 243).

“I’m disappointed that our amendment to allow Bob Hope Airport to adopt a curfew narrowly missed passage,” said Rep. Schiff. “But I’m encouraged that bipartisan support for a curfew at the Bob Hope Airport has only grown, and hope that the FAA gets the message that we are serious about noise relief.

“The Part 161 process is deeply flawed and the FAA has little intention of granting relief to any community unless it is forced by Congress. I will continue fighting on behalf of the thousands of San Fernando Valley residents who have long-sought relief from aviation-related nighttime noise, and look for future oppor-

(Continued on p. 76)

In This Issue...

Research ... Aircraft emissions worsen air quality over a much larger area than previously assumed, health scientists at the USC Keck School of Medicine show in a study at LAX. Aircraft on approach likely produce a significant portion of the increased ultrafine particulate matter newly found in a downwind pattern that follows the shape of the noise contour for landing aircraft, the study reports - p. 74

Nighttime Curfew ... An amendment to the federal transportation appropriations bill – which would have allowed Bob Hope Airport to bypass FAA’s Part 161 regulations to impose a nighttime curfew on operations – fails to pass this time by only four votes - p. 74

Annoyance Survey ... FAA is seeking comments on its intention to ask OMB for approval to conduct an annoyance survey of residents near airports to determine if the agency needs to update its aircraft noise policy - p. 77

USC, from p. 74

magnitude” as the L.A. urban freeway network.

The researchers warned that their study results indicate “that the air quality impact areas of major airports may have been seriously underestimated.”

The study, titled “Emissions from an international airport increase particle number concentrations 4 fold at 10 km downwind,” found that concentrations of ultrafine particles were more than double over 20 square miles compared to background concentrations in nearby areas outside the area of LAX impact. Also, ultrafine particle concentrations four times higher than background extended a distance of six miles from LAX.

Levels of smog-forming nitrogen oxides and black carbon, which is a major component of soot, also were found in elevated concentrations at distances of 9.5 to 12 km (5.9 to 7.4 miles) from LAX.

Published May 29 in the peer-reviewed journal *Environmental Science and Technology*, the study was conducted with University of Washington (UW) researchers and was funded by the National Institute of Environmental Health Sciences.

“Our research shows that airport impacts extend more than 5 times further than previously assumed,” said Scott Fruin, lead researcher and assistant professor of preventive medicine at the Keck School of Medicine of USC. “Effects from planes that are landing appear to play a major role in this large area of impact.”

To put this large area of impact into perspective, the researchers calculated that one-quarter to one-half of the entire L.A. County freeway system (between 174 and 491 miles) produces an equivalent increase in ultrafine particle numbers on a concentration-weighted basis.

“LAX may be as important to L.A.’s air quality as the freeway system,” said Fruin. “The impact area is large, and the airport is busy most hours of the day. That makes it uniquely hard for people to avoid the effects of air pollution in affected areas.”

“Given the existing concern about the possible health effects of urban ultrafine particle levels, living in an area with two to four times the average L.A. levels of ultrafine particles is of high public health concern,” said first author Neelakshi Hudda, Ph.D., research associate in preventive medicine at the Keck School.

The research team said it used vehicles equipped with special measurement devices to capture data not available using traditional fixed monitors. The team was able to take moving measurements for more than 5 hours under consistent wind conditions to fully capture the extent of the impact boundaries.

“Other airports generally have less steady wind directions, which would make these measurements more difficult,” said Hudda. “Similar impacts are probably happening, but their location likely shifts more rapidly than in Los Angeles.”

“The on-shore westerly winds cause this impact regularly

in communities east of LAX, because the impact’s location corresponds to the wind direction,” Hudda added. “In the winter months, when the winds were different, impacts were measured south of the airport during northerly winds.”

“This large, previously undiscovered spatial extent of the air quality impacts downwind of major airports may mean a significant fraction of urban dwellers living near airports likely receive most of their outdoor PN exposure from airports rather than roadway traffic,” the study said.

Ultrafine particles are currently unregulated but are of concern because they appear to be more toxic than larger particles on an equal mass basis in animal and cellular studies, and because they appear able to enter the bloodstream, unlike large particles that lodge in the lungs, the researchers explained.

Officials at the California South Coast Air Quality Management District said there is little that their state agency can do to reduce air pollution from airports because they do not have the power to regulate aircraft emissions. They suggested that the U.S. Environmental Protection Agency should set a standard for ultrafine particles, as exists in Europe.

Ralph Delfino, professor of epidemiology at UC Irving, who studies the health effects of air pollution and reviewed the USC study, told the *LA Times*, “This is a very novel and alarming set of results. It’s all very, very surprising.”

Landing Emissions Significant

The USC study concluded that landing approach emissions “likely produce a significant fraction” of the increased particle number (PN) concentrations observed downwind.

“The consistent and distinctive spatial pattern of elevated concentrations was aligned to prevailing westerly winds and landing jet trajectories, and roughly followed the shape of the contours of noise from landing jets, indicating that landing jets probably are an important contributor to the large downwind spatial extent of elevated PN concentrations,” the study said.

Asked by ANR why earlier airport emissions studies did not find increased PN concentrations in as large an area as his study did, Fruin replied via e-mail:

“My guess as to why the large air quality impacts we detected were missed by other studies is that most studies have measured rather close to runways where takeoff emissions dominate and concentrations are highest. Because these occur at or near ground level, they tend to fall off rapidly with distance.

“Other researchers appear to have assumed this rapid drop-off with distance applies to all airport emissions and impact areas, and it apparently does not. For example, incoming planes appear to play an important role in the large impact area we measured.

“Second, many studies have relied on fixed-site monitors, which are not well suited for covering large areas or accurately characterizing spatial gradients. We used an instrumented vehicle, which is much better suited to capture gradients and to cover large areas.

“Third, LAX Airport in Los Angeles has very consistent wind direction, which allowed us to cover a large area of impact before it changed location. At airports with more variable wind directions, this would be more challenging.”

Fruin said he would like to do follow-on work to the LAX study to obtain additional aircraft emissions and wind speed measurements and to determine if increased exposure to aircraft PN concentrations affects health in terms of low birth weight, asthma rates, and exercising outdoors.

LAWA Response

LAWA said its environmental staff is in the process of reviewing the USC study.

In a statement issued on May 29, the day the USC study was published, LAWA noted that in January 2014, it completed a multi-year LAX Air Quality Source Apportionment Study, which was one of the most extensive air-quality studies ever performed at an airport. That study and its results are available at www.lawa.org/airqualitystudy.

Some of the key findings of that study are:

1. All major pollutants were below National Ambient Air Quality Standards & California Ambient Air Quality Standards;

2. Air toxics are comparable or lower than elsewhere in the South Coast Air Basin;

3. Air pollutant concentrations show sharp decreases as distance from the source of emissions increases;

4. Based on data analysis from first season sampling, a supplemental study was conducted to further investigate Ultrafines (UFP) sources. The following was determined:

- Larger UFP particles indicated an association with vehicle emissions.
- Smaller UFP particles indicated an association with jet exhaust and possibly secondary particles.

LAWA said it cannot directly control aircraft-related emissions but said it has taken steps to reduce emissions that are within its responsibility and influence.

Curfew, from p. 74

tunities to pass legislative language to make this possible.”

Added Rep. Sherman, “Ninety-nine percent of Valley residents want to sleep at night without being awakened by a loud jet. Congress should act so that the reasonable nighttime curfew sought by Burbank Airport can be put into place. I will continue to fight for nighttime curfews at both Van Nuys and Burbank Airports.”

“I am disappointed the Republican controlled House has defeated this important, common-sense amendment,” said Rep. Waxman. “The airport should have the authority to impose a legally binding curfew on all flight operations and nighttime flights to the benefit of the residents who live in the surrounding communities.”

The amendment would have clarified that Bob Hope Airport should be exempted from the Airport Noise and Capacity

Act (ANCA), like other similarly situated airports were at the time of its passage. Bob Hope Airport was one of the first airports in the country to impose a curfew. The amendment language would have allowed the airport to adopt non-discriminatory curfews applicable from 10 p.m. to 7 a.m.

“The City of Burbank and the Burbank City Council are committed to providing nighttime noise relief for the entire San Fernando Valley,” said Burbank Mayor David Gordon. “As a result, the City of Burbank and the Burbank City Council strongly support the legislative efforts of Congressmen Schiff and Sherman in this regard.”

The legislation would have applied only to Bob Hope Airport and addressed concerns that the FAA cited in rejecting Burbank’s Part 161 application for a curfew – that it would add congestion to an already crowded airspace and it would impact the national system of airports because it would cause system wide delays. The proposal would have had a minimal impact on local airspace because a joint curfew for both airports is designed to ensure that air traffic is not shifted from one airport to the other, Schiff said.

“Thousands of residents of Southern California’s San Fernando Valley, who live under the flight paths or near the terminals at the Bob Hope Airport, endure the house-shaking noise of air traffic during the day and suffer the jarring interruption of their sleep caused by a roaring jet,” Schiff said in a speech on the House floor.

“To address the concerns of those affected by airport noise across the nation, the Federal Aviation Administration established a process to consider an individual community’s request for a curfew. However, the process was designed to be difficult – so difficult, that in the decades since it was established by the FAA, only one airport in the nation has successfully completed an application – Bob Hope Airport. And then it was summarily turned down ... Because of the FAA’s dismissive attitude toward legitimate local concerns it is clear to us that the only way to provide relief to the residents in our community is through legislative action.”

FAA’s Part 161 Regulations on Notice and Approval of Airport Noise and Access Restrictions were adopted in 1991.

Annoyance

FAA SEEKS PUBLIC COMMENTS ON PLANNED ANNOYANCE SURVEY

The public has until Aug. 11 to comment on the Federal Aviation Administration’s intention to ask the Office of Management and Budget for approval to undertake a nation-wide survey to update scientific evidence of the relationship between aircraft noise exposure and its effects on communities around airports.

“This Neighborhood Environmental Survey is necessary to update the relationship between aircraft noise exposure and its effect on communities around United States airports,” the FAA explained in its June 12 Federal Register announcement.

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The FAA said the survey “will collect data on annoyance from a representative sample of households surrounding airports chosen from a representative sample [of airports] and relate the annoyance level to the noise exposure for that address. The FAA will use the information from this collection to derive the empirical data to support potential updates to or validation of the national aviation noise policy.”

Some 12,147 residents around airports will be surveyed once via mail with a telephone survey for selected respondents. The mail survey is estimated to take five minutes to complete and the telephone survey 20 minutes to conduct. The “estimated total annual burden: of conducting the survey is 1,544 hours.

FAA has said elsewhere that it will conduct the survey in communities around 20 U.S. airports, which have not been identified.

The agency invited public comment on any aspect of this information collection (survey), including:

- Whether the proposed collection of information is necessary for FAA’s performance;
- The accuracy of the estimated burden;
- Ways for FAA to enhance the quality, utility and clarity of the information collection; and
- Ways that the burden could be minimized without reducing the quality of the collected information.

The agency said it will summarize and/or include the public comments in its request for OMB’s clearance of this information collection.

Comments should be submitted to Ms. Kathy DePaepe, Room 126B, Federal Aviation Administration, ASP-110, 6500 S. MacArthur Blvd., Oklahoma City, OK 73169.

Comments also can be submitted to Taylor Dahl, Paperwork Reduction Act Coordinator, FAA, 800 Independence Ave., SW, Washington DC 20591, Attn: Information Collection Clearance Office.

For further information, contact Ms. DePaepe at tel: (405) 954-9362; email: Kathy.DePaepe@faa.gov

Comments should reference “Information Collection: Neighborhood Environmental Survey.”

In Brief...

Merrill Field Noise Maps Approved

On June 10, the Federal Aviation Administration announced that noise exposure maps submitted by the Municipality of Anchorage, Alaska, for Merrill Field Airport are in compliance with federal requirements.

For further information, contact Michael Edelmann in FAA’s Anchorage office; tel: (907) 271-5026; email: mike.edelmann@faa.gov.

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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June 20, 2014

NASA

NASA SAYS IT IS MAKING STRIDES TO BRING BACK SUPERSONIC PASSENGER JET TRAVEL

The National Aeronautics and Space Administration said that the return of supersonic passenger travel may be coming closer to reality thanks to the agency's efforts to define a new standard for low sonic booms.

Several NASA aeronautics researchers will present their work in Atlanta the week of June 17 at *Aviation 2014*, an annual event of the American Institute of Aeronautics and Astronautics. They will share with the global aviation community the progress they are making in overcoming some of the biggest hurdles to supersonic passenger travel, NASA said in a June 17 release.

The research generates data crucial for developing a low-boom standard for the civil aviation industry. NASA said it works closely with the Federal Aviation Administration and the international aerospace community, including the International Civil Aviation Organization, to gather data and develop new procedures and requirements that may help in a reconsideration of the current ban on supersonic flight over land.

"Lessening sonic booms – shock waves caused by an aircraft flying faster than
(Continued on p. 79)

Chicago O'Hare Int'l

THREE ILLINOIS REPS CALL FOR NEW EIS, HEARINGS ON O'HARE MODERNIZATION PLAN

Illinois Reps. Mike Quigley (D), Tammy Duckworth (D), and Jan Schakowsky (D) urged the Federal Aviation Administration June 19 to prepare a new environmental impact study and hold new public hearings on the O'Hare Modernization Plan (OMP) in response to increased noise impact and questions raised about the original public hearings process held in 2005.

Their action comes in response to disclosures recently reported by the *Chicago Sun-Times* about the 2005 public hearings that confirmed to communities hit by increased noise from a major runway reconfiguration at O'Hare what they have long claimed: that the FAA employed tactics that deliberately misled the public about the noise impact of the \$8 billion O'Hare Modernization plan.

In a draft EIS the public considered in 2005, federal officials "released incorrect and incomplete information" about the extent of noise impact the communities under the revised flight paths would receive, the *Sun-Times* reported in a June 19 story.

"Nearly three-quarters of the figures in one key table – on the now-contentious
(Continued on p. 80)

In This Issue...

Chicago O'Hare ... Three members of Congress from Illinois – who represent noise-weary residents living under shifted flight paths from a major runway realignment – urge FAA to prepare a new EIS and hold new public hearings on the \$8 billion O'Hare Modernization Plan after *Chicago Sun Times* stories raise questions about how FAA conducted the original public hearings process held in 2005 - p. 78

SSTs ... NASA says it believes supersonic research has progressed to the point where the design of a practical, low-boom supersonic passenger jet is now within reach - p. 78

Part 150 Programs ... FAA announces its approval of an updated Noise Compatibility Program for Seattle-Tacoma Int'l that continues sound insulation of homes and schools - p. 80; FAA approves first Part 150 program for Willow Run Airport, a major cargo facility near Detroit - p. 79

SST, from p. 78

the speed of sound – is the most significant hurdle to reintroducing commercial supersonic flight,” said Peter Coen, head of the High Speed Project in NASA’s Aeronautics Research Mission Directorate at the agency’s Headquarters in Washington. “Other barriers include high altitude emissions, fuel efficiency and community noise around airports.”

Engineers at NASA centers in California, Ohio, and Virginia that conduct aviation research are tackling sonic booms from a number of angles, including how to design a low-boom aircraft and characterize the noise. NASA said the researchers have studied how to quantify the loudness and annoyance of the boom by asking people to listen to the sounds in a specially designed noise test chamber.

The agency noted that a recent flight research campaign at NASA’s Armstrong Flight Research Center in Edwards, California, had residents explore ways to assess the public’s response to sonic booms in a real-world setting.

Researchers at the Armstrong Flight Research Center have an advantage – pilots are permitted to fly at supersonic speeds because the facility is located on Edwards Air Force Base.

“People here are more familiar with sonic booms,” said Armstrong aerospace engineer Larry Cliatt. “Eventually, we want to take this to a broader level of people who have never heard a sonic boom.”

Similar work is conducted at NASA’s Langley Research Center in Hampton, Virginia, where volunteers from the local community rated sonic booms according to how disruptive they determined the sound to be.

“They each listened to a total of 140 sounds, and based on their average response, we can begin to estimate the general public’s reactions,” explained Langley acoustics engineer Alexandra Loubeau.

She also conducted a study at Langley comparing results from tools used to predict sonic boom noise at ground-level.

“Because of the interaction with the atmosphere, it is important to be as consistent as possible in the implementation and usage of these tools. The comparisons done so far have shown good agreement, but there are some inconsistencies that need to be studied,” Loubeau said.

Other NASA studies are focused on predicting the sonic boom and on design approaches to reducing it. Participants from Japan, the United States, and France attended the first Sonic Boom Prediction Workshop, held on Jan. 11 at the Gaylord Resort at National Harbor, MD, where they evaluated simple configurations — cylindrical bodies with and without wings — and complex full aircraft designs.

“We are working to understand the worldwide state of the art in predicting sonic booms from an aircraft point of view,” said Mike Park, a fluid mechanics engineer at Langley. “We found for simple configurations we can analyze and predict sonic booms extremely well. For complex configurations we still have some work to do.”

Wind tunnels are another tool used to help predict which

airplane designs might have quieter booms. The most recent tests were conducted at NASA’s Ames Research Center in Moffett Field, California, and Glenn Research Center in Cleveland. Similar to designs of the past, current aircraft designs being tested are characterized by a needle-like nose, a sleek fuselage and a delta wing or highly-swept wings – shapes that result in much lower booms.

NASA and industry engineers say they believe supersonic research has progressed to the point where the design of a practical low-boom supersonic jet is within reach.

Willow Run Airport**FAA APPROVES 150 PROGRAM INCLUDING INSULATION, GRE**

On June 9, the Federal Aviation Administration announced its approval of all nine proposed measures in the Part 150 Airport Noise Compatibility Program for Willow Run Airport in Ypsilanti, MI, which is one of the largest cargo airports in the United States.

The airport has no passenger service because it is located near Detroit Metropolitan Wayne County Airport, but does serve cargo (including 747s), corporate, and general aviation aircraft on its four runways.

Among the approved Part 150 program measures are:

- Voluntary sound insulation of single-family homes within the 65 DNL contour. Approximately 70 homes are located within the contour but the airport has not yet determine how many of those also meet FAA’s 45 dB DNL interior noise level standard required for sound insulation program eligibility;
- Voluntary sales assistance program for homeowners in the 65 dB DNL contour;
- Buyer notification requirement within the 60 DNL contour; would provide direct notice to prospective home buyers that the home they are considering to purchase may be subject to aircraft noise intrusion. Wayne County Airport Authority will work with surrounding communities to require notice of the noise to be placed on subdivision plats or deeds for each individual lot. Such notice would be recorded on the deed and is identified in a title opinion or title insurance report;
- Work with communities to update building codes to require sound attenuation (a 30 dB noise reduction from outside to inside) of new residences within the 65 DNL contour in order to prevent future land use incompatibilities;
- Work with communities to update comprehensive plans to discourage noise sensitive uses within the 65 DNL contour;
- Work with communities to update zoning ordinances to restrict noise sensitive uses within the 65 dB DNL contour; and
- Construct a ground run-up enclosure per a site selection study. No details of the GRE are available yet, an airport spokesman told ANR.

*Seattle-Tacoma Int'l***FAA APPROVES CONTINUATION OF INSULATION IN 150 UPDATE**

On June 12, the Federal Aviation Administration announced its approval of an update to the Part 150 Airport Noise Mitigation Program for Seattle-Tacoma International Airport.

The agency approved 19 of the 22 program recommendations, “disapproved” one recommendation, and approved one in part. One other recommendation was withdrawn.

Among the approved measures in Sea-Tac’s Part 150 update were continuation of the residential sound insulation program, insulation of schools in the Highline School District, a feasibility study of insulating apartments, and construction of a ground run-up enclosure, Perry Cooper, manager of Airport Public Affairs, told ANR.

To date, SeaTac has spent about \$400 million over the years on all noise mitigation programs, Cooper said. The Part 150 update identified 193 single family homes at an approximate cost of \$2.4 million that will remain eligible within the new noise remedy boundary.

Regarding school sound insulation, Cooper said the Port of Seattle and the FAA have an agreement with the Highline School District that is independent of the Part 150 to help rebuild and sound attenuate 15 schools for \$100 million.

Seven of those schools have been completed with about half of the funding spent through a combination of Airport Improvement Program grants, Passenger Facility Charges, and tax levies.

“We have been working with the district as they pass their own school levies to rebuild schools to help with the new facilities rather than upgrading an old school that will eventually need rebuilding,” Cooper explained.

As for the Ground Run-Up (GRE) enclosure, he said the Part 150 update identified three possible locations on the airfield that would be good for the location. Currently the Port of Seattle is working on a Sustainable Master plan that is seeking to identify a preferred location for the GRE.

Cooper said that FAA’s approval of the Part 150 update is not the final go ahead for doing the projects. “The Port of Seattle Commission has to approve a plan as it will have to pay for part of the projects. Then we would submit the plan to the FAA and see if they will approve funding on their end,” he said.

In its notice, the FAA did not define all the Part 150 program measures. Cooper said that all of the new mitigation options were approved by FAA and 18 other measures were carried forward from past Part 150 programs.

The FAA said that a measure addressing maintenance run-ups was previously disapproved in Sea-Tac’s 2002 Part 150 program and continues to be disapproved. Cooper said it clarified existing engine testing regulations.

FAA also disapproved a proposed measure to sound insulate the Highline Community College because it lies outside

the newly revised noise remedy boundary.

FAA’s Record of Approval for Sea-Tac’s updated Part 150 program provides greater detail on the program measures and will be available online at http://www.faa.gov/airports/environmental/airport_noise/part_150/states/

O’Hare, from p. 78

issue of what percentage of traffic each runway will carry – were quietly changed online” months after public hearings ended in 2005, the paper reported.

Some of the data changes “doubled, tripled, and even quadrupled” the percentage of flights the O’Hare runways were predicted to direct over communities east and west of O’Hare under the runway realignment, the *Sun-Times* reported.

Reporters compared original tables FAA put online for the 2005 hearings with later final versions of the tables and additional information to determine differences in FAA’s original predictions of noise impact. Among their findings were:

- The two busiest departure runways were originally predicted to carry only 78 and 79 average daytime takeoffs. However those figures were later changed to 407 and 372 takeoffs, respectively;
- The busiest arrival runway was originally predicted to handle 95 daytime landings, which later was changed to 338.
- Parts of northwest Chicago, including the 41st. Ward that Rep. Quigley represents, were originally only expected to get 12 nighttime arrivals but that figure was later changed to 59 nighttime arrivals.

In an earlier June 9 story, the paper reported that none of the three hearings that FAA held in 2005 on the draft EIS were held in the areas east and west of O’Hare that would get the new noise impact under the runway realignment. Instead, the hearings were held in communities north and south of the airport that would get reduced noise impact.

An FAA spokesman told the paper the FAA order on public hearings does not cite where they must be held; that the agency was trying to spread out the hearing sites geographically around the airport; and that there were environmental issues other than noise addressed in the draft EIS.

He said the original runway percentage use table was corrected but could not explain why it was changed “or say for sure how it was referred to at February 2005 public hearings,” the *Sun-Times* reported. The corrected table was part of a July 2005 final EIS (7.5 million web pages long) that was subject to public comment but not public hearings.

The FAA spokesman said that a noise contour map was displayed at the 2005 hearings showing where noise increases and decreases would occur five years after the OMP was completed.

“The FAA’s failure to focus on areas most impacted by the OMP in their public hearings and the inaccuracy and incompleteness of the information provided given the changes that have taken place since then is disappointing and calls into question the integrity of the environmental impact study

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process,” the three congressional representatives told FAA Administrator Michael Huerta.

“As such, we write to request a full explanation of the FAA’s outreach to affected areas in advance of the OMP’s approval and strongly urge the FAA to undertake a new environmental impact study (EIS), accompanied by a new round of public hearings that will afford vigorous citizen input. Impacted citizens deserve a chance to participate and comment upon the changes that have so profoundly affected their lives,” the representatives asserted in a joint letter to Huerta.

“Since October 2013, complaints on the impact the OMP, its newest runway and attending flight pattern changes at O’Hare have risen dramatically. In the ten years since the original EIS, significant changes to the implementation of the OMP underscore the necessity for a new assessment. Runways have opened out of sequence; new rules governing converging runways have pushed even more air traffic on the east-west configuration; and neighborhoods have been flooded with unexpected noise,” they said.

“In addition to the new EIS, we urge your agency to move quickly to address key issues that affect the health and well-being of our constituents. First, we believe that FAA’s ongoing 65 DNL assessment needs to be expedited. Telling constituents, who hope to qualify someday for sound insulation, that the study is not near completion after five years offers them cold comfort when jet noise is blanketing their communities.

“Additionally, we believe the FAA – in conjunction with the City of Chicago and the airlines – needs to devise a course of action that will bring relief to our residents. Whether such a plan involves changes to the airspace, keeping all runways open indefinitely, asking airlines to make some operational accommodations, or likely a combination of all three, we need to start work now. Our constituents should not have to wait until the airport expansion is completed in 2020 to decide if they can endure the increase in noise pollution. We want your guarantee to explore whatever practicable changes are necessary to protect our neighborhoods, while keeping O’Hare safe and efficient.”

Andolino Announces Her Departure

Meanwhile, four days after the first *Sun-Times* story on the 2005 hearings was published, Chicago Aviation Commissioner Rosemarie Andolino announced that she will step down from her position this summer.

The *Sun-Times* speculated that she is leaving because she had been a favorite of former Chicago Mayor Richard M. Daley but has been shut out by current Mayor Rahm Emanuel.

Both Andolino and Emanuel have refused to meet with the Fair Allocations in Runways Coalition (FAIR), which seeks to have arrivals and departures evenly spread among runways. Andolino contends that would only shift the noise impact.

But shifting the noise impact is exactly what the OMP did.

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Los Angeles Int'l

FAA DEEMS LAWA PART 161 APPLICATION TO BE 'COMPLETE'; OPENS 30-DAY COMMENT PERIOD

The Federal Aviation Administration announced June 27 that it has determined that Los Angeles World Airport's application to impose a restriction on operations at Los Angeles International Airport under FAA's Part 161 regulations is complete.

FAA is now seeking public comments on the Part 161 application. It announced a 30-day comment period, beginning on June 27.

FAA said it will issue a decision approving or disapproving the proposed restriction by Nov. 8, the end of the 180-day agency review period established under the Part 161 regulations.

The LAWA application seeks approval to adopt a new ordinance that would require all aircraft operators to comply with prevailing flows whenever LAX is in Over-Ocean or Westerly Operations from midnight to 6:30 a.m.

"The determination of completeness [of LAWA's application] is not an approval or disapproval of the proposed airport access restriction. FAA will review the application, public comments, and any other information obtained under § 161.137(b)

(Continued on p. 83)

Helicopters

FAA EXTENDS SUNSET DATE FOR MANDATORY OCEAN ROUTE; WILL BEGIN RULEMAKING

On June 23, the Federal Aviation Administration announced that it is extending for two years the expiration date of a regulation that requires helicopter pilots to fly over the ocean off the North Shore of Long Island, NY, in order to reduce helicopter noise impact on Long Island communities.

The two-year extension of the New York North Shore Helicopter Route will give the FAA time to conduct notice and comment rulemaking on whether to make the route permanent.

FAA said it expects to issue a Notice of Proposed Rulemaking on the permanent use of the North Shore route "in the immediate future."

FAA's *Federal Register* notice extends the expiration date of the current rule from Aug. 6, 2014, to Aug. 6, 2016.

In response to concerns from local residents regarding noise from helicopters operating over Long Island – and under strong pressure from Sen. Charles Schumer (D-NY) – the FAA on July 6, 2012, adopted the New York North Shore Helicopter Route final rule, which based on a voluntary Visual Flight Rule (VFR) route that was developed by the FAA working with the Eastern Region Helicopter Council.

(Continued on p. 84)

In This Issue...

Part 161 ... FAA deems LAWA's Part 161 application supporting imposition of a use restriction a LAX to be "complete," and is now seeking public comment on the application - p. 82

Helicopters ... FAA extends the sunset date of a rule imposing a mandatory helicopter route off the north shore of Long Island for two years so agency can determine if the rule should be made permanent - p. 82

Part 150 Program ... FAA announces its approval of a Noise Compatibility Program for Martin County Airport/Witham Field - p. 83

PANYNJ ... In a Request for Proposals, the Port Authority of NY/NJ seeks expert professional services for Part 150 studies that will be done for JFK, LaGuardia - p. 84

Conferences ... AAEA announces that registration has opened for the 14th Annual Airport Noise Mitigation Symposium - p. 85

Part 161, from p. 82

and issue a decision approving or disapproving the proposed restriction,” FAA explained in its *Federal Register* notice.

It noted that, pursuant to 14 CFR 161.317, FAA may approve or disapprove, in whole or in part, the proposed restriction or any alternative restriction submitted by LAWA.

FAA said it “will review and render a decision on the restriction as a whole, including its impacts on aircraft operations that are not classified as Stage 3, at the time it issues its decision to approve or disapprove the application for a Stage 3 aircraft noise and access restriction submitted under Subpart D of Part 161. This review will include a determination on how the restriction proposal addresses other applicable Federal law and LAX’s grant assurances.”

Six Statutory Conditions Must Be Met

The FAA’s evaluation will be conducted under the provisions of 14 CFR Part 161. FAA may approve the restriction only if it finds on the basis of substantial evidence that the following six statutory criteria are met. These six statutory conditions of approval are:

- Condition 1: The restriction is reasonable, nonarbitrary, and nondiscriminatory;
- Condition 2: The restriction does not create an undue burden or interstate or foreign commerce;
- Condition 3: The proposed restriction maintains safe and efficient use of the navigable airspace;
- Condition 4: The proposed restriction does not conflict with any existing Federal statute or regulation;
- Condition 5: The applicant has provided adequate opportunity for public comment on the proposed restriction; and
- Condition 6: The proposed restriction does not create an undue burden on the national aviation system.

FAA Seeks Public Comment

Interested persons are invited to submit comments to the FAA on LAWA’s Part 161 application. However, in its notice FAA provided no docket number to refer to in comments or address to send them to. ANR is seeking that information and will forward it when it becomes available.

For now, ANR suggests that those wishing to comment on the LAWA Part 61 application, contact James Byers in FAA’s Planning and Environmental Division at Washington, DC, headquarters; e-mail: jim.byers@faa.gov. He is listed in FAA’s notice as the person to contact for further information about it

LAWA’s application is available on their Web site at: [http://www.lawa.org/LAX Part161.aspx](http://www.lawa.org/LAX%20Part161.aspx).

FAA said that comments “should relate to the factors that Part 161 requires an airport sponsor to address in its application for restriction approval.”

The agency said that all relevant comments received within the public comment period will be considered by FAA to the extent practicable before FAA makes its final decision on the application.

Revised Application Accepted

On May 9, LAWA submitted to the FAA a revised Part 161 application for its runway use restriction at LAX, which supplemented parts of the original application FAA deemed to be incomplete last August.

If approved, the LAX ban on night departures to the east under certain conditions would be the first restriction on Stage 3 aircraft to be imposed since passage of the Airport Noise and Capacity Act of 1990 (ANCA).

LAWA submitted its original Part 161 application to FAA on Jan. 28, 2013.

LAWA’s Part 161 application proposes to restrict easterly departures of all aircraft at LAX, with certain limited exemptions, between midnight and 6:30 a.m. when the airport is in over-ocean and westerly operations during those hours. The restriction would not be in effect when LAX is in easterly operations, which occurs when winds reach 10 knots or greater from the east.

Pilots of heavily loaded aircraft occasionally request easterly departures when winds are slightly below the 10-knot threshold because the departure runway has a slight downward slope in the easterly direction and pilots want to take advantage of that and take off into the wind.

The proposed Part 161 restriction is intended to stop pilots of heavily loaded aircraft from making easterly departures over neighborhoods near LAX where they disturb sleep and provoke complaints.

In an Aug. 2, 2013, letter to LAWA, FAA said the Part 161 application remained incomplete as long as LAWA did not use CNEL contours to depict noise beyond the 65 dB CNEL contour; did not include CNEL values for census grid points beyond 65 dB CNEL; and did not provide additional flight track data and cost/benefit analysis (25 ANR 70).

LAWA’s revised Part 161 submission addressed these concerns. It deleted supplemental noise data about sleep awakenings in a large geographic area beyond the 65 CNEL contour – the boundary of the Airport Noise Study Area (ANSA) – that had been presented to FAA for consideration as a Noise Induced Awakening Change Contour, which FAA said could not be used in lieu of DNL (CNEL).

However, limiting the analysis to within the 65 CNEL study area reduced the number of awakenings to approximately 11 percent of those identified in the original application.

It remains to be seen how that diminution of impact will factor into FAA’s review of the Part 161 application.

Part 150 Program

FAA APPROVES NOISE MITIGATION PROGRAM FOR WITHAM FIELD

On June 26, the Federal Aviation Administration announced its approval of the Part 150 Airport Noise Compati-

bility Program submitted by Martin County, FL, for Martin County Airport/Witham Field in Stuart, FL.

The submitted Program contained 21 proposed actions for noise mitigation on and or off the airport. Of these 21 actions, the airport sponsor recommended 17 mitigations measures for FAA review and approval. Four measures were not recommended by the airport sponsor, FAA said in its notice.

Outright FAA approval was granted for four of the measures; approval on a voluntary basis was granted for six of the measures; approval-in-part was granted for six of the measures; a decision of disapproval was made for one measure, and No FAA Action was required for four of the measures because they were not recommended by the airport sponsor.

The FAA notice did not define the program measures. However, FAA said its Record of Approval for the program, which does define the program measures, will be available on-line at: http://www.faa.gov/airports_airtraffic/airports/environmental/airport_noise/part_150/states/.

For further information, contact Allan Nagy in FAA's Orlando Airports District Office; tel: (407) 812-6331.

ANR has asked Mr. Nagy to forward the Record of Approval of the Witham Part 150 Program but has not received it yet.

PANYNJ

RFP SEEKS FIRMS TO PROVIDE SERVICES FOR PART 150 STUDIES

The Port Authority of New York and New Jersey issued RFP #37887 seeking expert professional services for Part 150 Airport Noise Compatibility Studies to be conducted at JFK International Airport and LaGuardia Airport.

Firms have until July 15 to reply to the following the announcement:

The Port Authority of New York & New Jersey is seeking to identify firms interested in responding to a Request for Proposals (RFP) for the performance of expert professional services for FAR Part 150 Noise Capability Studies at JFK and LGA Airports.

RFP #37887 may be obtained online at <http://www.panynj.gov/business-opportunities/bid-proposal-advertisements.html?tabnum=6>. Addenda to the RFP(s), if any, will be posted at this site. Monitor the advertisement on the web site to ensure your awareness of any changes.

It is currently anticipated that proposals shall be due by 2:00 PM on July 15, 2014, or as otherwise indicated in the document.

If you have any technical problems accessing the documents online, email askforbids@panynj.gov or call us at (201) 395-3405. Your email should include the RFP number(s), your firm name, email address, contact person, mailing address, and phone number.

Helicopters, from p. 82

The rule requires civil helicopter pilots operating under VFR, whose route of flight takes them over the north shore of Long Island between certain waypoints, to use the North Shore Helicopter Route, as published in the New York Helicopter Chart. The rule permits pilots to deviate from the route and altitude requirements when necessary for safety, weather conditions, or transitioning to or from a destination or point of landing.

The FAA decided that the rule would sunset in two years if it was determined that there is no meaningful improvement in the effects of helicopter noise on quality of life or that the rule was otherwise unjustified. Specifically, the FAA stated, "Should there be such an improvement, the FAA may, after appropriate notice and opportunity for comment, decide to make the rule permanent. Likewise, should the FAA determine that reasonable modification could be made to the route to better address noise concerns (and any other relevant concerns), we may choose to modify the rule after notice and comment."

In its June 23 announcement FAA said that public input is critical to its determination regarding whether to make the rule permanent and additional time is needed to conduct the rulemaking process to gain that input.

NY Sen. Charles Schumer (D) and Rep. Tim Bishop (D) recently urged Secretary of Transportation Anthony Foxx and FAA Administrator Michael Huerta to renew the North Shore over-water helicopter route off Long Island and to make the rule permanent.

They also urged the FAA to expand its regulation mandating the route to require that helicopters follow a total water route and go past Orient Point and Shelter Island over water when landing at airports on the South Fork of Long Island.

As the route currently stands, there is an issue with the North Shore Route when helicopters cross over land on the North Fork in order to land at South Fork airports, Sen. Schumer said. He and Rep. Bishop urged the FAA to require helicopters to continue over water and go around Orient Point to address this concern.

The helicopter noise problem on Long Island is mainly caused by wealthy executives being ferried by helicopters from Manhattan to vacation homes during weekend shoulder hours in the summer. The North Shore Helicopter Route was designed to keep helicopters one mile off shore at a minimum altitude.

Sen. Schumer asserted in a May 27 release that the rule has been successful. "For the last two years, residents on Long Island have finally had some relief from the onerous helicopter noise that once interrupted dinners, disrupted people enjoying their backyards and had an effect on property values throughout Long Island.

"However, the over-the-water North Shore Route that provided that long-sought relief is about to expire in early August, and we are urging that the FAA not only extend that rule but also make it permanent, so that thousands of residents are

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not back to square one when it comes to the deafening drone of helicopters,” said Senator Schumer.

In 2013, the Helicopter Association International (HAI) challenged the authority of the FAA to issue the “North Shore Route” in the U.S. Court of Appeals for the D.C. Circuit.

“The federal court denied HAI’s petition for review and, therefore, the FAA has the authority and reasonable expectation to protect Long Islanders from low-flying helicopter noise,” Sen. Schumer said.

In Brief...

Airport Noise Mitigation Symposium Registration

The American Association of Airport Executives announced June 23 that registration is now open for the 14th Annual Airport Noise Mitigation Symposium, which will be held Oct. 5-7 in Fort Lauderdale, FL.

The symposium will be held at the Hyatt Regency Pier Sixty-Six hotel.; tel: (888) 421-1442.

Hotel reservations must be made by Sept. 12 in order to guarantee a special room rate of \$109 for a single/double marina/pool view or \$129 single/double for a tower room.

Those who should attend the conference include airport directors, noise mitigation officers, attorneys, operation managers, consultants, and property managers.

For conference registration information, contact Natalie Fleet at AAAE; e-mail Natalie.fleet@aaae.org.

For program information, contact Justin Towles; tel: (703) 824-0500; ext. 151; e-mail Justin.towles@aaae.org.

The meeting website is http://www.aaae.org/meetings/meetings_calendar/mtgdetails.cfm?Meeting_ID=141007

Chicago Group Seeking O’Hare Roundtable

The Fair Allocation in Runways (FAiR) coalition of communities seeking to mitigate noise from the major realignment of runways at O’Hare International Airport asked its members in a June 25 e-blast to demand that congressional hearings be held to make the public hearings process on airport projects “more open, transparent and democratic.”

Their demand follows two stories published in the *Chicago Sun Times* documenting incorrect information about projected runway use in the draft EIS and public hearings held in 2005 on the O’Hare Modernization Program (26 ANR 78).

FAiR also urged its members to demand that a roundtable “and movement toward a solution that includes affected citizens” be established.

AIRPORT NOISE REPORT

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

Volume 26, Number 22

July 18, 2014

Santa Monica Airport

NBAA, AOPA, OTHERS ASK FAA TO CLARIFY THAT GRANT AGREEMENTS EXPIRE IN 2023

On July 2, the National Business Aviation Association (NBAA) – joined by the Aircraft Owners and Pilots Association, the actor Harrison Ford, and seven airport tenants and pilots – filed a Part 16 complaint with the Federal Aviation Administration seeking to bar the City of Santa Monica from closing all or part of Santa Monica Airport in 2015, when the City contends its federal grant agreements expire.

The complaint asks FAA to clarify that the airport must continue to abide by its FAA grant assurances through August 2023 to ensure vital aviation services and facilities remain intact.

Under FAA's Part 16 process, a senior FAA official will hear the petition and consider evidence presented by airport proponents and the City of Santa Monica. The hearing officer will then issue a finding which can be appealed in federal court.

"The continuing attempts by the City of Santa Monica to close its community airport fly in the face of their legal obligations and disregard the importance of the airport as a general aviation gateway to Southern California," NBAA President and CEO Ed Bolen said in a statement announcing the Part 16 action.

(Continued on p. 87)

PBN

IG SAYS FAA MUST OVERCOME BARRIERS TO IMPLEMENTATION BEFORE AIRLINES EQUIP

Until the Federal Aviation Administration overcomes barriers to implementing performance-based navigation (PBN) procedures and streamlines how new RNAV/RNP flight procedures are developed, the aviation industry will likely remain hesitant to equip with new NextGen avionics.

That is the conclusion of a new Audit Report by the Inspector General of the U.S. Department of Transportation to the FAA.

The report was requested by the House Committee on Transportation and Infrastructure and its Aviation Subcommittee, which were concerned with FAA's progress in providing "high-value" PBN procedures (those that provide measurable benefits to airspace users such as shorter flight paths, improved on-time aircraft arrival rates, and greater fuels saving).

"FAA has deployed PBN procedures and has key projects underway, including adding new procedures at 13 major metropolitan areas, but preliminary data on high-value RNP procedures show that use is low, particularly at busy airports such as those in the New York City area," the Audit Report concluded.

At 14 major airports that have RNP procedures with curved runway ap-

(Continued on p. 88)

In This Issue...

Santa Monica ... NBAA, AOPA, and others file a Part 16 complaint with FAA seeking to bar the city from closing all or part of its airport next year - p. 86

NextGen ... DOT Inspector General tells Congress airlines will not equip with NextGen avionics until FAA overcomes barriers to implementing PBN - p. 86

... NASA transfers technology to FAA that allows ATC to maximize benefits of PBN procedures - p. 87

UAVs ... Park Service bans drones in national parks while UAV policy under development - p. 88

News Briefs ... FAA approves noise maps for Merrill Field near Anchorage ... FAA approves imposition of PFC at T.F. Green to fund noise mitigation program ... Honolulu Int'l gets state grant to fund update of NOMS... National Parks Overflight Advisory Group has openings - p. 89

Santa Monica, from p. 82

“On behalf of our Members, many of whom would be impacted if the airport closes, NBAA will continue to support all efforts to keep SMO open and accessible for those who rely on it.”

“The City has received significant federal funding for airport improvements over the years. As recently as 2003, Santa Monica accepted federal funding that obligates the city to keep the airport open and viable for another 20 years. Nonetheless, the city contends that these grant-based obligations ended in June 2014 and are extended only to July 2015 by another agreement with the FAA,” Bolen said.

The aviation trade groups are likely to prevail in their Part 16 complaint because the FAA has already told the City that its federal grant agreements for Santa Monica Airport extend until 2023.

In 1994, the City accepted a \$1.6 million Airport Improvement Program grant from the FAA. In 2003, the City requested an amendment to that grant to add an additional \$240,600 to it.

NBAA, AOPA, the others filing the Part 16 complaint – and FAA – assert that the 2003 amendment came with a new 20-year grant agreement, which does not expire until 2023. The City contends that the 2003 transaction was just “an accounting” on the 1994 grant and included no new grant assurances.

“Over the past 50 years, the city has repeatedly attempted to restrict operations at SMO; each time, NBAA has actively supported efforts to preserve access to the airport, and each prior case has been determined in favor of the federal government and airport users,” NBAA said.

Most recently, the Santa Monica City Council indicated that it may begin offering only short-term lease extensions to airport tenants, and it is considering prohibiting some aeronautical activities, such as fuel sales or flight training – all of which would violate its binding grant obligations, NBAA said.

That move by the City prompted a letter from NBAA Chief Operating Officer Steve Brown to the council, which stated: “These short terms are unjustified and do not appear to comply with the airport’s federal obligations. Generally, airport tenants are entitled to long-term leases at an airport – and in the case of KSMO, Airport Improvement Program grant assurances require it to be operated as an airport through 2023, and the terms of the 1948 Instrument of Transfer further require it to be operated as an airport in perpetuity.”

The Part 16 complaint goes on to state: “The complainants’ businesses and operations already have been, currently are, and will continue to be adversely affected by the city’s repeated public announcements of its intention to close or significantly restrict the airport and its operations after July 1, 2015, which effectively discourages investment in and commitment to the airport by current and prospective tenants and users. Formal confirmation of the city’s grant assurance

obligations is essential to prevent further, possibly fatal, erosion of the airport’s viability and availability for all users and the general public.”

In March, the Santa Monica City Council directed City staff to begin contingency planning for the possible closure of all or part of Santa Monica Airport after July 1, 2015 (26 ANR 38). Staff was directed to prepare preliminary conceptual plans for a smaller airport that excludes a 35-acre western parcel, effectively cutting in half the runway length of one of the busiest general aviation airports in the country.

In response to the City Council’s action, AOPA funded development of a ballot measure, currently under review by the City, that would change the City’s Charter to require voter approval “before any City decision becomes effective that changes the use of land currently used for the Santa Monica Municipal Airport and related aviation services to non-aviation purposes, or that closes or partially closes Santa Monica Municipal Airport.”

The City, however, is preparing its own ballot measure that would still require voter approval of airport redevelopment but would preserve the City’s power to bar or limit core functions of the airport, such as fuel sales and hangar leases.

NextGen

TECHNOLOGY ALLOWS ATC TO MAXIMIZE BENEFITS OF PBN

NextGen software technology that will allow air traffic controllers to maximize the benefits of Performance Based Navigation (PBN) procedures on the approach to the runway was transferred to the Federal Aviation Administration (FAA) from the National Aeronautics and Space Administration (NASA) on July 14 in an official ceremony at FAA headquarters.

Coupled with the precision of PBN, the technology – called Terminal Sequence and Spacing – provides predictability, allowing controllers to safely reduce excess spacing between approaching aircraft, saving time and fuel while reducing emissions.

The technology uses time-based metering to improve the safety and efficiency of Area Navigation (RNAV) and Required Navigation Performance (RNP) approach procedures in terminal airspace.

The airport-centric Terminal Sequence and Spacing technology dovetails with an existing traffic metering tool – called Time-Based Flow Management – that delivers efficiencies in the airspace beyond the airport,” FAA explained.

While Time-Based Flow Management “improves the flow of traffic through high altitude en route airspace down to the four corner posts navigational fixes in the sky approximately 40 miles from an airport,” FAA said that Terminal Sequence and Spacing “helps controllers manage aircraft from the four corner posts down to the runway.”

“With the new technology, controllers see circles – called

slot markers – on their display screens that indicate where an aircraft should be in order to fly a RNAV or RNP route through the forecasted wind field, meet all speed and altitude restrictions and land on time. This software enables the use of PBN procedures to become more routine, requiring less vectoring, fewer level-offs of aircraft and less communication between controllers and pilots,” FAA explained.

The FAA, which received an initial technology transfer of Terminal Sequence and Spacing from NASA last September, is expected to make a full investment decision by the end of the year through its Joint Resources Council, a team of top agency executives that reviews major acquisitions and approves funding.

UAVs

DRONES BANNED IN NATIONAL PARKS WHILE POLICY DEVELOPED

National Park Service Director Jonathan B. Jarvis signed a policy memorandum on June 20 that directs superintendents nationwide to prohibit launching, landing, or operating unmanned aircraft on lands and waters administered by the National Park Service.

“We embrace many activities in national parks because they enhance visitor experiences with the iconic natural, historic and cultural landscapes in our care,” Jarvis said. “However, we have serious concerns about the negative impact that flying unmanned aircraft is having in parks, so we are prohibiting their use until we can determine the most appropriate policy that will protect park resources and provide all visitors with a rich experience.”

Unmanned aircraft have already been prohibited at several national parks. These parks initiated bans after noise and nuisance complaints from park visitors, an incident in which park wildlife were harassed, and park visitor safety concerns.

Last September, an unmanned aircraft flew above evening visitors seated in the Mount Rushmore National Memorial Amphitheater. Park rangers concerned for visitors’ safety confiscated the unmanned aircraft.

In April, visitors at Grand Canyon National Park gathered for a quiet sunset, which was interrupted by a loud unmanned aircraft flying back and forth and eventually crashing in the canyon. Later in the month, volunteers at Zion National Park witnessed an unmanned aircraft disturb a herd of bighorn sheep, reportedly separating adults from young animals.

The policy memorandum directs park superintendents to take a number of steps to exclude unmanned aircraft from national parks. The steps include drafting a written justification for the action, ensuring compliance with applicable laws, and providing public notice of the action.

The memorandum does not affect the primary jurisdiction of the Federal Aviation Administration over the National Airspace System.

The policy memorandum is a temporary measure. Jarvis

said the next step will be to propose a Servicewide regulation regarding unmanned aircraft. That process can take considerable time, depending on the complexity of the rule, and includes public notice of the proposed regulation and opportunity for public comment.

The policy memo directs superintendents to use their existing authority within the Code of Federal Regulations to prohibit the use of unmanned aircraft, and to include that prohibition in the park’s compendium, a set of park-specific regulations.

All permits previously issued for unmanned aircraft will be suspended until reviewed and approved by the associate director of the National Park Service’s Visitor and Resource Protection directorate. The associate director must approve any new special use permits authorizing the use of unmanned aircraft. Superintendents who have previously authorized the use of model aircraft for hobbyist or recreational use may allow such use to continue.

The National Park Service may use unmanned aircraft for administrative purposes such as search and rescue, fire operations and scientific study. These uses must also be approved by the associate director for Visitor and Resource Protection.

PBN, from p. 86

proaches, only about 2 percent of eligible flights use these procedures, the report stated.

“Several obstacles hinder FAA’s efforts to increase implementation and use of PBN procedures, including outdated controller policies and PBN procedures, a lengthy flight procedure development process, the lack of standard training for pilots and controllers, and the lack of automated controller tools to manage and sequence aircraft with differing equipment and capabilities,” the report said. It continued:

“FAA has not overcome these obstacles or quantified user benefits of new procedures. As a result, airspace users will likely remain reluctant to equip with the avionics needed to advance new procedures.

“Although NAV Lean was launched four years ago, it has not met stakeholder demand for improved flight procedure development processes. FAA has completed nine of the 21 NAV Lean recommendations to streamline the flight procedure development process and is making progress on the remaining ones. However, the Agency does not expect to implement all 21 recommendations until September 2015, which is longer than desired by stakeholders.

“In addition, the completed Nav Lean initiatives are those that are less complex and costly, such as issuing interim guidance for environmental reviews. FAA had yet to define requirements or develop schedules for 11 of its most costly and complex improvements, such as creating and providing users access to a single set of databases for procedure development. Ultimately, industry will not get the full benefits of NAV Lean – to decrease the time it takes to implement new procedures by more than 40 percent – until all 21 recommendations are implemented,” DOT’s Inspector General told Congress.

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In response to a September 2009 Federal Government-industry task force report, FAA conducted a study of its internal processes for developing and implementing flight procedures. The study, known as the NAV Lean Project, was published in September 2010.

The Audit Report can be downloaded at
<http://www.oig.dot.gov/sites/dot/files/FAA%20PBN%20Flight%20Procedures%20Audit%20Report%5E06-17-14.pdf>

In Brief...

Merrill Field Noise Maps Approved

On June 10, the Federal Aviation Administration announced that noise exposure maps submitted by the Municipality of Anchorage, Alaska, for Merrill Field Airport are in compliance with federal requirements.

For further information, contact Michael Edelmann in FAA's Anchorage office; tel: (907) 271-5026; email: mike.edelmann@faa.gov.

FAA Approves PFC for TF Green

On July 8, FAA announced its approval of the Rhode Island Airport Corporation's application to impose and use of a \$4.50 Passenger Facility Charge at T.F. Green Airport from August 1, 2018, to July 1, 2028, to collect an estimated PFC revenue of \$78.3 million to fund several projects including a runway extension and noise mitigation program.

For further information, contact Priscilla Scott in FAA's New England Region Airports Division; tel: (781) 238-7614.

Honolulu Int'l to Upgrade NOMS

Honolulu International Airport received a \$123,000 state grant on June 27 to fund an upgrade of the airport's noise monitoring system. "The existing system is unreliable and not digitally compatible," Hawaii Governor Neil Abercrombie explained in his announcement of more than \$22.6 million in state grants to 12 airports.

National Parks Overflight Advisory Group

On June 9, the FAA invited interested persons to apply for two openings on the National Parks Overflights Advisory Group's Aviation Rule-making Committee. Both open seats are for those representing environmental concerns.

For further information, contact Keith Lusk on the Special Programs Staff in FAA's Western-Pacific Region Headquarters in Los Angeles: tel: (310) 725-3808; email: Keith.Lusk@faa.gov.

AIRPORT NOISE REPORT

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

Volume 26, Number 23

July 25, 2014

Chicago O'Hare Int'l

MAYOR AGREES TO INSTALL EIGHT MORE NOISE MONITORS IN AREAS HIT BY NOISE

Under strong political pressure to take action to address the noise problem caused by a major realignment of runways at Chicago O'Hare International Airport and the opening of a new runway, Chicago Mayor Rahm Emanuel announced July 22 that eight additional permanent noise monitors would be installed in communities newly impacted by aircraft noise.

The Mayor directed the Chicago Department of Aviation (CDA) to work with the O'Hare Noise Compatibility Commission (ONCC) to acquire and install eight additional permanent airport noise monitors in City neighborhoods and suburban communities near O'Hare.

Currently, the airport has 33 permanent noise monitors, only two of which are located in the City of Chicago.

But Emanuel made clear that the O'Hare Modernization Program (OMP) will move forward, saying it was "necessary" and would add 195,000 jobs and contribute \$18 billion to the region's economy.

The mayor did not respond to demands by local politicians and noise-weary
(Continued on p. 91)

Noise Monitoring

TRUCKEE-TAHOE SELECTS NEW VNOMS SYSTEM THAT IDENTIFIES GA AIRCRAFT

Truckee-Tahoe is the third airport this year to select the new "VNOMS" noise and operations management system, which allows airports to track and identify general aviation aircraft not identifiable by other NOMS systems.

"After an extensive search and competitive procurement process, we are excited to have chosen Vector Airport Systems as our vendor for the Airports' new NOMS solution," said Hardy Bullock, Director of Aviation and Community Services at Truckee-Tahoe Airport.

He said VNOMS "will allow the airport to eliminate many of the current data silos and replace them with a truly integrated solution. VNOMS will make it easier for our staff to address situations and improve the accuracy of operations reporting, doing so more efficiently and at a lower operating cost than ever before."

Portland (ME) International Jetport and Francis S. Gabreski Airport in Westhampton Beach, NY, also recently acquired the VNOMS system, which is the product of a partnership between two firms based in Herndon, VA:

- Vector Airport Solutions, the leading provider of automated aircraft identification, landing fee billing, and collection services; and

(Continued on p. 92)

In This Issue...

O'Hare Int'l ... Chicago Mayor Rahm Emanuel agrees to install eight more permanent noise monitors in communities in city, suburbs newly-hit by aircraft noise from major runway realignment, new runway - p. 90

Noise Monitoring ... Truckee-Tahoe is third airport to acquire new lower cost VNOMS system, which identifies GA aircraft not captured by other NOMS; fuses flight track data with data from camera-based aircraft ID system - p. 90

NextGen ... NASA transfers technology to FAA that will allow air traffic controllers to maximize benefits to PBN procedures by safely reducing excess aircraft spacing on approach - p. 91

Heathrow ... Airbus, BA, NATS, Heathrow Airport launch unique initiative in UK to study and develop operational procedures to reduce number of people around Heathrow affected by aircraft noise - p. 92

O'Hare, from p. 90

residents that a new environmental assessment be prepared for the OMP and new public hearings be held on it, that aircraft operations be more evenly spread to all O'Hare runways, and that the airport's nighttime fly quiet program be expanded.

"As the O'Hare Modernization Program moves forward, some of our residents in Chicago and the surrounding communities are affected by changes in flight patterns, and we need to better understand the impact on them," said Mayor Emanuel. "These additional monitors will help us gather and process the data we need to do that."

He charged the CDA to work with the ONCC, Chicago Alderman Michael Zalewski, Chairman of the City Council Committee on Aviation, and Aldermen Mary O'Connor, Pat O'Connor, and Margaret Laurino (who represent city communities newly hit by aircraft noise) to identify new noise monitor locations on existing and future flight paths near O'Hare, and then get those monitors installed as soon as possible.

"These monitors will enable us to ensure that noise levels are within the proper limits to protect our residents," said Alderman Margaret Laurino. "They are another effort by the city to curtail excessive sound disturbances caused by air traffic flight patterns."

Alderman O'Connor said the monitors would provide accurate records of the noise caused by the planes. "It's one step closer to us trying to find a way to improve the quality of life for everyone on the Northwest Side," he said.

The plan for more noise monitors also was applauded by Jac Charlier, one of the leaders of the growing Fair Allocation in Runways Coalition (FAiR), which has been urging the mayor to take action to address the noise impact caused by the runway realignment at O'Hare and opening of a new parallel east-west runway in October 2013.

A demand for more noise monitors is one of the coalition's priorities.

Charlier credited the political pressure generated by the his growing FAiR coalition for the mayor's action.

"We're not stopping," Charlier told the Chicago press. He said FAiR members want to sit down with local and federal aviation officials to discuss a long-term solution to the noise caused by aircraft operations at O'Hare.

Meanwhile, U.S. Rep. Mike Quigley (D-IL) and others are still calling for the Federal Aviation Administration to conduct new public hearings on the impact of O'Hare noise on urban and suburban neighborhoods, asserting that the environmental studies done a decade ago did not make it clear that the new O'Hare runway would send hundreds of flights over homes in northwest Chicago.

Quigley said he would continue to push to extend the hours of O'Hare's "fly quiet" program and to allow more homes to qualify for subsidized soundproofing.

"While I'm glad the city is taking this important step, there's plenty more that can be done," Quigley said in a blog post.

But some suburban officials did not see the benefit of adding more noise monitors around O'Hare.

"Adding monitors, which provide information used to make funding decisions about soundproofing, doesn't do enough for hard-hit neighborhoods where noise is 'unbearable'," Bensenville Village President Frank Soto told the *Chicago Daily Herald*.

"There is not a level of soundproofing that can compensate these people," said. "This problem is not going away."

NextGen**TECH TRANSFER ALLOWS ATC TO MAXIMIZE BENEFITS OF PBN**

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The FAA, which received an initial technology transfer of Terminal Sequence and Spacing from NASA last September, is expected to make a full investment decision by the end of the year through its Joint Resources Council, a team of top agency executives that reviews major acquisitions and approves funding.

*Heathrow***INDUSTRY INITIATIVE TO STUDY NOISE REDUCTION PROCEDURES**

Airbus, British Airways (BA), Heathrow Airport and the UK's air navigation services provider NATS launched a unique partnership on July 16 to study and develop operational procedures to reduce the number of people affected by noise around London's Heathrow Airport.

The announcement comes as Heathrow vies with Gatwick Airport to be selected as the site of a new runway to increase airport capacity in the London area. The commission established by the UK Government to decide where to add the runway is concerned about noise impact.

The new Heathrow project utilizes the capabilities of the A380, the quietest aircraft of its size, and will look at how the aircraft manufacturer, airline, airport and air navigation services provider can further reduce the noise impact of flight operations for local communities.

Airbus ProSky – the Air Traffic Management subsidiary of Airbus – is in charge of designing the departure and arrival procedures based on NATS, Heathrow, and BA recommendations.

The four cross-industry partners announced a three-stage 'Quieter Flight' project.

The first stage identifies the operational improvements that are possible. These include for departures, for example, reducing thrust and optimizing the height at which the aircraft is flown. Changes to these departure procedures have the potential to significantly reduce noise levels.

The second stage will see the testing and training of procedures in a British Airways flight simulator.

Once all the project stages are complete, the partners expect to bring all the operational improvements together into a series of demonstration flights with the A380, starting from early next year. These procedures will then be made available to other operators and airports around the world.

Airbus' executive Vice President, Customer affairs, Christopher Buckley said: "The A380 is the ideal aircraft to conduct the "Quieter flights" because it has the latest state of the art technologies that allow optimized paths to be flown very precisely. The A380 is able to further reduce the noise of what is already the quietest aircraft of its type. Together with Airbus ProSky, we are honored to be a key player in this unique industry project that addresses a real issue worldwide."

Heathrow's Sustainability Director Matt Gorman added, "We are really pleased to be working closely with industry partners on this project. Heathrow is at the forefront of international efforts to tackle aircraft noise and collaborations such as this form part of our long term commitment to do this whilst also safeguarding the connectivity and growth that Heathrow provides."

Ian Jopson, NATS Head of Environmental and Community Affairs, commented: "Air traffic management has a vital

role to play in tackling the impact of aircraft noise and NATS has an excellent track record of working with the rest of the industry and community groups on this important issue. The Quieter Flight partnership, brings together the expertise of the whole industry, and when combined with the wide range of other initiatives we are working on, will help make a difference to those people living under the flightpath."

VNOMS, from p. 90

- INDMEX Aviation, an engineering and software development firm established by air traffic surveillance, information technology, and engineering experts.

The firms said their strategic partnership allowed them to leverage their respective subject matter expertise in the NOMS market and launch their VNOMS web-based NOMS application.

VNOMS, they explained, "is based on the complete operations data set that results from the fusion of flight track data with data from Vector's Automated Aircraft Identification system.

"Unlike other products in the market that rely solely on flight track data, Vector has spent years researching and developing technologies that independently detect aircraft operations, capture the aircraft's registration number, and automatically fuse this data to the flight track and Vector's own operator database, giving the VNOMS user the complete data needed to respond to complaints, interact with pilots, and produce comprehensive reports.

"This is especially critical at airports with significant general aviation traffic - where typically up to 60 percent of the tracked aircraft are not identifiable by the industry's other existing NOMS products," the firms said.

Added Pete Coleton, president of Vector, "As the leading supplier of aircraft identification and landing fee management systems, we saw the NOMS market as a logical extension of our existing product line – one that was being underserved by the offerings from other vendors. Our new VNOMS system, developed in cooperation with INDMEX, allows us to offer the industry the first fully-integrated common operational NOMS application with greater aircraft identification capabilities at a price point significantly lower than existing offerings."

Filling a Niche in the NOMS Market

Tom Breen, Vector's vice president for Sales and Product Strategy, told ANR that VNOMS is not trying to compete with Exelis or B&K in the NOMS market.

Rather, VNOMS is trying to fill a niche in the market for general aviation and smaller airports "that are not interested in all the bells and whistles of larger, more expensive NOMS systems or can't keep up with the increasing cost of a larger NOMS system but need to identify GA aircraft to bill them, send them letters regarding noise violations, monitor compliance with voluntary noise restrictions, or otherwise identify them," he said.

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Vector has more than 30,000 unique GA registration numbers and operators in its growing data base, Breen said, and for half of those operators it also has verified e-mails and telephone numbers in addition to their street addresses.

Breen said that other GA airports are considering VNOMS because it can identify aircraft not conforming to training flight patterns, bill operators for exceeding specified noise levels, and identify aircraft exceeding voluntary curfews or doing touch-and-go operations. The VNOMS camera-based aircraft identification system operates on solar power and can capture aircraft identification numbers day and night.

Can Be Added to Larger NOMS Systems

The VNOMS software can be used alone or added to a larger, existing NOMS system. In that regard, it could be of interest to noise offices at larger airports by allowing them to identify GA aircraft that use the FAA's Blocked Aircraft Registration (BARR) Program to block their flight tracks from public-access flight tracking displays.

In 2012, the general aviation community rallied enough support on Capitol Hill to force the FAA to rescind a policy that made it much more difficult for GA operators to block their flight tracks (24 ANR 5).

FAA's policy rescision disappointed several airport noise officers, including Dan Frazee, who at the time was director of Airport Noise Mitigation at San Diego International Airport but is now retired.

ANR asked Frazee whether he thought VNOMS could be of use to larger airport noise offices.

He responded, "From the information you provided, I think this product would benefit airports operating without a 'conventional' NOMS. Practically speaking, though, from a large airport perspective, such as SAN, whose general aviation traffic is about 3% of volume, this camera-based aircraft identification system would be an expensive add-on with limited payback."

Larger airports with a greater percentage of GA aircraft, however, may be interested in VNOMS.

In Brief...

The Airport Cooperative Research Program (ACRP) is seeking potential legal research topics for the Fiscal Year 2015 ACRP Legal Research Program and the FY 2015 Synthesis Program.

The closing date for submitting legal research topics is Sept. 5, The closing date for submitting Synthesis Program topics is Sept. 12.

For further information and submission forms, look under "Announcements" at <http://www.trb.org/ACRP/ACRP.aspx>.

AIRPORT NOISE REPORT

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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Heathrow Airport

HEATHROW ASKS NEIGHBORS HOW TO SPEND \$922.7 MILLION NOISE COMPENSATION OFFER

On July 24, Heathrow Airport launched a twelve week consultation with local residents and businesses, asking for their views on how the airport should structure a proposed \$922.7 million community noise impact compensation package in the event Heathrow is selected next year by a Government-appointed panel as the site for a new runway in the London area.

Heathrow is in competition for the new runway with Gatwick Airport and the Mayor of London's proposed new greenfield airport in the Thames Estuary to the east of London.

As part of its updated submission to the Airports Commission, which is concerned about the noise impact of a new runway, Heathrow committed in May to a £550m (\$922.7 million) fund for new noise and property compensation schemes if a third runway at Heathrow gets the go-ahead (26 ANR 62). The consultation will seek views on how that compensation fund should be used.

The twelve-week consultation runs from July 21 to Oct. 12 and will be supported by a series of public exhibition events across the local area. Some 180,000
(Continued on p. 95)

Ground Noise

NOISE MITIGATION TRANSFORMED INTO ART IN BROMMA, SCHIPHOL AIRPORT PROJECTS

Stockholm Bromma Airport and Schiphol Amsterdam Airport are leading the way in showing the world that creative thinking can produce unique airport ground noise barrier designs that are visually captivating, preserve green spaces, please both airport neighbors and airport visitors – and are effective in reducing noise.

The projects are examples of noise mitigation that transcends the utilitarian and enters the realm of art; enhancing and preserving views of rolling forested hills near Bromma and flat green bottomland near Schiphol.

Bromma's 'SkyWall' – a stunning transparent, almost 2,000 foot-long deformed glass wall buttressed by stripped and pruned native tree trunks – was the recently announced winner of an international contest by the Swedish state airport operator Swedavia to find a creative way to reduce ground noise in the residential area of Bromma Kyrka near Bromma Stockholm Airport.

Schiphol's Buitenschot Land Art Park is a series of parallel, grass-covered rows of 5-foot high sculpted ridges and equally deep furrows forming a geometric pattern that spreads over 81 acres between the airport and nearby community. The

(Continued on p. 96)

In This Issue...

Heathrow ... Airport asks nearby residents, businesses how it should shape a proposed \$992.7 million noise mitigation package if Heathrow is selected as site for new UK runway.

CAA study shows that fewer people would be affected by Heathrow noise if third runway added - p. 94

Ground Noise ... Creative, visually captivating projects at Stockholm Bromma, Amsterdam Schiphol airports are making art out of noise mitigation; preserving community view of green spaces while cutting noise - p. 94

Noise Monitoring ... UK's Manchester Airports Group selects B&K's new ANOMS 9 system, which allows one NOMS to monitor, report on noise at four of Manchester Group's airports - p. 95

NASA ... Agency administrator talks green aviation with a global airlines audience at recent Boeing eco-Summit - p. 96

Heathrow, from p. 94

households and businesses will be contacted with details on how to take part.

“We believe our proposal to expand Heathrow is the right way to deliver the capacity Britain needs to connect to fast growing economies around the world,” said Heathrow Chief Executive John Holland-Kaye.

“This must go hand in hand with treating those most affected by a third runway fairly. This consultation provides local people with an opportunity to let us know their views to develop the right compensation scheme.”

The consultation is a continuation of Heathrow’s engagement with the local community throughout the Airports Commission process and follows on from a public consultation earlier in the year around improving the proposal for a new runway to the northwest of the airport.

The results of the consultation will be shared with the Commission for its independent review.

Study Shows Reduced Noise Impact

In related news, on July 14 Heathrow published an independent UK Civil Aviation Authority (CAA) analysis on the number of people that would be affected by aircraft noise with a third runway added at Heathrow.

The study found that between 34,450 and 49,550 fewer people could be affected by aircraft noise with a third runway in 2040 than today, based on the Government’s 57dB LAeq threshold of significant noise impact.

The noise reductions would be delivered by a combination of a new runway location, steeper landing approaches, and new aircraft technology.

The CAA data form part of a series of technical annexes that Heathrow submitted to the Airports Commission.

Heathrow’s submission provides speculative flight path maps, which airport officials said confirm that a reduction in noise and periods of noise respite for local communities are achievable with a third runway.

However, Heathrow officials said the flight paths shown in the technical document “are illustrative only and do not represent the final flight paths that would be used if a third runway was given the go ahead by Government.”

The final flight paths would be subject to more detailed working with NATS, the UK’s air navigation services provider, and comprehensive consultation with local communities, Heathrow said.

The flight paths drawn by Heathrow were developed to test Heathrow’s noise reduction assumptions and to prove that it would be possible to operate all runways while maintaining the runway alternation that delivers noise respite for local communities.

The flight paths show that by 2040 there will be at least 15 percent fewer people exposed to 57 dB LAeq compared with today.

Heathrow is not proposing any extra night flights and said its third runway plans could reduce the number of night

flights on existing flight paths. Residents under existing flight paths could have night flights only every third week rather than every other week today.

The speculative flight paths detailed in the document show that Heathrow would be able to provide periods of respite from noise for all local communities with a third runway.

The public consultation that Heathrow held at the start of 2014 showed a strong preference from local communities for runway alternation and noise respite to be maintained. Heathrow officials said this contrasts with Gatwick Airport’s rival proposal “which would see both its runways operating in ‘mixed mode’, offering no respite from noise for communities under their flight paths.”

“The CAA’s modeling shows that Heathrow can reduce aircraft noise while delivering the long-haul flights that Britain needs to prosper in a global economy,” Heathrow’s Sustainability Director Matt Gorman said.

Noise Monitoring

ANOMS 9 WILL MONITOR FOUR UK AIRPORTS WITH SINGLE SYSTEM

One of the United Kingdom’s largest airport operators, Manchester Airports Group Plc (M.A.G.), has expanded its noise management capabilities with a new Airport Noise and Operations Monitoring System (ANOMS 9) from Bruel & Kjaer.

ANOMS 9 enables M.A.G. to monitor and report on noise and operations at multiple airports, including London Stansted, Bournemouth, East Midlands and Manchester, with a single system. The four airports serve around 43 million passengers every year and are an important part of the local economy.

The airports also will receive WebTrak and WebTrak MyNeighbourhood; part of a suite of web-based applications that assist airports in building good community relationships. WebTrak enables local residents to self-investigate recent noise and flight tracks, while WebTrak MyNeighbourhood illustrates typical operating scenarios. The WebTrak sites enables users to find answers to frequently asked questions, such as: “How loud and low was that plane” or “How many flights pass over my house in a single day.”

Additional noise monitoring terminals (NMTs) will be deployed at Stansted, Manchester, East Midlands and Bournemouth. NMTs continuously monitor the environment for noise events, which are defined as noise that remains above a certain level for a prescribed period of time. These noise events are correlated with flight information and enable the airport to demonstrate compliance with regulations, respond to community enquiries, address noise issues with airlines, adjust operating procedures to limit noise impact and carry out measurements to improve their noise maps.

“Through a recent tender process we examined new offer-

ings from Bruel & Kjaer and other companies, before finally deciding that Bruel & Kjaer's ANOMS 9 solution and new Type 3639 NMTs met all our needs," said Dr. Tim Walmsley, Environment Manager at Manchester Airport.

"We are extremely pleased to continue our 20 year association with M.A.G.," said Kent Espersen, European Sales Operations Manager for Bruel & Kjaer. "We're also thrilled to be able to offer M.A.G. our brand new ANOMS 9 platform and state-of-the-art noise monitoring terminals at the start of this new era."

NASA

NASA ADMINISTRATOR TALKS GREEN AVIATION WITH GLOBAL AIRLINE AUDIENCE

[Following is a recent News Feature by Karen Rugg, NASA Aeronautics Research Mission Directorate.]

NASA Administrator Charles Bolden had a rare opportunity to address the representatives responsible for environmental compliance at U.S. and international airlines during a recent industry event in Seattle.

Organized by The Boeing Company, ecoSummit was a two-day event that provided industry participants with a chance to talk peer-to-peer about how they make airline operations more environmentally sustainable for the long term.

Bolden kicked off the first day of the summit with a keynote address highlighting what NASA has already done to reduce aviation's environmental impact and which technologies are on the horizon that could benefit airlines.

"Greening aviation is one of our top goals at NASA. It's at the forefront of a lot of our cutting edge work to open the aviation frontiers of tomorrow, and it's very important to us," Bolden said.

"Our vision is to deliver technical solutions for the challenges facing the existing global air transportation system, and our foundation is built on understanding emerging global trends."

Research leaders from NASA's Aeronautics Research Mission Directorate (ARMD) participated in break-out sessions on issues airlines care about: biofuels, operational efficiency, and airplane technologies that reduce fuel use, emissions and noise.

"Boeing and NASA are strong partners in advancing technology that will improve commercial aviation's environmental performance, including collaboration to test new technologies on Boeing's ecoDemonstrator Flight Test Airplanes," said John Tracy, Chief Technology Officer and Senior Vice President of Engineering, Operations & Technology at Boeing. "NASA plays a critical role in civil aviation as well as space exploration."

EcoDemonstrator Flights Planned

A centerpiece of the event was Boeing's ecoDemonstrator development and flight test program. Aircraft in this program are specially outfitted with experimental technologies designed for use on future airliners and currently being tested by Boeing or its partners such as NASA or the Federal Aviation Administration.

NASA will fly three experimental technologies on ecoDemonstrator aircraft beginning this fall and running into next year to demonstrate their capabilities.

"Flight test programs like ecoDemonstrator provide us with resources we can't afford on our own, such as access to current generation large transport aircraft, to test technologies that we and industry know can make a difference in air travel," said Dr. Jaiwon Shin, ARMD associate administrator.

"In the past, partnerships like this have resulted in technologies with very real benefits, such as the chevron nozzles that are now on some jet engines to dramatically reduce noise inside and outside the aircraft cabin."

This year, the Boeing ecoDemonstrator 787 will be flown to test a NASA-developed air traffic management tool designed to help pilots maintain safe spacing with aircraft in front of them during its approach to an airport.

In 2015, the Boeing ecoDemonstrator 757 will be equipped with two NASA technology demonstrations.

The first uses active flow control on the aircraft's tail to determine if future tail designs can be altered to reduce drag.

The second will test the effectiveness of coatings applied to a section of one wing's leading edge to see how well they reduce residue buildup from insect impacts during flight. As small as the issue of bug residue might seem, any disruption in the smooth flow of air over the surface of a wing increases drag. Ground tests have already demonstrated that the coating reduces drag and improves fuel efficiency.

Ground Noise, from p. 94

rows were strategically placed in segments at right angles to the direction of aircraft noise to deflect and absorb it.

SkyWall

SkyWall was designed by Albin Rousseau, Gabriel de Boisriou, and Albert Hasssan at Red-Architectes in Paris.

The wall is 600 meters (1,968.5 feet) long and made of glass panels that range in height from 3-9 meters (9.8-29.5 feet). The wall is separated into three segments, which are distorted (leaning at various angles) to have a more dynamic visual effect and break the monotony of a straight wall.

The community's view of the airport and wooded landscape is not blocked by the wall but much of the airport noise is. The wall is expected to reduce ground noise from the airport by around 12 dB.

In their final report on SkyWall, Rousseau and his colleagues proposed that a grassy promenade be added behind the wall on the community side for use by runners, walkers,

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picnickers, and airplane watchers. They also said SkyWall, which will be oriented to the southwest, presented an opportunity for a photovoltaic installation.

Swedavia called the SkyWall design “modern, innovative, and timeless,” adding “the solution is well integrated in the airport landscape and can be appreciated both from ground and air. The design highlights Bromma Stockholm Airport in a positive manner and, at the same time, it solves the task to reduce the noise levels.”

Swedavia said its Airport Innovation Challenge attracted close to 1,000 participants from 87 countries and almost 100 original solutions were submitted.

The jury for Swedavia’s contest was comprised of representatives from the local residential area and experts in the fields of acoustics, architecture, and construction.

This fall, Swedavia begins the process of adapting the SkyWall design to local conditions.

For more on SkyWall, including a rendering of what it would look like, go to <http://www.mynewsdesk.com/swedavia/pressreleases/skywall-is-the-winner-of-swedavia-airport-innovation-challenge-1010270>

Schiphol Project

The Schiphol project was based on an old observation by farmers that plowed fields become quiet spaces. That was the basis for the Buitenschot Land Art Park, which was created by the Dutch firm H+N+S Landscape Architects and designed to abate noise from Schiphol’s longest runway.

The park, completed last fall at a cost of \$4 million, is the joint project of Schiphol Airport, the Municipality of Haarlemmermeer, the City of Hoofddorp, and Stichting Mainport en Groen, a foundation that manages much of the land around the airport and promotes the development of recreational facilities. The park includes walking paths and artwork.

The group asked the Dutch research institute TNO Delft to prepare a preliminary study of the potential of plowed fields to mitigate airport ground noise. The study showed that the small man-made hills and furrows on the 81 acre project area could reduce noise by 2-3 dB.

In order to reach the 10 dB noise reduction Schiphol committed to in an agreement with the City of Hoofddorp, the project area will have to be expanded to cover 148 acres.

On July 28, the *Chicago Tribune* ran a story on the Schiphol park, asking whether something similar could work around O’Hare International Airport. Federal Aviation Administration officials told the paper they had not yet analyzed whether the hill and furrow noise mitigation strategy used at Schiphol would be a viable means to mitigate aircraft noise.

An interesting story on the Schiphol project is at <http://www.landscapethejournal.org/Ridge-and-furrow>

AIRPORT NOISE REPORT

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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Research

COMMERCIAL SPACEPORT NOISE, SONIC BOOM TO BE MODELED IN FY 2015 ACRP PROGRAM

On July 30, the Transportation Research Board announced the Fiscal Year 2015 Airport Cooperative Research Program. It includes 20 projects, only one of which deals directly with airport noise impact but three others will be of interest to airport noise mitigation practitioners.

Project 02-66, "Commercial Spaceport Noise and Sonic Boom," will be funded at a level of \$600,000.

The goal of the project is to develop a set of noise and sonic boom modeling methods suitable for environmental analysis of commercial space operations at airport/spaceport facilities. The methods "must represent best current practice, be compatible with the Aviation Environmental Design Tool (AEDT), and be in a form that can be made readily available to airport industry practitioners," TRB stressed in the project statement.

"Commercial space flight activity is expected to increase substantially in the next few years. Many of those operations, particularly 'space tourist' flights, will

(Continued on p. 99)

CLEEN

FAA DOCUMENTS PROGRESS BEING MADE BY INDUSTRY PARTNERS IN CLEEN PROGRAM

[On Aug. 2, FAA issued the following fact sheet on the status of its Continuous Lower Energy, Emissions and Noise (CLEEN) Program.]

The Federal Aviation Administration (FAA) is committed to enhancing aviation's capacity and efficiency through the implementation of the Next Generation Air Transportation System (NextGen).

The Continuous Lower Energy, Emissions and Noise (CLEEN) program is the FAA's principal NextGen environmental effort to accelerate the development of new aircraft and engine technologies and advance sustainable alternative jet fuels. The CLEEN Program is a key element of the NextGen strategy to achieve environmental protection that allows for sustained aviation growth.

The FAA has selected partner companies to participate in CLEEN through a cost-sharing program. These companies are working to develop technologies that will reduce noise, emissions, and fuel burn and enable the aviation industry to expedite integration of these technologies into current and future aircraft from 2015

(Continued on p. 100)

In This Issue...

ACRP ... TRB announces the 2015 research program for ACRP. It includes four noise-related projects that will:

... Develop a method to model commercial spaceport noise and sonic boom;

... Improve intelligibility of airport terminal PA systems;

... Use GIS for local government airport land use compatibility planning;

... Aid understanding of FAA grant obligations - p. 98

CLEEN Program ... FAA issues status report showing progress being made by industry partners Boeing, GE, Honeywell, P&W, and Rolls-Royce on reaching the goals of its Continuous Lower Energy, Emissions and Noise (CLEEN) Program - p. 98

Awards ... Ben Sharp, who recently retired from a long career at Wyle Labs, is named the winner of the 2014 Randy Jones Award in honor of his lifelong contributions to the sound insulation industry - p. 99

AEDT, from p. 98

be from dual use airport-spaceport facilities. Noise and sonic booms will be generated as part of those operations and will require prediction as part of NEPA and FAR Part 150 studies,” the project statement explained.

“While the prediction of noise from aircraft operations is well-specified by the use of FAA’s Integrated Noise Model (INM), transitioning to the AEDT, there is currently no standard tool for spacecraft noise and sonic boom modeling.

“Although some spacecraft activities can be modeled by INM/AEDT, many aspects cannot (e.g., noise from vertical launches, sonic booms). The result is that often proprietary programs, each having unique modeling methods and limited availability, must be used.

“There is therefore a need to develop a model (or suite of models) for commercial space noise and sonic boom analysis that is compatible with AEDT to allow for potential acceptance as the industry standard. The noise and sonic boom models should be consistent with each other, using the same vehicle and trajectory data inputs, much as AEDT uses common databases for noise and air quality analysis.”

PA System Intelligibility

Project 07-14, “Acoustical Design to Improve Intelligibility of Airport Terminal PA Systems,” will be funded at a level of \$350,000.

The goal of the project is to summarize the existing acoustic design guidelines commonly used when airport terminals are constructed, identify their shortcomings, and identify ways to improve the acoustical design guidelines used in airport terminals.

Using GIS for Land Use Compatibility

Project 03-37, “Using GIS for Local Government Management of Airspace Obstructions and Airport Land Use Compatibility,” which will be funded at a level of \$350,000.

The objective of this research is to develop guidance and best practices for using GIS for airspace obstruction and airport land use compatibility evaluation and planning at the local government level, particularly in support of aviation-related zoning ordinances and easements.

Special emphasis would be placed on jurisdictions around smaller airports without their own GIS capabilities, and using GIS to help protect public investments in those airports.

Understanding Grant Assurances

Project 03-38, “Understanding the Benefits and Impacts of NPIAS Obligations for Airports,” will be funded at a level of \$150,000.

The objective of this research is to produce a guidebook in an easy-to-read layout and language that addresses the understanding and implications of adhering to FAA grant obligations (e.g., airport sponsor grant assurances).

The full list of projects included in the FY 2015 ACRP program and a full description of them is available at http://onlinepubs.trb.org/onlinepubs/acrp/acrp_announcementfy2015.pdf

Oversight Panel Members Sought

TRB also announced that it is seeking volunteers to serve on the oversight panels that will be formed to guide each of the 2015 ACRP projects.

Further information on how to serve on the panels is available at <http://www.trb.org/Main/Blurbs/171112.aspx>

Awards

BEN SHARP IS NAMED WINNER OF 2014 RANDY JONES AWARD

In honor of his lifelong contributions to the sound insulation industry, Dr. Ben Sharp, who recently retired from Wyle Laboratories as director of its Acoustics Group, has been awarded the 2014 Randy Jones Award for Excellence in Airport Noise Mitigation.

The Planning Committee for the AAAE Airport Noise Mitigation Symposium announced the award, which is given every year to an individual or organization that has made a significant contribution to the airport noise mitigation industry.

The Randy Jones Award will be presented to Dr. Sharp at the 14th Annual AAAE Airport Noise Mitigation Symposium during the awards luncheon on Oct. 6 at the Hyatt Regency Pier 66 in Ft. Lauderdale, FL.

Dr. Sharp has a Ph.D. in Acoustics from the University of Manchester (United Kingdom), is a Fellow and Board Certified member of the Institute of Noise Control Engineering (INCE), a member of the Acoustical Society of America (ASA), and a voting member of the American Society for Testing and Materials.

Since 1968, when he conducted a first-of-its-kind study at Los Angeles International Airport, he has provided management or oversight of all Wyle’s sound insulation programs. Since then he has been involved in over 150 projects at 37 airport communities in addition to research studies for the FAA, HUD, FHWA, and EPA.

He developed the noise reduction measurement protocol that was adopted by the FAA and which is one of the standard measurement procedures for U.S. projects and has been instrumental in developing alternative protocols using artificial noise sources.

He also was responsible for developing policy and procedures manuals for multiple airport programs and was one of the authors of the 1992 Guidelines for Sound Insulation prepared for the FAA.

Dr. Sharp has lectured extensively on the technical and programmatic aspects of residential sound insulation and has published more than 100 technical papers and reports.

CLEEN, from p. 98

to 2018. These technologies include sustainable alternative jet fuels; lighter, more efficient gas turbine engine components; noise-reducing engine nozzles; advanced wing trailing edges; optimized flight trajectories using onboard flight management systems; and open rotor and geared turbofan engines.

Under the CLEEN program, the FAA entered into five-year agreement with Boeing, General Electric (GE), Honeywell, Pratt & Whitney (P&W), and Rolls-Royce. These companies are matching or exceeding the FAA funding in this cost-sharing program. Over the five-year period, the FAA expects to invest a total of \$125 million. With the funding match from the five companies, the total investment value could exceed \$250 million. To date, matching funds spent from the FAA include:

- Boeing – \$27.4 million;
- GE – \$23.2 million;
- Honeywell – \$11.6 million;
- P&W – \$24.5 million;
- Rolls Royce North America – \$11.1 million.

CLEEN Goals

Specifically, CLEEN's goals include developing and demonstrating:

Certifiable aircraft technology that reduces aircraft fuel burn by 33 percent relative to current subsonic aircraft technology, and which reduces energy consumption and greenhouse gas emissions;

Certifiable engine technology that reduces landing and takeoff cycle (LTO) nitrogen oxide (NOx) emissions by 60 percent below the International Civil Aviation Organization (ICAO) standard adopted in 2004;

Certifiable aircraft technology that reduces noise levels by 32 dB cumulative, relative to the Stage 4 standard;

“Drop-in” sustainable alternative jet fuels, including quantification of benefits - drop in alternative fuels will require no modifications to aircraft or fuel supply infrastructure.

Boeing CLEEN Program

Under CLEEN, Boeing is developing and demonstrating two aircraft technologies that could reduce aircraft fuel burn up to 2 percent. If used fleet wide in the United States, based on 2009 total gallons burned, a 2 percent reduction would save 340 million gallons with a cost savings of \$1.2 billion. The two technologies being examined by Boeing are an Adaptive Trailing-Edge on the aircraft wing and a Ceramic Matrix Composite (CMC) acoustic nozzle at the engine exhaust. Boeing has also completed research to determine effects of alternative jet fuels on aircraft fuel systems.

In August and September 2012, the first of Boeing's “ecoDemonstrator” tests demonstrated Adaptive Trailing-Edge, a technology that deploys miniature flaps to improve wing aerodynamic efficiency and decreases noise during ap-

proach. Under an agreement with American Airlines, these tests used one of the airline's pre-delivered 737-800 models for flight testing in Glasgow, MT.

In Spring 2013, Boeing completed ground testing of its Ceramic Matrix Composite (CMC) engine nozzle. Because this technology can withstand higher temperatures and is made of lighter weight material, it lowers fuel consumption. The CMC nozzle technology can also accommodate acoustic treatments that reduce community noise. Boeing plans to conduct a flight test of the CMC nozzle on a 787 aircraft in the latter half of 2014.

Boeing has also completed testing of alternative fuels to determine their impact on aircraft fuel system materials, aiding in the understanding and approval of these fuels.

GE CLEEN Program

Under CLEEN, GE is developing and demonstrating four areas of aircraft technology that will reduce fuel burn, emissions and noise. These technologies are the Open Rotor engine, an advanced engine combustor known as the Twin Annular Premixed Swirler (TAPS) II, Flight Management System-Air Traffic Management (FMS-ATM) System Integration, and Flight Management System-Engine Integration.

In January 2012 GE completed core engine tests of the TAPS II Combustor. Results show landing and take-off nitrogen oxide (NOx) emissions were reduced 60 percent compared to the International Civil Aviation Organization (ICAO) NOx standard adopted in 2004, meeting one of the CLEEN goals. This combustor will be used in CFM International's LEAP turbofan engine and is expected to enter service in 2016.

In January 2012 GE completed scaled Open Rotor wind tunnel tests. Results indicate aircraft fuel burn on a single aisle aircraft may be reduced 26 percent relative to a CFM International, CFM56-7B engine, and up to 15 dB cumulative noise reduction relative to FAA Stage 4 noise standards.

In March 2013, General Electric demonstrated flight trajectory synchronization between aircraft and the En Route Automation Modernization (ERAM) system. Trajectory synchronization will provide pilots and controllers better predictability of an aircraft's location, enabling fuel savings through more efficient aircraft routing.

General Electric also completed modeling of their Flight Management System-Engine Integration technology. This technology will reduce aircraft fuel burn through efficiencies gained by adaptive engine control, integrated vehicle health management, and integrated flight-propulsion control.

Honeywell CLEEN Program

Under CLEEN, Honeywell is developing and demonstrating technologies that will increase engine efficiency and reduce engine weight. The CLEEN technologies will contribute 5 percent toward an overall 15.7 percent reduction in fuel burn resulting from an engine upgrade relative to baseline engine technology. This requires demonstrating seven technologies including new coatings, higher temperature impeller,

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advanced seals and improved turbine cooling.

In 2012 and 2013, Honeywell completed engine tests of two technologies, validating their capability of increased engine temperature and efficiency. Honeywell procured the hardware necessary to conduct engine ground tests of the remaining technologies in 2014 and 2015.

In March 2011, Honeywell completed cold fuel testing of an alternative jet fuel blended with Jet-A fuel, demonstrating no clogging will occur at cold temperatures. This test directly supported ASTM International approval of the hydroprocessed esters and fatty acids (HEFA) jet biofuel blend on July 1, 2011.

Pratt & Whitney CLEEN Program

Under CLEEN, Pratt & Whitney is developing and demonstrating an ultra-high bypass ratio geared turbofan (GTF) engine and associated advanced technologies. Geared turbofan engine technologies will contribute to reduced aircraft noise and fuel consumption because of increased engine efficiency. This engine is projected to reduce single aisle aircraft fuel consumption by 20 percent relative to a CFM International, CFM56-7 engine and 25 dB noise reduction relative to the Stage 4 noise standards.

In June 2012 Pratt & Whitney began NASA wind tunnel tests of an advanced fan. Results were used to validate the CLEEN GTF fan design.

Further wind tunnel tests and an engine ground test of the GTF are scheduled for 2014 and 2015.

Rolls-Royce CLEEN Program

Under CLEEN, Rolls-Royce is developing and demonstrating a Dual-Wall Turbine Airfoil and CMC Blade Track, technologies aimed at increasing thermal efficiency in turbine section of the engine. Dual-wall turbine airfoils are projected to provide 20 percent or more reduction in cooling and increased operating temperature capability. The new blade tracks made from CMC material are projected to offer more than a 50 percent reduction in engine cooling and weight savings compared to a metallic design. Technology benefits will realize up to a 1 percent reduction in fuel consumption. Rolls-Royce has also conducted laboratory and engine component tests of advanced sustainable alternative jet fuels that could be approved for commercial use by ASTM International.

In July 2011 Rolls-Royce completed CMC Turbine Blade Track (shroud) component tests. Engine testing of this technology began in Spring 2013.

Rolls-Royce completed laboratory testing of new jet biofuels under development by nine fuel companies. Four of these jet biofuels were selected for auxiliary power unit and rig tests, which were completed in 2013.

AIRPORT NOISE REPORT

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

Volume 26, Number 26

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JFK Int'l

REP. ISRAEL DEMANDS THAT FAA ADHERE TO AGREEMENT LIMITING NIGHT FLIGHTS

Rep. Steve Israel (D-NY) joined local officials and residents living near JFK International Airport on Aug. 13 to demand that the Federal Aviation Administration adhere to an agreement signed in 2000 stipulating that air traffic controllers will not utilize a specific runway at JFK between 11 p.m. and 7 a.m. unless absolutely necessary.

“Despite the agreement, use of this runway during these hours has increased by 36 percent, greatly increasing noise from aircraft and impacting many of Nassau County’s residents’ quality of life,” Israel said in a press release issued after the event.

“As a member of Congress representing constituents from the Borough of Queens, and Nassau and Suffolk Counties [on Long Island], I am writing to let you know that the increase in aircraft noise in communities across my district has been intolerable,” Israel wrote in a letter to FAA Administrator Michael Huerta.

“I ask that you increase enforcement of an agreement put in place almost 14 years ago to limit the number of overnight arrivals that fly directly over a large sec-
(Continued on p. 103)

Los Angeles Int'l

COMMUNITIES, CARGO AIRLINES DISAGREE ON IMPACT OF LAWA’S PART 161 RESTRICTION

Communities around Los Angeles International Airport believe that a proposed Part 161 restriction banning nighttime departures from LAX to the east, over houses, will provide meaningful noise relief while having little to no impact on operations at the airport.

But the Cargo Airline Association asserts that the proposed restriction, which it contends is not needed, would cause severe problems operationally and create an undue burden on interstate and foreign commerce.

LAWA’s Part 161 application passed a major hurdle on June 27 when the Federal Aviation Administration announced that it had determined the application was complete (26 ANR 82).

The next step in FAA’s process of reviewing the application was to open a 30-day public comment period on it, which ended in late July.

LAWA’s proposed restriction would make mandatory a current voluntary restriction at LAX intended to stop pilots of heavily loaded aircraft from making easterly departures over neighborhoods near the airport where they disturb sleep and spark complaints.

(Continued on p. 104)

In This Issue...

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Los Angeles Int'l ... Cargo airline industry, communities near LAX disagree on impact of proposed Part 161 restriction limiting night flights to east over homes - p. 102

Drones ... New Center of Excellence on Unmanned Aviation Systems being set up by FAA will study noise reduction of small drones operating below 400-foot altitude - p. 103

ACRP ... HMMH selected by TRB to conduct new study assessing aircraft noise conditions affecting student achievement - p. 103

News Briefs ... Fresno-Yosemite is the only airport thus far in fiscal year 2014 to get an FAA AIP grant for noise mitigation ... FAA approves noise exposure map for Pease ... Correction to Sea-Tac 150 issued - p. 105

JFK, from p. 102

tion of Nassau County.”

Joining Rep. Israel in announcing the letter to Huerta were 16 people who were members of the NY State Senate and Assembly, County supervisors, Town Councilmembers and mayors, and representatives of anti-noise groups.

The overnight flight agreement signed by the Air Traffic Managers at both New York TRACON and Kennedy Tower on September 1, 2000, entitled “New York TRACON/Kennedy Tower Letter of Agreement” directly addressed the issue of overnight aircraft noise over Nassau County.

“The agreement noted that Runways 22L and 22R, which are responsible for a majority of the aircraft noise my constituents experience in Nassau County, would not be used for arrivals, except in a very limited number of situations, between the hours of 11p.m. to 7a.m. local time,” Rep. Israel explained.

“We know that airplane noise is impacting local communities. I am calling on the FAA to comply with its agreement and give North Shore residents much-needed relief overnight. We stand tonight in a united front with all levels of government to change the unacceptable level of noise. I will continue to fight for other common-sense changes like more noise monitors for tracking and robust community input on the needed flight changes.”

Said NY State Sen. Jack M. Martins (R), “For years, Nassau communities have been barraged by aircraft noise, affecting our quality of life and our environment. The FAA’s current practice of routing the overwhelming share of planes over our suburban communities must stop, especially where they are disrupting our residents throughout the night. The FAA needs to find alternatives and take steps to improve the quality of life for our communities, and I am proud to join with Congressman Israel in urging them to do so.”

UAS**NOISE REDUCTION OF DRONES WILL BE STUDIED BY NEW COE**

On Aug. 12, the Federal Aviation Administration released the final solicitation for its new FAA Center of Excellence for Unmanned Aircraft Systems (COE). The new COE will be tasked with identifying current and future issues critical to safe integration of UAS, commonly called drones, into the nation’s airspace.

Noise reduction of small UAS operating below an altitude of 400 feet is one of the 11 initial areas of research that will be conducted by the new COE.

“Advances in technology have greatly increased the affordability and accessibility of UAS to potential commercial operators and the general public,” FAA’s solicitation notes.

It continues: “Accordingly, when the FAA develops and

issues regulations that enable the commercial and private operation of sUAS (small UAS) in the National Airspace (NAS) below 400 feet, we can expect a significant increase in the number of aircraft operating in this space.

“In addition to the significant number of new aircraft operating in this space, these sUAS will be operating in airspace that puts them in closer proximity to people than conventional aircraft now operate (currently it is rare for aircraft to operate in this arena).

“This research focuses on the development and measurement of quieting technology for electric motors, internal combustion motors, rotors, and propellers along with the measurement of existing UAS to understand the potential noise impact of such operations.”

The COE will study several technical issues critical to successful UAS integration, including detect-and-avoid technology, control and communications, low-altitude operations safety, compatibility with air traffic control operations and training and certification of UAS pilots and other crewmembers, FAA said.

University teams, which will be in competition to be selected as the leader of the COE, may include industry and other affiliates expected to support, conduct joint research efforts, and serve on the COE team. The deadline for teams to submit proposals is September 15.

The FAA said it intends to support the UAS COE over the next 10 years with minimum funding of \$500,000 per year. The universities will be required to match federal grants, dollar for dollar, from nonfederal sources.

Exactly how the new COE will interact with six UAS test sites that the FAA selected last December will be determined once the COE team is in place and develops its detailed research plans, FAA explained.

Congress mandated that the FAA establish the COE under the Consolidated Appropriations Act of 2014. Like university think tank partnerships, the agency’s Centers of Excellence bring the best minds in the nation together to conduct research, to educate and to train, and work with the FAA toward solutions for aviation-related challenges.

The final solicitation document is at:

<http://www.faa.gov/go/coe>

ACRP**HMMH WILL STUDY HOW NOISE AFFECTS STUDENT ACHIEVEMENT**

The acoustical consulting firm HMMH has been selected to conduct Airport Cooperative Research Program Project 02-47: “Assessing Aircraft Noise Conditions Affecting Student Achievement-Case Studies,” the firm announced July 29.

HMMH President Mary Ellen Eagan will serve as Principal Investigator and Lead Author for the \$600,000 study, which will require observation and measurement of responses at the classroom level to determine at what level aircraft noise

events cause interruptions within the classroom environment and how student and teacher communication and behavior are affected.

The objectives of the research are to:

- Develop and implement a rigorous case study methodology to identify and measure those factors at the individual classroom, student, and teacher level that influence the impact of aircraft noise on student achievement, especially as it relates to reading comprehension;
- Identify appropriate metrics that define the level and characteristics of aircraft noise that impact student achievement; and
- Develop practical guidance for use by decision makers on how to reduce the impact of aircraft noise on student achievement.

Annoyance Survey Methods

In related news, HMMH also announced the release of Airport Cooperative Research Program (ACRP) Report 17: Research Methods for Understanding Aircraft Noise Annoyance and Sleep Disturbance.

HMMH said it led a research team to develop and validate a research protocol for a large-scale study of aircraft noise exposure-annoyance response relationships across the US, and to propose alternative research methods for field studies to assess the relationship between aircraft noise and sleep disturbance for U.S. airports.

The first phase of this ACRP Study included the collection of data for the purpose of testing an aircraft noise annoyance survey, for use in a national study, to update the dose-response relationship between noise exposure and the percentage of people who are highly annoyed, HMMH explained.

The second phase, the sleep disturbance portion of the ACRP Study, included: 1) Developing at least two general research protocols to improve the understanding of the relationship between aircraft noise and sleep disturbance in a field setting; and 2) Identifying criteria to be used to test and evaluate the protocols.

“The report describes the annoyance survey methodology that was developed and applied and the results relevant to the goals of the study. It also discusses airport-community relations and presents the final sleep disturbance study designs and the budget estimates for each type of study,” HMMH noted.

It said, “This project validated the approach that will be used in the surveys that FAA will conduct at 20 airports, with HMMH-led assistance. The HMMH team currently is working with the FAA to refine the survey methods based on the results of the Study and to develop an appropriate statistical process for randomly selecting the 20 representative airports.”

The report is available at http://onlinepubs.trb.org/onlinepubs/acrp/acrp_webdoc_017.pdf

LAX, from p. 102

The proposed restriction would not be in effect when LAX is in easterly operations, which occurs when winds reach 10 knots or greater from the east.

Pilots of heavily loaded aircraft occasionally request easterly departures when winds are slightly below the 10-knot threshold because the departure runway has a slight downward slope in the easterly direction and pilots want to take advantage of that and take off into the wind.

The LAX Airport/Community Noise Roundtable, several individual Roundtable members (the cities of El Segundo, Rancho Palos Verdes, and Palos Verdes Estates), the Westchester Neighbors Association and Ladera Heights Civic Association, and Los Angeles City Councilman Mike Bonin, whose district includes the airport, all voiced strong support for the proposed restriction in their comments to FAA.

Only Average of 65 Flights Per Year Affected

But the Cargo Airline Association stressed to FAA that the restriction was not needed because it would affect only an average of 65 flights per year.

“Both the Airport Noise and Capacity Act (ANCA) and Part 161 specifically require that, for a proposed regulation to be approved, it must be ‘reasonable.’ Implicit in any ‘reasonable standard’ is that the proposed restriction must address a significant noise problem. The Cargo Airlines Association respectfully submits that LAWA has not demonstrated a significant noise problem and the proposed mandatory operating restriction at LAX is both unnecessary, unreasonable and creates an undue burden on interstate and foreign commerce,” the association told FAA.

“LAWA apparently believes that carriers will simply limit their payloads or occasionally delay individual flights until more favorable wind conditions exist, but that such operational impacts on air carrier operations and associated costs will be small. This belief is wholly at odds with an all-cargo business model that depends on guaranteed expedited time-definite service. Contrary to LAWA’s assertions, off-loading cargo and/or delaying flights which could operate on time is not a viable option – especially where, as here, the environmental benefits are *de minimis*,” the association wrote.

It urged the FAA to deny LAWA’s Part 161 application, saying to rule otherwise would “find that the noise complaints of a few residents trump the public interest.”

But LAX Roundtable Chairman Denny Schneider told the FAA, “These east departure operations cause sleep disturbance for thousands of residents living in the communities east and south of the airport as these easterly departures fly at very low altitudes for an extended period of time to maintain a safe distance from aircraft arriving to LAX from the east and the south.”

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One Noise Grant Thus Far in FY 2014

Fresno-Yosemite is the only airport thus far in fiscal year 2014 to have received an Airport Improvement Program (AIP) noise mitigation grant, according to AIP grant data released by the Federal Aviation Administration on Aug. 12.

It shows that the City of Fresno was awarded a \$360,000 AIP grant to conduct a noise compatibility plan study for Fresno-Yosemite Airport and to update airport noise exposure maps.

FY 2014 does not end until Sept. 30 so it is likely that FAA will award AIP noise grants to additional airports.

Sea-Tac 150 Measure Added to ROA

FAA announced Aug. 14 that it has issued an *errata* sheet to its Record of Approval (ROA) for the Seattle-Tacoma International Airport's Part 150 Noise Compatibility Program.

FAA approved the program on May 29 in a Record of Approval, which was published in the *Federal Register* on June 12. However, subsequent to the *Federal Register* publication, FAA realized that a measure was inadvertently omitted from the ROA. The following approved noise mitigation measure has been added via an *errata* sheet:

Measure M-14 – Sound insulate eligible owner-occupied multi-family (condominiums) within the modified noise remedy boundary was included in the Noise Compatibility Program and vetted with the public through the Part 150 process.

For further information, contact Cayla Morgan in FAA's Seattle Airports District Office; tel: (425) 227-2653.

Portsmouth Int'l NEM Approved

On Aug. 12, FAA announced its determination that noise exposure maps for Portsmouth International Airport at Pease (New Hampshire) meet applicable federal requirements.

For further information, contact Richard Doucette in FAA's New England Regional Airports Division, 12 New England Executive Park, Burlington, MA 01803. No e-mail or telephone number was provided.

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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Catex2

FAA SEEKS COMMENT ON NAC PROPOSAL TO IMPLEMENT CATEX2, POSSIBLE OPTIONS

On Aug. 19, the Federal Aviation Administration invited public comment on the Net Noise Reduction Method proposed by the NextGen Advisory Committee (NAC) to implement the controversial “CatEx2” provision of the FAA Modernization and Reform Act of 2012, which seeks to speed the environmental approval of Performance-Based Navigation procedures.

FAA also is seeking input from the public on specific variations to the NAC’s Net Noise Reduction Method that are under consideration by the agency.

Sept. 8 is the deadline for submitting comments.

Section 213(c)(2) of the FAA Modernization and Reform Act of 2012 (dubbed CatEx2) directs the FAA to issue and file a categorical exclusion for any navigation performance or other performance based navigation (PBN) procedure that would result in measureable reductions in fuel consumption, carbon dioxide emissions, and noise on a per flight basis as compared to aircraft operations that follow existing instrument flight rule procedures in the same airspace.

The FAA could not find a technically sound way to implement CatEx2 because its preferred DNL noise metric cannot measure noise reduction on a *per flight* basis as required by the statute.

So, in September 2012, the FAA tasked the NAC for assistance, especially on how measurable reductions in noise on a per flight basis might be measured and assessed. The NAC developed the Net Noise Reduction Method, which it recommended to the FAA but the agency has not yet accepted.

Following are excerpts from FAA’s *Federal Register* notice that explain the Net Noise Reduction Method, the variations to it that FAA is considering, and list the five questions the FAA is seeking public comment on:

Description of Net Noise Reduction Method

The Net Noise Reduction Method provides for the computation of the number of people who would experience a reduction in noise and the number of people who would experience an increase in noise with a proposed PBN procedure as compared with the existing instrument procedure, at noise levels of DNL 45 dB and higher.

If the overall number of people is reduced, the NAC Task Group viewed this result as reasonably demonstrating noise reduction as intended by the Section 213(c)(2) legislative CATEX; therefore, the noise reduction determination required for the CATEX could be made.

The example in Table 1 [p. 109] illustrates the result (i.e., a decrease in noise for 1,431,221 people compared to an increase for 1,018,055 people) that could support the CATEX noise determination using the Net Noise Reduction Method.

(Continued on p. 107)

In This Issue...

CatEx2 ... FAA seeks public comment on its prospective implementation of the FAA Modernization and Reform Act’s CatEx2 provision, which “has some unique statutory requirements that have presented challenges to the FAA,” the agency says.

FAA asks the public to what extent it should rely on the NextGen Advisory Committee’s recommended Net Noise Reduction Method for implementing CatEx2.

Is the NAC method appropriate if people receiving a noise decrease from concentrated PBN flight tracks outnumber the people receiving an increase, but the noise decrease is small compared to the noise increase? FAA asks.

Does the NAC method’s reliance on a net reduction in the number of people exposed to noise constitute a net reduction in noise? The two reductions are not the same, FAA stresses. Should the method be based on population change, noise change, or population weighted noise change? - p. 106

CatEx2, from p. 106

The NAC Task Group additionally observed that if there would be a net increase in people exposed to noise within the DNL 65 dB noise exposure band and the amount of the noise increase would be described as significant under FAA's NEPA criteria, community opposition could delay implementation and negate Congressional intent of expedited PBN procedures.

Accordingly, the NAC Task Group indicated that in such a case, the FAA might apply its significant noise impact threshold as a second test in addition to the determination of net reduction in the number of people exposed to noise.

If the noise increase would not exceed DNL 1.5 dB in the DNL 65 dB band and there would be an overall net reduction in the number of people exposed to noise across all noise exposure bands, the NAC Task Group concluded that this would appear to further confirm that application of the CATEX is reasonable.

If the increase in noise in the DNL 65 dB band was DNL 1.5 or greater, the FAA could decide not to use the CATEX.

FAA Considerations Involving the Use of the Proposed Net Noise Reduction Method

The FAA's first consideration is the extent to which the Net Noise Reduction Method meets the statutory requirement for the FAA to determine that proposed PBN procedures would result in measurable reductions in noise on a per flight basis compared to aircraft operations following existing instrument flight rules procedures.

As with current noise analysis methodologies, the Net Noise Reduction Method does not produce a quantity of noise on a per flights basis. However, the NAC Task Group has pointed out that the Conference Report describing the final legislative language for the Section 213(c)(2) CATEX expresses the Congressional intent to determine measurable reductions on an average per flight basis.

The Task Group confirmed with Congressional staff that this language allows for averaging noise impact on a representative basis for flights using a particular procedure.

The FAA is considering the extent to which the Net Noise Reduction Method should be relied on to determine measurable reductions in noise on a per flight basis under the statute and in light of the accompanying Conference Report, and invites public views on this aspect of the methodology.

Another consideration is the extent to which the Net Noise Reduction Method's reliance on a net reduction in the number of people exposed to noise constitutes a net reduction in noise, since the two reductions are not the same.

An increase in the number of people exposed to noise does not convey the amount of the noise increase, i.e. whether it is a small or a large increase in noise. Similarly, a decrease in the number of people does not convey the amount of the noise decrease.

If people receiving a noise decrease outnumber the people

receiving an increase, but the amount of the noise decrease is small compared to the noise increase, is it appropriate for the FAA to determine that there is a measurable reduction in noise?

The FAA has explored this issue by using the same source data used by the NAC in its example (see Table 1), but calculating differences in terms of noise, i.e., the average change in the DNL at thousands of locations within the area of airspace. The FAA did this calculation in two ways – (1) a straightforward average of all locations, and (2) a population weighted average.

The population-weighted average was used because where people reside in relation to locations on the ground that receive more or less noise is relevant to assessing noise impact.

The FAA's results, expressed in changes in noise using DNL, are shown below in Table 2 [p. 109]. In both cases, the total average change in noise is a decrease. Therefore, if the FAA used a Net Noise Reduction Method, but relied on noise changes rather than population changes, the results in this example could support the use of the legislative CATEX.

The FAA is giving further consideration to which approach (i.e., population change, noise change, population weighted noise change) best fulfills the letter and intent of the statute. The FAA is also considering whether one approach offers greater public understanding, and invites comments on these different approaches to a net noise reduction methodology.

In the examples in both Tables 1 and 2, the greatest reductions in either noise or the population exposed to noise are at the DNL 45–60 dB level, which is the lowest noise level that the FAA normally evaluates for differences in noise that may result from certain proposed changes in procedures.

In Table 1, there are increases in the number of people in higher noise exposure bands of DNL 60–65 dB and above DNL 65 dB. In Table 2, the average DNL decrease occurs in the lowest noise exposure band, while the average DNL change in the higher noise exposure bands is either zero or a slight increase using the population weighted average approach.

The use of the total of all three DNL noise exposure bands to determine a net noise reduction gives equal weight to lower and higher levels of noise, while the FAA's practice is to give greater weight to higher noise levels which people find more annoying, especially noise levels above DNL 65 dB.

Accordingly, the FAA is considering the extent to which a mix of noise increases and decreases in different noise exposure bands supports a determination of noise reduction, especially when reductions at lower DNL noise levels would outweigh increases at higher noise levels.

A potential alternative approach could be to require reductions in all three DNL noise exposure bands to support a noise reduction determination for use of the CATEX. This alternative approach would be expected to reduce the use of the CATEX, and it appears less consistent with the statutory pro-

vision to compare procedures “in the same airspace.”

The FAA invites comments on this aspect of the Net Noise Reduction Method.

Finally, if the FAA decides to use the Net Noise Reduction Method or a variation of it, the FAA must also decide if and how to employ its significant noise impact threshold.

The decision that is the most consistent with the statutory language would be not to employ the threshold at all. The statutory text is prescriptive in that a PBN procedure that meets the test for measurable reductions “shall be presumed to have no significant affect [sic] on the quality of the human environment and the Administrator shall issue and file a categorical exclusion for the new procedure.”

Unlike CATEXes that are administratively established under CEQ regulations, this legislative CATEX is not subject to extraordinary circumstances; therefore, a CATEX determination is not precluded by potential environmental impacts that are beyond the specific parameters in the statutory text (i.e., measurable reductions in fuel consumption, carbon dioxide emissions, and noise on a per flight basis).

As the FAA considers the viability of employing the significant noise impact threshold in conjunction with this CATEX, the FAA is soliciting public views on whether a threshold test may and should be used.

Further, if a significant noise impact threshold test is used, should it be used only when there is a net increase in people exposed at DNL 65 dB and above, as the NAC Task Group has suggested, or should it be more broadly used to check for significant noise impact when there is any increase in the number of people exposed to noise at DNL 65 dB and above – even if there is a net population benefit at that level?

Solicitation of Public Comment

The FAA invites public comment on the entirety of the prospective implementation of the CATEX in Section 213(c)(2) of the FAA Modernization and Reform Act of 2012, and particularly invites comment on the following specific aspects of the Net Noise Reduction Method which are under consideration by the FAA as described in this notice:

1. Extent to which the FAA should rely on the Net Noise Reduction Method to determine measurable reductions in noise on a per flight basis.

2. Appropriateness of determining that there is a measurable reduction in noise if people receiving a noise decrease outnumber the people receiving an increase, but the noise decrease is small compared to the noise increase.

3. Different approaches to a net noise reduction methodology (i.e., population change, noise change, population weighted noise change), and whether the selection of one approach over another is preferred and increases public understanding.

4. Extent to which a mix of noise increases and decreases could support a determination of measurable noise reduction, especially when reductions at lower noise levels outweigh increases at higher noise levels, and whether an alternative approach that would require reductions in all three noise exposure bands to support the use of the CATEX should be used.

5. Whether a significant noise impact threshold test should be used; and if so, if it should be used only when there is a net increase in people exposed to noise at DNL 65 dB and above, or if it should be used when there is any increase in the number of people exposed to noise at DNL 65 dB and above—even if there is a net population benefit at that level.

How to Submit Comments

Send comments identified by “Docket Number FAA–2014–0510” using any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and follow the online instructions for sending your comments electronically.

- Mail: Send comments to Docket Operations, M–30; U.S. Department of Transportation (DOT), 1200 New Jersey Avenue SE., Room W12–140, West Building Ground Floor, Washington, DC 20590–0001.

- Hand Delivery or Courier: Take comments to Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

- Fax: Fax comments to Docket Operations at 202–493–2251.

Privacy: The FAA will post all comments it receives, without change, to <http://www.regulations.gov>, including any personal information the commenter provides.

Using the search function of the docket Web site, anyone can find and read the electronic form of all comments received into any FAA docket, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.).

For further information, contact Lynne S. Pickard, Senior Advisor for Environmental Policy, Office of Environment and Energy (AEE–6), Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267–3577; email lynne.pickard@faa.gov.

FAA Federal Register notice is available online at <http://www.gpo.gov/fdsys/pkg/FR-2014-08-19/pdf/2014-19691.pdf>

TABLE 1—NUMBER OF PEOPLE EXPOSED TO DNL LEVEL PBN PROCEDURES VS EXISTING PROCEDURES⁴

DNL Noise Exposure Band	No. of people decreases	No. of people increases	No. of people unchanged
45–60	1,405,952	961,579	445,074
60–65	15,531	45,401	6,792
Above 65	9,738	11,075	3,964
Total People	1,431,221	1,018,055	455,830

TABLE 2—AVERAGE CHANGES IN DNL LEVEL PBN PROCEDURES VS EXISTING PROCEDURES⁵

DNL noise exposure band	Straight average change in DNL	Population weighted average change in DNL
45–60	- 0.3 DNL	- 0.2 DNL
60–65	0	0
Above 65	0	+ 0.1
Total Change	- 0.3 DNL	- 0.2 DNL

4 The example in Table 1 is used by the NAC based on noise and population data from an EA for procedural changes at Chicago Midway International Airport; however, in its June 2013 published report, the NAC mixed this example with another example in reporting the number of people in the DNL 60–65 noise exposure band, which also resulted in inaccuracies in the total number of people. The FAA used NAC source data for the example in this notice. The Midway EA may be viewed at <http://www.flychicago.com/midway/en/AboutUs/NoiseManagement/AirportNoise/Airport-Noise.aspx#FinalAssess>. The NAC also used an example based on the Greener Skies EA for Seattle Tacoma International Airport, which is not repeated in this notice.

5 The FAA's threshold for a significant noise impact under NEPA is an increase of DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above this level due to a 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe.

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

Volume 26, Number 28

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AEDT

NEXT VERSION OF AEDT BEING DEVELOPED; SET FOR RELEASE AT YEAR END, VOLPE SAYS

The next version of the Aviation Environmental Design Tool (AEDT), version 2b, is currently in development and scheduled to be released at the end of the year, the U.S. Department of Transportation's Volpe National Transportation Systems Center announced Aug. 25.

AEDT 2b will replace AEDT 2a, as well as the airport noise and emission dispersion modeling tools the Integrated Noise Model (INM) and the Emissions and Dispersion Modeling System (EDMS).

The new version has interactive menus, wizards, and enhanced geospatial features that guide users from the beginning of an analysis through the calculation and review of results, Volpe said.

A video is now available on YouTube highlighting the use of key tool features and functionality implemented in AEDT 2b. The video can be downloaded at <https://www.youtube.com/watch?v=P57mGv61-BI&feature=youtu.be&rel=0>

The video introduces the AEDT 2b user interface and shows the major work

(Continued on p. 111)

Litigation

COURT SHOULD UPHOLD FAA'S ADOPTION OF RNAV SID FOR LOGAN RUNWAY, DOJ SAYS

Justice Department attorneys told the U.S. Court of Appeals for the First Circuit on Aug. 6 that it should uphold the Federal Aviation Administration's decision to adopt an RNAV Standard Instrument Departure (SID) procedure for aircraft departing Runway 33L at Boston Logan International Airport.

"The record amply supports the agency's finding of no significant impact," DOJ told the Court in a response brief filed in the case *Fleitman v. FAA* (No. 13-1984), which challenged the FONSI.

When the new RNAV SID was instituted from Runway 33L at Logan in mid-2013, it moved the departure flight path over parts of the Town of Milton, MA, southwest of the airport, and the Hyde Park area of Boston where the plaintiffs live.

The myriad challenges to FAA's FONSI and Record of Decision filed by the three community associations and 13 individuals in Milton and Hyde Park "lack merit," the Government attorneys said, calling their claims "vague, perfunctory, and completely unsupported."

Fleitman principally challenged FAA's use of the DNL noise metric in the environmental analysis of the RNAV SID and the use of noise modeling instead of

(Continued on p. 112)

In This Issue...

***AEDT* ...** The next version of the Aviation Environmental Design Tool is under development and will be released at the end of the year, DOT's Volpe Center announces - p. 110

***Litigation* ...** Department of Justice attorneys tell the U.S. Court of Appeals for the 1st Circuit that it should uphold FAA's adoption of an RNAV departure SID for Runway 33L at Boston Logan Int'l Airport - p. 110

***Chicago O'Hare Int'l* ...** Fair Allocation in Runways Coalition (FAiR) holds first-ever Property Tax Appeal Workshop to teach homeowners how to make Chicago pay them for the aircraft noise moved over their heads - p. 112

***East Hampton* ...** Over 300 angry residents from the East End of Long Island demand that Town of East Hampton officials take action to reduce noise from 44 percent increase in helicopter operations - p. 113

AEDT, from p. 110

areas. The video demonstrates the following:

- The new menu structure
- Mapping and GIS capabilities
- User customization options.

It has been two years since the Federal Aviation Administration and Volpe publicly released AEDT version 2a, an environmental analysis tool that offers a robust, integrated way to quantify aviation's environmental impact.

Now boasting hundreds of users in government, industry, and academia, AEDT is being used to support policy decisions, research, and environmental reviews, Volpe said.

A software system that dynamically models flights, AEDT takes into account aircraft weight, performance characteristics, and weather conditions, and calculates the resulting noise, dispersion of air pollutants, greenhouse gas emissions, and fuel burn.

Users then analyze the trade-offs between noise, fuel burn, and emissions, and quantify the potential environmental consequences of changes in a flight's trajectory or aircraft design.

New Aircraft Separation Standards Gain Wider Adoption, Saving Time and Money

Volpe issued the following press release on Aug. 26:

Just as a boat leaves a wake of water, an airplane leaves a wake of air that affects the aerodynamics of trailing aircraft. For four decades, Volpe has supported the Federal Aviation Administration (FAA) in understanding the science of aircraft wake turbulence.

Volpe researchers have moved beyond a basic understanding of the physical science of aircraft wake and are now using the information gleaned from their research to improve aviation safety.

Volpe's recent work on behalf of FAA has focused on wake turbulence recategorization (RECAT), which uses millions of data points on wake turbulence to determine a new set of wake separation standards for various aircraft models. Separation standards define the minimum distance that one aircraft must be behind another during take-offs and landings.

In June, that work – which includes analyzing data, creating risk matrices, and studying new aircraft – helped FAA implement new separation standards at Hartsfield-Jackson in Atlanta, the world's busiest airport.

Jeffrey Tittsworth, the manager of the FAA Wake Turbulence Research Office, stated, "Without Volpe's contribution to the science of wake turbulence data collection and analysis, RECAT would not have been successful."

Improving Efficiency

The amount of wake an aircraft creates, to the first approximation, is proportional to the weight of the aircraft. A

typical Boeing 767 can seat around 250 passengers, while a 747 can seat more than 400. A 767 traveling behind a 747 needs 4 nautical miles of separation – but a 747 traveling behind a 767 needs only 2.5 nautical miles of separation.

Even though the 747 seats 60 percent more people, before RECAT, both aircraft were in the "heavy" category and required 4 nautical miles of separation. Bringing that separation down to 2.5 nautical miles goes a long way toward increasing capacity and reducing delays.

Tallying the Results

The RECAT separation standards were first implemented with aircraft operations in Memphis, Tennessee, starting in November 2012. FedEx, the major air carrier at Memphis, reported a 20 percent increase in airport capacity and \$1.8 million in fuel savings each month.

Recently, FAA approved Atlanta's Hartsfield-Jackson to use new separation standards for commercial operations. Fifteen additional major U.S. airports are scheduled to implement these new standards by 2017. Unlike other efforts to improve airport efficiency that may require years of construction, RECAT is a simple rule change that has an immediate impact.

Unlocking the Full Potential of Wake Turbulence Science

Reduced fuel costs and time savings represent the tip of the iceberg of what new separation standards and wake turbulence science can do, said Jonathan Lee, chief of Volpe's Aircraft Wakes and Weather Division.

Environmental, economic, and time savings will increase as Volpe researchers continue to investigate how wake turbulence acts during crosswinds, storms, and other weather events, and under different aircraft configurations and weights.

"We have a rudimentary understanding of how wake turbulence behaves," said Lee. "Currently, there are five or six different wake models that will give you five or six different answers with the same set of inputs."

Today these wake turbulence models work best at either high or low altitudes. One model may be able to accurately predict wake at 2,000 feet but not 200 feet, while another may be correct at 200 feet, but not 2,000. The key is in understanding what happens in the middle and create a model that accurately provides wake predictions at all elevations on the way to touchdown.

"If we can get a better handle on how wakes behave in all weather conditions, including temperature, and other aircraft factors, we might be able to do something even more dynamic," said Lee.

*Chicago O'Hare Int'l***COALITION HOLDS PROPERTY TAX APPEAL WORKSHOP IN CHICAGO**

The Fair Allocation in Runways (FAiR) Coalition hosted its first-ever Property Tax Appeal Workshop in Chicago on Aug. 25 to teach noise-weary homeowners how to make the city pay for the aircraft noise it has moved over their heads.

An estimated 150 people attended the workshop, which was filled in only three days after being announced, with 56 seats accounted for in just the first 24 hours, said FAiR, a coalition of community groups newly hit by noise from the major realignment of runways at O'Hare in October 2013.

Said FAiR Co-Founder Jac Charlier, "With this event, FAiR again taps into the growing frustration of residents who feel they have been abandoned by local politicians, especially FAiR Chicago residents who constantly ask: Where is Mayor Emanuel?"

"The Mayor is late on arrival on the Northwest side. When asked, we tell people he has rerouted himself elsewhere because he is nowhere to be found. What we do know is while he doesn't seem to care about Northwest side voters, he does care about money. That much is clear."

Added FAiR Leadership Team Member Colleen Mulcrone, "That we have had such a tremendous response in so short a time speaks volumes about how huge of a quality-of-life issue the O'Hare changes really have become for so many neighbors, both city and suburban."

"We have reached tens of thousands of people through our doorhanger campaign, and our membership just continues to grow."

Said Lisa Ziems, fellow event co-planner and Leadership Team member, "Appealing property taxes is one more way for residents to say that it is not okay for the City of Chicago to expect people to just accept this reduced quality of life. We don't accept it, we won't accept it and we are not going away."

FAiR is employing a variety of civic tactics as the Coalition continues to work towards securing what it calls "a real seat at the O'Hare decision-making table." But using a mass appeal of property taxes to protest increased aircraft noise impact is a tactic ANR has not seen elsewhere.

The Tax Appeal Workshop featured a speaker from the Cook County Commissioner's Office who explained the appeal process and what documentation is appropriate for residents appealing based on the issue of increased plane traffic due to the flight path changes.

The event also featured FAiR members who successfully won tax appeals in spring of 2014 based solely on increased plane noise and traffic discussing their experience with the process.

FAiR distributed a Property Tax Appeal Support packet to everybody who attended. The Support packet provides supporting documentation for the Tax Appeal.

While the Aug. 25 workshop focused on Cook County,

demand for a workshop in nearby DuPage County where suburban communities received increased noise impact is already high, FAiR said. Another Cook County workshop is already in the works.

FAiR is growing and currently includes 25 civic organizations in the City of Chicago and suburbs, 15 elected officials, and 675 individual members, Charlier told ANR.

"This is now the largest movement of people in this area I've seen in over 20 years of building community," said Charlier. "We have five new meetings with mayors already on the calendar. About two months ago they started calling us fairly regularly to join FAiR."

Litigation, from p. 110

noise measurements of the impact.

But DOJ attorneys told the Court, "The FAA reasonably found that its action would have no significant impact on noise exposure levels. In so finding, the FAA properly relied on the noise measurement metric (DNL) and airport noise model (Integrated Noise Model) required by longstanding agency guidance.

"This Court has previously upheld the FAA's use of these same noise measurement tools, and Fleitman does not present any feasible and superior alternatives. Instead, she faults the agency for not conducting on-the-ground field measurements of noise exposure levels in the areas of interest to petitioners (Milton and Hyde Park). The agency reasoned, however, that such a step would be both impracticable and insufficient to model the noise impacts of an updated Runway 33L departure procedure.

"Fleitman also raises a slew of other arguments related to the FAA's noise analysis. She contends that the agency failed to analyze the cumulative impact of overflights from Runways 27 and 33L, but in fact, the EA expressly considered such impacts and determined that they would not be significant.

"She argues that the FAA violated a nonbinding Advisory Circular that asks pilots to use caution when flying over noise-sensitive areas. The memorandum's recommendations are expressly voluntary, and they do not apply to pilots flying RNAV procedures like the one at issue here.

"Fleitman also criticizes the FAA for failing to consider an alternative departure route that would reduce (as opposed to maintain) air traffic over Milton and Hyde Park. As the agency explained, however, such alternatives were infeasible and/or would increase the overall noise burden in the study area.

"The remaining challenges to the FAA's noise methodology are likewise unavailing. The same is true of Fleitman's environmental justice, Clean Air Act, and public participation claims.

"Once the FAA determined that its proposed action would not have a significant environmental impact on anyone in the study area, the agency did not need to conduct further analysis to determine that the action would not impose dispropor-

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tionate burdens on low-income or minority populations.

“Governing regulations entitled the FAA to presume that a change in Runway 33L’s departure procedure would not result in violations of National Ambient Air Quality Standards, and Fleitman offers no evidence suggesting otherwise. And Fleitman’s argument that the FAA violated its public participation obligations is belied by the fifty-six pages of responses to public comments appended to the agency’s EA.”

East Hampton Airport

RESIDENTS DEMAND THAT AIRPORT LIMIT INCREASED HELICOPTER FLIGHTS

More than 300 residents from the East End of Long Island, NY, urged East Hampton town leaders at a public meeting they convened on Aug. 27 to take action to limit helicopter flights ferrying people from Manhattan to summer vacation spots in the Hamptons.

Helicopter traffic at East Hampton Airport is up 44 percent this year due to a new market that helicopter operators have tapped.

Instead of requiring one party to pay the \$3,000 cost of the trip from Manhattan to the Hamptons, a new helicopter service called Blade allows passengers to split the cost by buying individual seats for about \$500 a trip.

That has made the trip, which would take over four hours by car, much more affordable. But the increase in helicopter ferrying operations has spiked airport noise complaints to 11,758 through early August, up from 3,335 during the same period in 2013.

East Hampton officials convened the public meeting on the increase in helicopter noise complaints after learning that residents of the East End of Long Island planned to barge into their town board meeting last week.

East Hampton Town Councilwoman Kathee Burke-Gonzalez told the angry Long Islanders that the town board “will do whatever we legally can do to address the intolerable situation,” but stressed that the town’s powers are limited by federal law, Long Island Newsday reported.

Altering flight paths is not the answer because it only moves the noise over a different community, many residents said. They want the town to impose a curfew or limit on the number of helicopter operations.

East Hampton airport comes out from under FAA grant obligations at the end of 2015 and town officials are in the process of determining what they can do to limit airport noise in light of that.

Helicopter operators are expected to sue the town if it enacts operational restrictions at its airport.

AIRPORT NOISE REPORT

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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FAA

STAKEHOLDER COLLABORATION PROGRAM TO LAUNCH IN FALL 2015; PILOT BEGINS SOON

In October 2015, the Federal Aviation Administration plans to launch a Stakeholder Collaboration Program as a way to grow industry support for FAA programs that address key environmental issues: noise, air quality, climate, energy, and water quality.

The program also will serve as a vehicle for recognizing and rewarding collaboration, stewardship, leadership, progress, and innovation in the environment and energy arena by industry stakeholders.

“Managing the aviation industry’s environmental and energy issues will require the collaborative efforts of all aviation stakeholders,” Pat Moran of FAA’s Office of Environment and Energy noted in a recent presentation to the Transportation Research Board’s AV030 Committee on Environmental Impacts of Aviation.

Included in his list of stakeholders are airlines, manufacturers, airports, aviation associations, other agencies, academia, and local communities.

A core group of aviation industry stakeholders began working with FAA in Oc-

(Continued on p. 115)

Chicago O’Hare Int’l

HUERTA SAYS NO NEW EIS ON OMP, PUSHES RELEASE OF ANNOYANCE SURVEY TO MID-2016

A new environmental impact statement for the massive O’Hare Modernization Program (OMP) will not be prepared, FAA Administrator Michael Huerta told three Chicago-area congressional representatives who had urged FAA to update the decade-old original environmental study which has come under recent criticism.

But Huerta told the congressional representatives that, in 2015, FAA does plan on completing a written re-evaluation of the original EIS that will be used to determine if the agency needs to prepare a supplement to the original EIS.

The written re-evaluation is being done “to examine the runway construction schedule modifications provided by Chicago resulting from the 2011 settlement of a State court lawsuit between Chicago and the airlines,” Huerta explained in a Sept. 5 letter. He did not state that the re-evaluation of the original EIS would address increased noise impact, however.

Huerta also told the congressional representatives that the FAA has pushed back the date when it will complete its analysis of a national survey on aircraft annoyance that will be used to determine if FAA needs to revise its 65 dB DNL threshold

(Continued on p. 116)

In This Issue...

FAA ... A new Stakeholder Collaboration Program will be launched by FAA in the fall of 2015 to foster support for FAA’s key environmental programs and to recognize and reward leadership and innovation in the stakeholder community - p. 114

Chicago O’Hare ... No new EIS will be prepared for the O’Hare Modernization Program, FAA Administrator tells Illinois congressional representatives, but re-evaluation of original EIS will be completed in 2015.

Release of findings of national survey on airport noise annoyance has been pushed back to mid-2016, Huerta tells them - p. 114

CatEx2 ... NJCAAN wants names of Hill staffers who wrote CatEx2 provision and who told NAC that average noise levels could be used to measure compliance with it.

FAA extends deadline for submission of public comments on CatEx2 implementation until Oct. 20 at request of ACI-NA - p. 115

Stakeholders, from p. 114

tober 2013 on the design of the Stakeholder Collaboration Program, which is expected to be completed this month.

The core group that developed the program includes Boeing, GE Aviation, Airlines for America, Aerospace Industries Association, Airports Council International North America, Dallas-Ft. Worth International Airport, and the Port of Portland.

From October 2014 to April 2015, FAA will conduct a pilot project to test the program design with a broader set of stakeholders, which the agency is in the process of recruiting.

Stakeholders interested in participating in the pilot project can apply by contacting Donald Scata in the FAA Office of Environment and Energy (donald.scata@faa.gov). Applications will be processed this fall and a meeting of selected participants is planned for late 2014.

Program Activities

The following activities are envisioned for the Stakeholder Collaboration Program:

- An annual report on the state of the aviation industry and environmental performance;
- A system for recognizing membership achievements toward the FAA environment and energy goals;
- An information portal for data, reports, and training for aviation professionals;
- Program sponsored meetings, conferences, and forums;
- Exclusive conference calls/webinars hosted by FAA staff or industry to discuss environment and energy efforts;
- Focused Communities of Interest where environmental challenges and opportunities are discussed;
- Opportunities to showcase environmental successes through the program's website and newsletter;
- Exclusive access to program logo, marketing, and communication materials; member organization's name displayed on the program's website.

Moran's presentation defined two program membership categories. The "Industry" category includes airlines, airports/heliports, aviation manufacturers, aviation associations, aviation service providers, and the FAA.

The "Aviation Support Organization" category includes trade groups, standards groups, technical membership groups, research groups, universities/colleges, and non-governmental organizations.

CatEx2**NJCAAN WANTS HILL STAFFERS WHO WROTE CATEX2 IDENTIFIED**

The New Jersey Coalition Against Aircraft Noise (NJCAAN) asked the Federal Aviation Administration Sept. 2 to make public the names of the congressional staffers who wrote the "CatEx2" provision of the FAA Modernization and

Reform Act of 2012, which is intended to accelerate the environmental review of NextGen Performance-based Navigation (PBN) procedures.

NJCAAN also wants the names of the Hill staffers the NextGen Advisory Committee (NAC) relied on to conclude that CatEx2 allows FAA to average aircraft noise in determining whether PBN procedures qualify as Categorical Exclusions under the National Environmental Policy Act, meaning they have no potential for significant environmental impacts and no environmental assessment (EA) or environmental impact statement (EIS) is required.

Extension of Comment Deadline Requested

NJCAAN asked the FAA to extend the Sept. 18 deadline for submitting comments on CatEx2 until the public has an opportunity to review the following information:

- A copy of the Conference Report on the FAA Modernization and Reform Act that the NAC used as the basis for its conclusion that the DNL noise metric can be used to determine compliance with the CatEx2 provision;
- The names of the congressional staffers who told the NAC that it is Congress's intent to allow noise measurement on an average basis; and
- The names of the congressional staffers who drafted the initial CatEx2 language that was included in the FAA's reauthorization bill, which does not refer to measuring noise reduction on an "average" per flight basis.

On Aug. 19, FAA invited public comment on the Net Noise Reduction Method proposed by the NAC to implement the CatEx2 provision (26 ANR 106).

FAA is in the process of determining whether the NAC's Net Noise Reduction Method meets the CatEx2 legislative language, which states that PBN procedures can be given a categorical exclusion only if they "would result in a measurable reductions in fuel consumption, carbon dioxide emissions, and noise *on a per flight basis* as compared to aircraft operations that follow existing instrument flight rule procedures in the same airspace."

The FAA could not find a technically sound way to implement CatEx2 because its preferred DNL noise metric cannot measure noise reduction on a "per flight" basis as required by the statute.

The NAC got around that problem by relying on language that was not in the Act but in the Conference Report on the Act, which it said refers to measuring noise on an "average per flight basis."

In its report to the FAA, the NAC also said it interviewed congressional staffers who confirmed that it was their intent in drafting the CatEx2 language to allow noise measurements on an "average per flight basis."

The NAC's Net Noise Reduction Method is based on DNL. It computes the number of people who would experience a reduction in noise and the number of people who would experience an increase in noise with the proposed PBN procedure as compared with the existing instrument procedure, at noise levels of DNL 45 dB and higher.

FAA Extends Comment Period

On Sept. 11, the FAA announced that it has extended the public comment period on the implementation of CatEx 2 until Oct. 20. The original deadline was Sept. 18.

The agency said it extended the comment deadline at the request of the Airports Council International - North America, which cited a need “to communicate with its membership and facilitate industry participation in providing the FAA with meaningful comments.”

No mention was made in FAA’s announcement that it would respond to NJCAAN’s request for the names of the congressional staffers who wrote the CatEx2 provision and concluded that DNL could be used to determine compliance with it.

To submit comments, go to <http://www.regulations.gov> and follow the online instructions; or mail comments to Docket Operations, M-30, U.S. DOT, 1200 New Jersey Ave SE, Room W12-140, West Bldg. Ground Floor, Washington DC 20590-0001; or fax comments to Docket Operations at 202-493-2251.

Comments must reference Docket Number FAA-2014-0510.

O’Hare, from p. 114

for compatible residential use around airports. Lowering that threshold would potentially allow more residents to be eligible for O’Hare’s Residential Sound Insulation Program and for sound insulation programs around all U.S. airports.

The analysis of the annoyance survey results will be completed in the middle of 2016, Huerta wrote.

“We are moving as quickly as possible within the constraints of the sequential nature of much of this work. The results of the study will then be used to determine whether changes to the FAA’s use of the DNL 65 dB noise metric are warranted,” Huerta said.

The development and coordination of new proposed policy (including any potential amendments to FAA’s Part 150 airport noise compatibility program) would take place after the completion of the national survey, he noted.

Huerta Defends EIS

Illinois Reps. Tammy Duckworth (D), Mike Quigley (D), and Janice Schakowsky (D) had urged Huerta in a June 19 letter to undertake a new EIS accompanied by a new round of public hearings following publication of story in the *Chicago Sun Times* that was critical of the original EIS on the Modernization Program done a decade ago.

The *Sun Times* reported that the public hearings on the EIS were not held in areas expected to be the most noise-impacted by the OMP and the draft EIS included a table with incorrect information regarding the expected increase in runway operations from the OMP.

But Huerta defended the original EIS, noting it had withstood a court challenge and calling it “one of the most com-

prehensive environmental analyses we have ever done.”

“We believe that the perception of inaccuracy or incompleteness during the public hearing process is not support by facts,” the FAA Administrator wrote. “The June 19 *Chicago Sun Times* article focused on one inaccurate data table from the 2005 Draft EIS document, which contained thousands of pages of information in six volumes. The incorrect data was never used in the EIS modeling and never appeared in the public meetings. The Final EIS contained a corrected version of the table.”

Problem Warrants Urgent Action

In response to Huerta’s letter, Duckworth, Quigley, and Schakowsky issued the following statement on Sept. 11:

“The unprecedented noise pollution facing our local communities is a serious problem that warrants urgent action. The FAA’s refusal to immediately complete a thorough EIS is extremely disappointing, and any FAA re-evaluation is meaningless if it does not consider increased noise level data.

“Our constituents’ quality of life is rapidly deteriorating, and the FAA’s response is unacceptable. There is more work to be done at all levels, and we will continue to push the FAA towards meaningful solutions that can provide relief to residents who are losing both sleep and patience.”

The representatives announced two new U.S. Department of Transportation grants for noise mitigation measures in the area. The first provides \$6.8 million for residential sound-proofing for homes that fall within the 65 DNL contour of O’Hare and the second provides \$4.8 million for measures at an elementary school.

ONCC Sets Deadline for Re-evaluation

Meanwhile, with a community coalition and suburban mayor calling for the ouster of its chair, the 53-member O’Hare Noise Compatibility Commission voted Sept. 5 to approve a resolution setting a January 2015 deadline for the FAA to complete its re-evaluation of the EIS on the O’Hare Modernization Program.

“Residents are looking for relief from noise now and the FAA’s environmental re-evaluation should validate noise levels and environmental concerns,” ONCC Chair Arlene Mulder said in a prepared statement following the ONCC vote on the resolution.

“The Environmental Impact Study Re-Evaluation has been under consideration since 2011 when the FAA agreed to review interim aircraft noise as a result of negotiations with airlines and the city of Chicago to change the original sequence of the airport’s modernization,” Mulder said. “It’s time to finish this study and address its ramifications.”

The ONCC resolution was offered by Park Ridge, IL, Mayor David Schmidt and had the strong support of the community coalition Fair Allocation in Runways (FAiR), which represents neighborhoods in Chicago and the suburbs newly-impacted by O’Hare noise and has been a driving force in turning the new noise impact into a major political issue in Chicago.

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Both the mayor and FAiR are calling for the resignation of ONCC Chair Mulder, who served as mayor of Arlington Heights, IL, for 20 years until she stepped down from that post last year. Mulder has served at the ONCC chair since the City of Chicago established and funded the organization in 1996 and was re-elected to that post in March.

Mayor Schmidt argues that Mulder should resign her position as ONCC chair because she represents a suburb that will benefit from the runway realignment when a diagonal runway that sends flights over Arlington Heights is decommissioned over the next few years under the O'Hare Modernization Program.

She "has no dog in the hunt," he told the *Chicago Sun Times*.

Schmidt also contends that Mulder has turned the ONCC into "a lap-dog" for the Chicago Department of Aviation, a charge she aggressively refutes.

Mulder told the *Sun Times* that ONCC has worked hard on noise issues, urging the FAA to reconsider its criteria for sound insulation eligibility and instituting a voluntary curfew on the new northern-most parallel runway, which affects Park Ridge.

Mayor Schmidt said he hopes a supplemental EIS would lead to a cap on the number of flights over Park Ridge and would adjust the current airport noise contours so that additional residents qualify for sound insulation.

AA Cutting MD-80 Ops at O'Hare

In related news, American Airlines announced recently that it will cut the number of daily flights in and out of O'Hare Airport using noisier McDonnell Douglas MD-80 aircraft by 53 percent, and replace them with quieter, more fuel efficient aircraft, such as 737s.

An airline spokeswoman said AA has sped up its efforts to retire its MD-80 operations at O'Hare at the request of Chicago Alderman Mary O'Connor, Patrick O'Connor, and Margaret Laurino, who represent areas in northwest Chicago under O'Hare's revised flight paths.

As of Aug. 19, only 29 American Airlines daily flights to and from O'Hare will be on MD-80 aircraft, compared with 62 in previous months, AA said.

The airline's announcement came just 24 hours after the ONCC released new data showing that noise complaints had increased by 150 percent from March to July.

A significant shift in aircraft noise around O'Hare occurred when the airport moved to an east/west flow parallel runway configuration in October 2013 with the commissioning of Runway 10C/28C. A new southern Runway 10R/28L will be commissioned in October 2015.

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