

Key West International Airport
Ad-Hoc Committee on Airport Noise
Agenda for Tuesday, October 2nd, 2018

Call to Order 2:00 pm Harvey Government Center

Roll Call

- A. Introduction of Richard Strickland, Director of Airports
- B. Review and Approval of Meeting Minutes
 - 1. For March 6th, 2018
 - 2. For June 5th, 2018
- C. Ad-Hoc Committee Members
 - 1. Discussion of potential nominee for Alternate Aviation Representative, Andrea Haynes, Signature Flight Support
- D. BOCC Meeting - September 19, 2018
 - 1. Ratification and Approval of FAA AIP Grant Agreement #3-12-0037-057-2018
 - 2. Award of Contract for NIP Construction
 - 3. Award of Contract for NIP Program Management
 - 4. Approval of Avigation Easements for Building B, Floors 3-6
 - 5. Award of Contract for Airport Noise Program Coordinator
- E. Discussion of NIP Implementation
 - 1. Status of Construction of Building B, Floors 3-6 (34 units)
 - 2. Final Bid Document Preparation & Bidding of KWBTB Building C
- F. Other Reports:
 - 1. Noise Hotline and Contact Log
 - 2. Airport Noise Reports
- G. Other Discussion

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".

Posted on: September 19, 2018

MONROE COUNTY BOCC APPROVES RICHARD STRICKLAND AS THE NEW DIRECTOR OF AIRPORTS

The Monroe County Board of County Commissioners today approved Richard Strickland as the new Director of Airports, a position that oversees Key West International and the Florida Keys Marathon International airports.

Strickland replaces Don DeGraw, who resigned in July 2018.

After a national search, Strickland was chosen from a pool of 97 applicants based on his extensive knowledge in all facets of Airport Management. He has extensive Strategic Planning and Capital Project Planning, the ability to understand and focus on customer service, and is an open communicator who will engage with staff and the community.

Strickland was recommended unanimously by all members of the Selection Committee of County Administrator Roman Gastesi, Employee Services Director Bryan Cook, Airport Manager Beth Leto and Key West Chamber of Commerce Executive Vice President Virginia Panico. The position was advertised extensively. The County hired ADK Consulting & Executive Search to assist in the hiring process.

Strickland has a Bachelor's Degree in Finance, as well as 20 years of related experience in Airport Management. He most recently served for the past five years as Director of the Meadows Field Airport in Kern County, California.

Previously, he has worked at the San Diego International Airport as Manager of Aviation and Landside and at Detroit International Airport as Assistant Director of Aviation Services.

KWIA Ad-Hoc Committee on Noise March 6th, 2018 Meeting Minutes

Meeting called to order by Commissioner Dany Kolhage at 2:00 P.M.

ROLL CALL:

Committee Members in Attendance:

Commissioner Danny Kolhage
Peter Horton, via telephone
Bill Gordon
Marlene Durazo
Dr. Julie Ann Floyd
Harvey Wolney
Nick Pontecorvo

Staff and Guests in Attendance:

Don DeGraw, Monroe County Director of Airports
Deborah Lagos, DML & Associates
Steve Vecchi, THC
Rick Herz, THC
Nat Harris
Brian Corbett, KWBTS

A quorum was present. Commissioner Dany Kolhage chaired the meeting.

Review and Approval of Meeting Minutes for the December 5th, 2017 Ad Hoc Committee Meeting

Commissioner Dany Kolhage asked if there were any comments or corrections to the minutes. Peter Horton mentioned that Danny Kolhage chaired the December meeting, rather than Don DeGraw. Marlene Durazo made a motion to approve the minutes, as amended; Harvey Wolney seconded the motion. The minutes were approved as amended.

Ad-Hoc Committee Members

Nick Pontecorvo was "promoted" from Alternate to Regular Aviation Representative. Marlene Durazo made a motion to nominate Nat Harris as Community Representative, and Theresa Calhoun as Alternate Aviation Representative. Harvey Wolney seconded the motion. The motion was unanimously approved.

KWIA Ad-Hoc Committee on Noise

March 6th, 2018 Meeting Minutes

Discussion of NIP Implementation

Steve Vecchi provided a Power Point Presentation summarizing the progress and challenges of the NIP "Pilot" Project (KWBTTS Building B, Floors and one SF home), as well as the status of the project for Preparation of Final Bid Documents & Bid Process for KWBTTS Building B, Floors 3-6. A schedule for each project, included in the agenda package, was reviewed with the committee.

Brian Corbett commented that the construction workers are polite, and the work is of high quality.

Other Reports

Noise Hotline and Contact Log

Deborah reviewed the four calls received on the hotline.

Airport Noise Report

Deborah mentioned that the 2017 annual index of ANRs was included in the agenda package. The following articles were mentioned: Volume 30, Number 3, "Norway's Short-Haul Flights to be All-Electric by 2040," and Volume 30, Number 2, "Dose/Response Curves on Annoyance Have Shifted Over Time, Study Shows." There were also several articles regarding the FAA working with cities to work out NextGen flight path issues.

Any Other Discussion

Don DeGraw was questioned regarding the nighttime runway work, and the completion of the additional 270 feet for take-off on Runway 9. He responded, saying 100% of the paving and concrete work is finished, however work will continue through May. Around the end of March or early April, the runway will be grooved. It will take seven nights to complete.

Harvey Wolney moved to adjourn the meeting, seconded by Dr. Julie Ann Floyd. The meeting adjourned at approximately 2: 53 pm.

KWIA Ad-Hoc Committee on Noise June 5th, 2018 Meeting Minutes

Meeting called to order by Commissioner Dany Kolhage at 2:00 P.M.

ROLL CALL:

Committee Members in Attendance:

Commissioner Danny Kolhage
Peter Horton
Sonny Knowles
Marlene Durazo
Harvey Wolney

Staff and Guests in Attendance:

TJ Henderson, Monroe County Interim Director of Airports
Beth Leto, Airports Business Manager
Deborah Lagos, DML & Associates
Steve Vecchi, THC
Heather Faubert, THC

A quorum was not present. Commissioner Dany Kolhage chaired the meeting.

Review and Approval of Meeting Minutes for the March 6th, 2018 Ad Hoc Committee Meeting

Since a quorum was not present, this item will be deferred to the next meeting.

Ad-Hoc Committee Members

The position of Alternate Aviation Representative is still vacant. The committee discussed potential nominees, and Andrea Haynes of Signature Flight Support was suggested. TJ Henderson indicated he would follow up with her to see if she would be interested in being on the committee.

Discussion of NIP Implementation

Steve Vecchi provided a Power Point Presentation summarizing the progress and challenges of the NIP "Pilot" Project (KWBTTS Building B, Floors and one SF home), as well as the status of the project for Preparation of Final Bid Documents & Bid Process for KWBTTS Building B, Floors 3-6.

KWIA Ad-Hoc Committee on Noise June 5th, 2018 Meeting Minutes

The Substantial Completion letter issued to Kenmar General Contracting, for completion of the NIP Pilot Project, was included in the agenda package included in the agenda package.

Qualifications for DEC Contracting, LLC were also included in the agenda package.

In response to a question from the Committee, Deborah reiterated the Ad-Hoc Committee's previous decision to allow every eligible homeowner an opportunity to participate in the NIP before allowing anyone a second chance (e.g., they rejected their first opportunity, then changed their mind later).

Other Reports

Noise Hotline and Contact Log

Deborah reviewed the one call received on the hotline.

Airport Noise Report

Peter Horton commented on the number of articles that discussed a variety of studies and surveys being conducted for the FAA, and the amount of time and money being invested.

In addition, the following articles were discussed:

1. Volume 30, Number 8, "U.S. Airline Passengers Will Grow by 400 Million in 20 Years,"
2. Volume 30, Number 9, "Ben & Jerry's Co-Founder Arrested for Noise Protests,"
3. Volume 30, Number 13, "House Passes FAA Reauthorization Bill with at Least 10 Noise Amendments," and
4. Volume 30, Number 15, "NASA Broadens Partnership with UBER on UAM Systems."

Any Other Discussion

None

The meeting adjourned at approximately 2: 50 pm.

Monroe County Board of County Commissioners

Meeting - September 19, 2018

- Ratification and approval of Federal Aviation Administration AIP Grant Agreement #3-12-0037-057-2018 providing funding for the Key West International Airport Noise Insulation Project (NIP) at Key West by the Sea (KWBTs), Building B, Floors 3-6 and final preparation of Final Bid Documents & Bid Process for KWBTs Building C. The project will be funded 90% by FAA, and 10% Passenger Facility Charges (PFC#17).
- Approval to waive a minor bid irregularity and award bid and contract to sole bidder DEC Contracting Group, in the amount of \$3,160,070.52 for the Key West International Airport Noise Insulation Program (NIP) project at Key West by the Sea, Building B, Floors 3-6. Total project cost to be funded by the FAA (90%) and Passenger Facility Charge (PFC) #17 (10%).
- Approval of Professional Service Order #4 with THC, Inc. for the preparation of final bid documents and bid process for Key West by the Sea, building C (76 units), construction management and administration of the Key West International Airport Noise Insulation Program Construction project at the Key West By the Sea, Building B, Floors 3-6 (34 units) in the amount of \$1,310,824.85. All project cost to be funded with FAA Grant# 37-57 (90%) and Passenger Facility Charge# 17 (10%). The total number of units may change if homeowners decide to opt out of the program.
 - PSO #4A - Preparation of Final Bid Documents and Bid Process for KWBTs Building C - \$515,860.20
 - PSO #4B - Construction Management & Administration for KWBTs Building B, Floors 3-6 - \$894,795.65
- Approval of Avigation Easements and Property Owner Noise Insulation Agreements for thirty-two (32) participating units at Key West by the Sea for the Key West International Airport Noise Insulation Program (NIP) Building B, Floors 3-6 Construction Project.
- Approval of Jacobs Project Management Co.'s Task Order No. 12/15- 34 for Airport Noise Program Coordinator Services PSO# 34 in the amount of \$83,873.00 to be funded 90% by FAA Grant# 37-57, and 10% Passenger Facility Charges (PFC#17).

**Key West International Airport
Noise Insulation Program (NIP)**


KWBTS NIP UPDATE

NIP Pilot Project
KWBTS Building B Floors 3-6 (34 Units)
KWBTS Building C




October 2, 2018






AGENDA ITEMS

1. KWBTS Master Phasing Plan Review
2. NIP Pilot Project Update
3. Update of KWBTS Asbestos Testing
4. Building B (Floors 3-6) Construction Process
5. Building C Design Review Process Update
6. Building C Construction Plan and Challenges



Review of KWBTS NIP Master
Phasing Plan & Requirements



KWBTS NIP Master Phasing Plan

Current KWBTS NIP Implementation Plan


2017-18 Grant (completed)
Construction of NIP Pilot
Design Review & Bid of Building B (Floors 3-6)

2018-19 Grant
Construction of Building B (Floor 3-6)
Design Review & Bid of Building C

2019-20 Grant
Construction of Building C
Design Review & Bid of Building A


2020-21 Grant
Construction of Building A

The above implementation plan is contingent upon FAA funding, hurricane impact potential and contractor capability and interest.



KWBTS NIP Pilot Project Update

Achieved Noise Level Reduction
(NLR) Results




Achieved Noise Level Reduction (NLR)

The primary goal of the Key West International Airport Noise Insulation Program (NIP) is to achieve a minimum noise level reduction (NLR) of five (5) decibels in a treated property.

Though challenging at times, a minimum 5 decibel NLR can be achieved by providing an array of acoustical modifications to the participating property that provide a reduction in the level of air infiltration from the exterior, where aircraft noise is present.

Since noise travels through air, the reduction of the infiltration of exterior air will provide a reduction of the interior noise level.

Before NIP Pilot Project construction occurred, the NIP Management Team conducted "pre" noise testing to determine the existing levels of exterior air infiltration. Based on this information, a unique NIP acoustic modification package was developed intended to achieve a NLR greater than 5 decibels.




Achieved Noise Level Reduction (NLR)

After the completion of the NIP Pilot Project construction, "post" noise testing was conducted to determine the actual achieved NLR in the treated 17 KWBTS condominiums and the single family home.

The NIP Management Team is pleased to announce that the average achieved NLR levels exceeded the 5 decibel reduction goal in the 18 participating NIP Pilot Project properties:

KWBTS Condominiums (17)
 Range of Achieved NLR Levels: **8 to 15 decibels**
 Average Achieved NLR Level: **12 decibels**

Single Family Home (1)
 Average Achieved NLR Level: **18 decibels**




Achieved Noise Level Reduction (NLR)

These excellent NLR results were partially due to the use of replacement windows and doors that provided both a high sound transmission class (STC) rating, as well as compliance with Category 5 hurricane impact requirements.


The achieved NLR level of 12 decibels in the KWBTS condominiums also justifies the need for the Energy Recovery Ventilator (ERV) unit. Given the existing concrete building and this high reduction in the infiltration of exterior air, it is critical that the condominiums have an ERV unit that provides a continual exchange of inside / outside air to ensure a healthy interior environment.

In summary, these excellent NLR results will provide a foundation of excellence for all future NIP participants.



KWBTS NIP Pilot Project Update

Property Owner Satisfaction Survey Results



Pilot Property Owner Surveys

Consultant Team Performance Results *(Excellent, Very Good, Good, Fair, Poor)*


Did the Team represent and describe the noise insulation modifications?
Excellent 100%

Did the Team thoroughly explain the NIP legal documents?
Excellent 98% **Very Good** 2%

Was the Team staff helpful, courteous and responsive to your questions?
Excellent 98% **Very Good** 2%

Please rate the Team staff's overall performance and quality of work?
Excellent 100%

Did the Construction Manager maintain an appropriate level of communication and coordination with you during your NIP construction period?
Excellent 100%




Pilot Property Owner Surveys

General Contractor Performance

Would you recommend the NIP contractor to your neighbor?
Excellent 100%

Did the NIP contractor maintain an appropriate level of coordination and Communication with you during your NIP construction period?
Excellent 100%

Please rate the NIP Contractors quality of work?
Excellent 100%



Pilot Property Owner Surveys

KWBTS NIP Pilot Overall Satisfaction Rating *(Yes, No)*

Are you satisfied with the KWBTS Noise Insulation Program?
Yes 100% **No** 0%

Would you recommend the KWBTS NIP program to your neighbor?
Yes 100% **No** 0%

Are you satisfied with the NIP products?
Yes 100% **No** 0%

Are the noise insulation treatments effective in reducing aircraft noise in your condominium?
Yes 100% **No** 0%

Pilot Property Owner Surveys

Here are a few actual comments received:

"All personnel were very professional and helpful in all matters. The NIP Program and resulting work exceeded our expectations"

"The quality of life "post-project completion" far exceeded my expectations. It's like living in a brand-new / totally different home. The product quality is exceptional. The ERV and AC condenser are "whisper quiet".....for the first 3 days I kept looking at it to make sure it was running! Thank you for making such a HUGE positive improvement to the quality of life at my condo. The workmanship, material and products far exceed anything people have done privately outside the NIP project."

"We were pleased with everyone. Kenmar's workers were extremely helpful and polite. Heather Faubert was wonderful, always available to answer any questions and explain everything. Overall, I think it was an awesome project!"

KWBTS Asbestos Testing Update

KWBTS Asbestos Testing Update

Asbestos Abatement Requirements
 The degree of required asbestos abatement depends entirely on the presence of asbestos containing materials (ACM) in the samples collected:

No Presence of ACM
 No abatement is required

A presence of <1% ACM
 The awarded NIP contractor is required to comply with OSHA worker safety requirements when cutting and sanding gypsum board, to include worker respirators, poly curtain walls and HEPA vacuum units.

A presence > 1% ACM
 The awarded NIP contractor is required to perform full asbestos abatement to include sealed containment, air sampling, safety barricades, worker clearances in containment areas, full worker protective suits, worker decontamination and hazardous waste disposal.

KWBTS Asbestos Testing Update

THC's Environmental Consultant (EE&G) has now completed asbestos testing in all KWBTS Buildings (A, B & C).

Samples were taken of three (3) interior surfaces in each condominium to include:

Gypsum Board (Joint Compound)
Window & Door Caulking
Window Glazing

In addition, random **Stucco** samples were taken at the exterior of both "courtyard" and "walkway" building elevations

THC has received final laboratory tests results for KWBTS Building B (Floors 3-6), Building C and Building A which show differing results in the level of asbestos containing materials (ACM) between KWBTS Building A, B and C.

KWBTS Asbestos Testing Update

Building B – Floors 3-6 Test Results
 100% of all samples collected showed no presence of ACM in all surfaces to include gypsum board joint compound, window glazing, window & door exterior caulking and exterior stucco samples ("courtyard" and "walkway" elevations).

Building C Test Results
No presence of ACM was detected in three (3) surfaces to include windows glazing, window & door caulking and exterior stucco ("walkway & "courtyard" elevations)

However, the gypsum board joint compound contained <1% ACM in ten (10) units (C212, C215, C217, C221, C304, C306, C307, C 307S, C311, C-317).

Given these results, the awarded NIP contractor will be required to comply with OSHA worker safety requirements when cutting or sanding gypsum board in these 10 Building C units.

KWBTS Asbestos Testing Update

Building A Test Results: Interior Surfaces
No presence of ACM was detected in two (2) surfaces to include windows glazing and window & door caulking

However, the gypsum board joint compound contained <1% ACM in twenty three (23) units (A106, A202, A207, A209, A210, A304, A305, A306, A402, A404, A406, A411, A501, A502, A505, A507, A509, A510, A511, A602, A607, A610, A611).

Given these results, the awarded NIP contractor will be required to comply with OSHA worker safety requirements when cutting or sanding gypsum board in these 23 Building A units.

KWBTS Asbestos Testing Update

Building A Test Results : Exterior Stucco

A presence of both <1% ACM and 2-5% ACM was detected on the exterior stucco surfaces on the "walkway" and "courtyard" elevations of Building A.

"Walkway" Elevation
Of the random stucco samples collected at the Building A "walkway" elevation:

- Twenty (20) showed a presence of <1% ACM
- Two (2) showed a presence of 2-5% ACM (units A604, A603)

Given these results, the awarded NIP contractor will be required to comply with OSHA worker safety requirements when disturbing stucco on all "walkway" windows, door and PTAC openings

In addition, the awarded NIP contractor will be required to perform full asbestos abatement in units A603 and A604 when disturbing stucco on the "walkway" windows, door and PTAC openings

KWBTS Asbestos Testing Update

Building A Test Results: Exterior Stucco

"Courtyard" Elevation
Five (5) of the six (6) exterior stucco samples (ground floor level) on the "courtyard" elevation showed a presence of 2-5% ACM. (Units A101, A102, A103, A110, A111)

In a worst-case scenario, these limited test results suggest there is a potential that full asbestos abatement may be required on all "courtyard" windows, patio door and PTAC openings, which would greatly complicate the NIP construction.

The only way to determine if this 2-5% ACM level is consistent to the entire "courtyard" elevation, is to conduct additional stucco testing on the "courtyard" elevation in all participating Building A condominiums.

KWBTS Asbestos Testing Update

Supplemental Building A Stucco Testing

To minimize the full abatement requirement on the entire "courtyard" elevation of Building A, the NIP Management Team and FAA have decided to collect two (2) additional stucco samples in all participating condominiums on the balcony / patio wall:

- stucco adjacent to sliding patio door
- stucco near existing PTAC or existing ductless AC condenser

Once collected and analyzed, these additional stucco samples could have the potential to reduce the NIP Contractor's requirement to perform full asbestos abatement at all units on the entire "courtyard" elevation:

- If a unit tests >1% ACM: full asbestos abatement will be required
- If a unit tests <1% ACM: OSHA worker safety rules will be required
- If a unit tests no ACM: No additional measures will be required

KWBTS Asbestos Testing Update

Supplemental Building A Stucco Testing (cont.)

The NIP Management Team will be conducting the supplemental asbestos testing in all participating Building A condominiums during the November 5 – 8 period.

To facilitate the collection of additional stucco samples, all participating Building A property owners would be assigned a 4-hour time period (8:00am – 12:00 noon, 1:00pm – 5:00pm).

It should be noted that the requirement of full asbestos abatement on the "courtyard" elevation of Building A condominiums (window & door replacement, wall infilling, mechanical and electric AC work) will increase both construction time periods and costs.

Once the supplemental stucco testing results become available, the NIP Management Team will review and define the impact of asbestos abatement on the original Building A construction process assumptions.

KWBTS Building B (Floors 3-6) Construction Process

1. Project Overview

KW NIP Building B Scope - 32 Total Units (310, 401 recent dropouts)

- Floor 3 – 9 Units:** 301, 302, 303, 304, 305, 306, 308, 311
- Floor 4 – 9 Units:** 403, 404, 406, 407, 408, 409, 410, 411
- Floor 5 – 9 Units:** 501, 502, 503, 504, 507, 508, 509, 510, 511
- Floor 6 – 7 Units:** 602, 603, 604, 605, 608, 609, 610

1. Project Overview

Building B Construction Sub-Periods 1 – 5

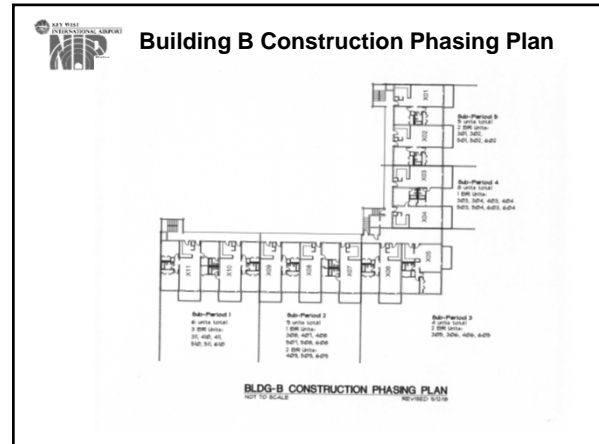
Construction Sub-Period 1 (6 units)
311, 410, 411, 510, 511, 610 (non-participant: 310, 611)

Construction Sub-Period 2 (9 units)
308, 407, 408, 409, 507, 508, 509, 609, 608 (non-participants: 309, 307, 607)

Construction Sub-Period 3 (4 units)
305, 306, 406, 605 (non-participants: 405, 505, 506, 606)

Construction Sub-Period 4 (8 units)
303, 304, 403, 404, 503, 504, 603, 604

Construction Sub-Period 5 (5 units)
301, 302, 501, 502, 602 (non-participants: 401, 402, 601)



KWBTS NIP – Building B (Floors 3-6)

Building B Construction Schedule Development

It is anticipated that Monroe County will award the Building B – Floors 3-6 construction contract to DEC Contracting Group in late September.

The NIP Project Manager will issue the Notice to Proceed – Permits on September 26, 2018.

Upon this issuance, the Contractor will be required to submit their proposed construction schedule for the 32 condominiums to the NIP Project Manager for review, based on the five (5) defined construction sub-periods.

Once reviewed and approved, the NIP Project Manager will communicate final construction schedule assignments to the 32 participating Building B Property Owners in early October, 2018.

KWBTS NIP – Building B (Floors 3-6)

Building B Construction Sub-Periods 1 - 5

Contractor will be required to complete construction in the above five (5) Building B Construction Sub-Periods, beginning with Sub-Period 1.

Contractor will be allowed a total of twenty (20) calendar days in each of the 32 condominiums.

Once construction is initiated in a condominium, the Contractor will be limited to five (5) simultaneous construction starts.

KWBTS NIP – Building B (Floors 3-6)

TOTAL CONTRACT TIME (301 Calendar Days)

PRE-CONSTRUCTION 9/26/18- 1/27/19 (124 Calendar Days)

Notice to Proceed - Permits	September 26, 2018
Contractor Walk & Final Measurement	October 1 - 5, 2018
Shop Drawings, Product Submittals Review	October 8 – November 16, 2018
Product Procurement	November 16, 2018 – January 27, 2019
Mobilize and Prepare Site	January 14 – 27, 2019

CONSTRUCTION BASE BID 1/28/19 - 7/23/19 (177 Calendar Days)

Notice to Proceed - Construction	January 28, 2019
Construction (Sub-Periods 1-5)	January 28 – July 8, 2019
Post Construction Closeout	July 9 - 23, 2019

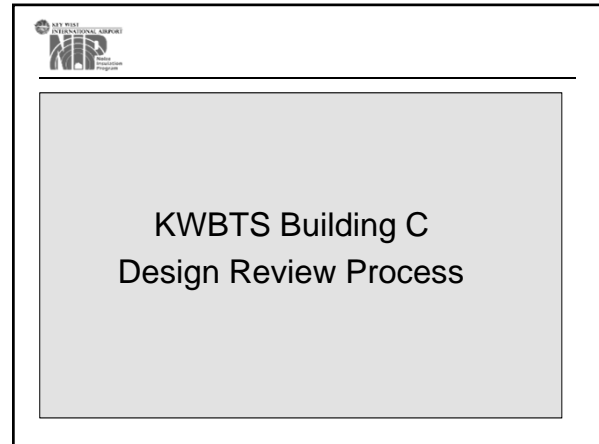
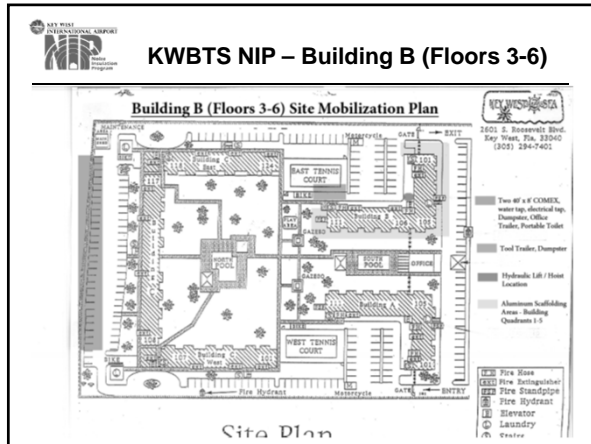
KWBTS NIP – Building B (Floors 3-6)

Scaffolding Requirement: Courtyard Elevation

In each of the 5 Construction Sub-Periods, the Contractor will be required to utilize scaffolding on the Courtyard elevation of Building B (and building ends) from Floors 1-6 to meet strict "high rise" construction safety requirements. This plan will limit the scaffolding to only one (1) Building Quadrant at a time.

Vertical Hoist Requirement: Parking Lot Elevation

During the entire Building B construction period, the Contractor will utilize a Vertical Hoist on the Building B Parking Lot Elevation as the primary method of delivering construction materials and products to floors 3 -6.



KWBTS Building C Design Review Process

During the November 1, 2018 to March 1, 2019 time period, the NIP Design Team will conduct several design tasks for the participating Building C Property Owners:

- Distribution of Draft Design Documents
- Preparation and Distribution of Legal Documents
- Scheduling and Conducting Design Review Meetings
- Finalization of Design Documents
- Identification of Required "Pre-Work" Items
- Pre-Construction Property Owner Orientation Session

KWBTS Building C Design Review Process

During the January 1 to March 1, 2019 time period, the NIP Design Team will also conduct several Bid Document preparation tasks for to prepare for the bidding of the Building C Bid Process C:

- Update Bid Documents
- Update Specifications (Volume 1, 2 & 3)
- Finalization of Construction Drawings
- Bid Advertisement Development

During the March to May 2019 time period, the NIP Design Team will also conduct several Bid Process tasks for the participating condominiums in Building C :

- Bid Advertisement
- Pre-Bid Meeting
- Bid Opening
- Bid Review and Contract Award Recommendation



KWBTS Building C Construction Period


Potential for a Building C Bid Package that Includes All Condominiums

The NIP Management Team is considering the option of developing a bid package that contains all seventy six (76) Building C condominiums.

Given the large number of participating Building C condominiums (*the majority of which are 3-bedroom units*), a longer construction period would be required.

Early projections show that the Building C construction period might occur during late January to October / November 2020.

Using the same methodology as utilized on the Building B – Floors 3-6 Project, the NIP Management Team projects that the Building C construction would be phased into **nine (9) sub-construction periods** designed to maximize Contractor efficiency and minimize Building C Property Owner disruption.

 **KWBTS Building C Construction Period**

Hurricane Season Challenges


Unfortunately, a longer Building C construction duration will extend into the Key West Hurricane Season (*traditionally June – November*), which will introduce several additional challenges that will need to be addressed:

1. Potential for Construction Delays and Stoppages

In the event of a threat of an approaching hurricane and/or actual Key West hurricane event, the NIP Building C construction contract would need to contain additional language that would address:

- additional construction work days
- additional monies for mobilization
- additional monies for labor, lodging and per-diem.
- additional monies
- additional contractor liability coverages

The above could be addressed as "Unit Price" line items in the NIP Building C Bid Documents.

 **KWBTS Building C Construction Period**


Hurricane Season Challenges (cont.)

2. Potential for Property Owner Inconveniences

When awarded, the Building C Contractor will develop and assign construction period of 20 calendar days to each of the participating Building C Property Owners. In the event of work stoppages due to a hurricane threat, this 20-day period would need to be revised for numerous Building C Property Owners. This has the potential to create a major inconvenience to many participating Property Owners including:

- revising owner relocation period
- revising tenant relocation period
- revising furniture moving schedules

All participating Building C Property Owners would have to agree in advance to the potential for the inconveniences due to potential Hurricane construction work stoppages in exchange for the NIP improvements.

 **KWBTS Building C Construction Period**


Hurricane Season Challenges (cont.)

3. Potential for Additional Consultant Costs

Since the NIP Management Team will be responsible for the daily management of the NIP construction, as well as all Property Owner communication and construction assignments, stoppages due to a hurricane threat will have the potential to increase consultant costs that would include:

- Construction Management costs
- NIP Design Team
- Project Management

These costs would need to be included as "contingency costs" in the annual NIP consultant contract budget.

 **KWBTS Building C Construction Period**

Hurricane Season Challenges (cont.)

4. Potential for Slight Delay of Building A Pre-Construction Activities

This extended Building C construction period could have the potential to slightly delay the Building A pre-construction process and start of NIP construction.

In addition, the Building A asbestos tests findings will also have the potential to revise or extend original Building A construction timelines and cost.

 **KWBTS Building C Construction Period**

Questions?

Key West International Airport Noise Hotline Log

Date of call	Time of call	Caller	Contact information	Message
6/19/2018	11:19 AM	Nathaniel Harris	La Brisas full-time resident	At 9:35 AM a FedEx plane came within 200 feet of flying over LaBrisas. This is too close; they are not obeying the rules.
6/26/2018	4:09 PM	Nathaniel Harris	La Brisas full-time resident	He noticed the roofing contractor was flying a drone over LaBrisas to check their work. He questioned whether this was allowed, and was told by the contractor that they were allowed to fly up to 400 feet ASL. He finds that to be a problem.
7/3/2018	11:33 AM	Dave Zensinger	2023 Catherine Street; 305-304-4692	He is on the direct flight path, and wanted to discuss the 45 dB interior threshold and his potential eligibility for the NIP.
7/30/2018	11:30 AM	Nathaniel Harris	La Brisas full-time resident	Between 8:30 and 9:30 AM a Cessna 150 (white plane with green accents) was conducting T&Gs. The noise is a problem; they should not be flying over LaBrisas.
8/1/2018	6:52 PM	Joel Cognevich	3632 Sunrise Dr. 713-409-9891	A yellow tourist helicopter keeps flying over our house near the airport. This is the third time it has flown over.

Airport Noise Report



A weekly update on litigation, regulations, and technological developments

Volume 30, Number 17

June 1, 2018

New Aircraft

JETSUITE IS LAUNCH CUSTOMER FOR ZUNUM REGIONAL HYBRID-ELECTRIC AIRCRAFT

Charter operator JetSuite will be the launch customer for Zunum Aero's 12-seat hybrid-to-electric aircraft, which is slated for delivery in 2022, will have a range of 700 miles, and is expected to reduce community noise levels by 80%.

The launch will mark the first step in Zunum's goal of creating a regional electric air network providing frequent air service to underused regional and general aviation airports. By 2030, the firm, which is backed by Boeing and JetBlue, expects to expand the network with up to 50-seat hybrid-electric aircraft with a range of 1,000 miles.

Zunum says its hybrid-electric aircraft "could light up a network of over 5,000 under-utilized airports in the U.S. alone, delivering significantly lower door-to-door times and emissions at fares below commercial today."

"JetSuite, with its tradition of shifting paradigms in aviation, is an ideal partner for us in this launch collaboration," said Zunum Aero CEO Ashish Kumar. "We have a shared vision for fundamentally transforming and improving the way that people live and travel."

(Continued on p. 66)

Legislation

NASA'S AERONAUTICS PROGRAM BUDGET WOULD GET BIG BOOST UNDER SENATE BILL

NASA's Aeronautics program budget would be significantly increased over the next five years under the Aeronautics Innovation Act (S. 2977), which was introduced by Sens. Jerry Moran (R-KS) and Mark Warner (D-VA) on May 24.

"In order for the U.S. to boost its competitive edge in aeronautics, Congress must enact policies that invest in long-term research and development," said Sen. Warner.

"With countries across the globe looking to profit from record demand in the coming years for commercial aircraft, competition is fierce to lead the way in developing next-generation technology.

"This bill lays out a blueprint for how the U.S. can lead the world in a new age of manufacturing, where we can build the safest, quietest, most-fuel efficient and environmentally friendly planes available."

The Aerospace Industries Association applauded Sens. Warner and Moran, the Senate Aerospace Caucus co-chairs, for championing the legislation, which will provide continuity and budget stability for aeronautics research.

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Hybrid-Electric Aircraft ...

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Legislation ... NASA's Aeronautics program budget would get a big boost for the next five years under bill introduced in Senate - p. 65

... House passes DOD spending bill that requires Navy to share military jet noise reduction technology with civilian community - p. 67

Phoenix Sky Harbor ... FAA implements nine RNAV departure procedures in compliance with noise reduction plan agency developed with City of Phoenix, historic neighborhood groups after court loss - p. 66

Briefs ... FAA extends comment period for EIS on new runway, other projects at Charlotte Douglas Int'l because of error in e-mail address for comments - p. 68

Zunum, from p. 65

By bringing major airliner operating economics to a mid-sized platform, Zunum said its aircraft will enable JetSuite to provide fast, quiet, and comfortable service to its customers while reducing its carbon footprint by up to 80 percent. Through the partnership, JetSuite will add up to 100 Zunum Aero aircraft to its fleet.

Its aircraft, Zunum said, are well-positioned to refresh the roughly \$1 trillion stock of aircraft currently serving regional routes. Notably, Zunum has disclosed that its range-optimized aircraft feature a maximum cruise speed of 340 mph and have a low runway requirement of 2,200 feet for takeoff.

Zunum said its aircraft “are optimized for distances up to 1,000 miles, where efficient travel options are limited, with low numbers of regional flights, high costs and cumbersome door-to-door travel times, making it a perfect fit for the short-haul private and semi-private travel offered by both JetSuite and JetSuiteX.

80% Noise Community Noise Reduction

By reducing noise and emissions by 80 percent, Zunum said its aircraft are positioned to fly near residential communities, accessing over 5,000 underutilized airports in the U.S., reducing door-to-door travel times and costs.

The company told ANR that its noise reduction estimate is based on “analysis of our low pressure electric ducted fans, absence of spoilers, and of the turbogenerator encapsulated in the rear fuselage.”

The company will produce the electric motors used in its aircraft and Zunum aircraft/engines will have to be certified by FAA as meeting current aircraft noise standards.

Asked if noise levels of its aircraft will increase with increasing aircraft size, Zunum replied, “Not clear. We will need to increase pressure ratios for the larger aircraft but also expect our quiet technologies to improve in future platforms.”

Asked if they planned any demonstrations of the noise levels of their hybrid-electric aircraft, the firm said, “Of course. In wind tunnels, in ground test rigs, the flying testbed, and in the prototype aircraft.”

Flight Tests Begin in 2019

Zunum Aero said it remains on track for flight testing in 2019, and is rapidly growing its technical bench across power electronics, electric motors, propulsors, and aircraft.

“In short order, Zunum and JetSuite will prove out a model that is incredibly innovative,” said Logan Jones, managing director at Boeing HorizonX, a Zunum Aero investor. “We look forward to seeing the impact of a partnership between two exciting companies in aviation.”

For information, please visit <http://www.JetSuiteX.com>

Phoenix Sky Harbor Int'l**FAA IMPLEMENTS REPLACEMENT NEXT-GEN DEPARTURE ROUTES**

On May 24, the FAA implemented nine replacement Area Navigation (RNAV) Standard Instrument Departure (SID) procedures for aircraft departing west out of Phoenix Sky Harbor International Airport.

The new departure procedures, which also apply to aircraft that turn south after departing to the west, are intended to provide relief from aircraft noise by approximating the westerly departure routes in place prior to September 2014 when FAA implemented new NextGen RNAV departure procedures out of Sky Harbor.

Those procedures moved aircraft over historic areas of Phoenix that had previously had no overflights.

Enraged that they had not been notified of the 2014 flight path changes, the City of Phoenix and several historic neighborhood associations filed a lawsuit in the U.S. Court of Appeals for the District of Columbia Circuit, which resulted in a stinging loss for the FAA in an Aug. 29, 2017, court ruling in *City of Phoenix, Arizona v. Huerta*.

The Court held that the September 2014 RNAV departure procedures violated the National Historic Preservation Act, the National Environmental Policy Act, and the Department of Transportation Act because that agency had implemented them without adequately notifying local elected officials and residents and allowing them to comment on the procedures (29 ANR 111). The ruling was significant because it was the first to vacate NextGen routes for failure to follow environmental laws and involve stakeholders.

Rather than appeal the ruling, FAA decided to work with the City of Phoenix and historic neighborhood groups to develop a two-step plan to address the noise impact of the post September 2014 RNAV departure procedures.

FAA’s May 24 action completes Step One of that two-step plan. Under Step Two of the joint plan, FAA will consider feedback on airspace procedures throughout the Phoenix area, not just on the westerly departure routes.

The agency said it is in discussions with the City of Phoenix to determine how Step Two should proceed.

On May 22, in the *Federal Register*, the FAA issued a Notice of Availability of a Categorical Exclusion/Record of Decision approving the new westbound departure routes implemented under Step One of the joint noise mitigation plan.

The agency said those routes complied with the National Environmental Policy Act and would not result in any extraordinary circumstances in accordance with FAA Environmental Order 1050.1F. FAA also said it considered the approximately 1,100 public comments it received on the new westbound departure routes.

FAA’s notice on the new routes at Phoenix is at:

https://www.faa.gov/nextgen/nextgen_near_you/community_involvement/phx/

Legislation

BILL REQUIRES NAVY TO SHARE JET NOISE REDUCTION TECH

Congresswoman Grace Meng (D-NY) announced May 30 that the U.S. House of Representatives has passed her measure to authorize a Jet Noise Reduction Program within the U.S. Navy's Office of Naval Research.

Under the Jet Noise Reduction Program, the Secretary of the Navy would be required to share relevant military aircraft noise reduction technologies with the civilian community.

Meng's measure was included as an amendment to the fiscal year 2019 National Defense Authorization Act (NDAA), which established funding levels and policies for the U.S. Department of Defense. The bill will take effect on Oct. 1 after being signed into law.

The congresswoman originally secured the authorization of her Jet Noise Reduction Program in last year's House-passed NDAA but the measure was not included in the version passed by the Senate. She is hopeful that her provision will be in both versions this year.

Meng's Jet Noise Reduction Program seeks to reduce engine noise of high-performance military aircraft. Any breakthroughs that are made could possibly be applied to commercial jets, which would result in decreased airplane noise over communities.

"The Jet Noise Reduction Program has the potential to be a critical component in mitigating excessive aircraft noise over communities like Queens," said Rep. Meng, a founding member and former Co-Chair of the Congressional Quiet Skies Caucus.

"That is why it's important for Congress to authorize this initiative, and I'm pleased that the House has voted to do so. The U.S. military has made many significant breakthroughs over the years that have greatly benefitted our nation. Many of these advancements have been implemented for civilian use and the same can certainly be done for combating airplane noise.

"Excessive airplane noise remains a major issue that negatively impacts residents of our borough, and we must continue to take advantage of all opportunities – such as measures like this – that can help provide long-term solutions to the problem. I now call for the NDAA to be passed by the Senate with this specific provision included and I'm hopeful that this will happen."

"Authorizing the Jet Noise Reduction Program will ensure we can provide relief to the thousands of families living in Queens and the Bronx that are burdened with excessive aircraft noise," said Rep. Crowley.

"This program is crucial to our efforts to reduce noise pollution in New York City. The U.S. military has always paved the way on technological breakthroughs in aviation, and I am eager to work with our armed forces as they develop and deploy aircraft technologies that help combat the excessive noise that has plagued our communities."

Legislation, from p. 65

"This legislation will support research in new sectors of the industry, including electric propulsion, simplified air vehicle operation, and increased vertical takeoffs and landings, as well as research efforts on unmanned aircraft systems and supersonic flight," the General Aviation Manufacturers Association said.

Key Provisions

Key provisions of the Aeronautics Innovation Act would:

- Authorize robust funding levels for NASA's Aeronautics Research Mission Directorate (ARMD) over the next five years. The directorate would be funded at levels of \$790 million in fiscal year 2019; \$930 million in fy 2020; \$974 million in fy 2021; \$996 million in fy 2022; and \$1.03 billion in fy 2023.

The Trump Administration is seeking only \$634 million to fund NASA's Aeronautics Directorate in fy 2019. That is \$156 million less than what the legislation would provide in fy 2019;

- Ensure sustained congressional support for ARMD's Strategic Implementation Plan, a forward looking strategy that supports the future needs of the aviation community;

- Build on the success of NASA's Advanced Composites Consortium to enhance public-private collaboration on transformative aeronautics research necessary to maintaining competitive advantages in aircraft manufacturing;

- Establish a national policy for aeronautics research that will maintain U.S. superiority in air capabilities and aviation industrial leadership.

- Establish a new series of experimental plane, or "X-Plane," programs, including:

- (1) A low-boom supersonic aircraft that will demonstrate supersonic aircraft designs and technologies that reduce sonic boom noise to levels that encourage the repeal of domestic and international bans on supersonic flight overland and gather the data needed to support informed decisions of the FAA regarding overland supersonic flight; and

- (2) A series of large-scale X-Planes to demonstrate alternative propulsion and energy systems, to enable significant increases in energy efficiency and lower life cycle emissions while achieving "a step change" in noise emissions, and to demonstrate high-speed flight propulsion concepts and technologies;

- Direct NASA's continuing support of unmanned aircraft system development, particularly unmanned traffic management and on-demand mobility technologies;

- Establish a 21st Century Aeronautics Capabilities Initia-

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tive, a program designed to modernize NASA's aeronautics facilities, such as wind tunnels and modeling and simulation capabilities.

S. 2977 is the companion bill to bipartisan legislation introduced by Reps. Steve Knight (R-CA), Marcy Kaptur (D-OH), Bobby Scott (D-VA) and others in the House of Representatives.

Sens. Moran and Warners noted that aviation forecasts estimate that the world's demand for passenger aircraft with over 100 seats will double over the next 20 years, generating between 35,000 and 40,000 new plane orders worth more than \$5 trillion by 2035.

"The future of our aerospace industry depends on our investment in research, testing, and manufacturing," said Sen. Moran.

In Brief...

Comment Period on Charlotte-Douglas EIS Reopened

FAA announced May 25 that it is opening an additional 45-day public comment period on the Environmental Impact Statement for proposed projects at Charlotte Douglas International Airport.

The comment period now closes on July 9.

FAA explained that it has extended the comment period on the EIS because the e-mail address it provided for the original comment period was incorrect.

Residents who submitted comments to the previous, incorrect address should resend their comments to the correct email address: 9-ASO-CLTEIS@faa.gov

FAA said it also will accept new comments during the additional comment period.

The agency said it anticipates that the additional comment period will not affect the EIS schedule. FAA expects to publish a Draft EIS and hold public hearings and an additional public comment period in late 2019. It plans to issue a Final EIS and Record of Decision in mid-2020.

The EIS will evaluate potential environmental impacts that may result from the Airport's proposed projects, which include a 12,000-foot-long fourth parallel runway, associated taxiways, and terminal and ramp expansion. The project would require the decommissioning of Runway 5/23 and relocation of West Boulevard.

Details on the project at CLTEIS.com

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Cleveland/Detroit Metroplex

FAA CONCLUDES METROPLEX PROJECT WILL HAVE NO SIGNIFICANT NOISE IMPACT

Extensive airspace changes to make the Cleveland/Detroit Metroplex airspace more efficient will have no significant environmental impact, including on noise and air quality, FAA concluded in its Final Environmental Assessment of the project issued on June 1.

FAA issued a Finding of No Significant Impact (FONSI) and Record of Decision (ROD) for the project, which will affect two major airports – Detroit Metropolitan Wayne County Airport and Cleveland Hopkins International Airport – and 10 satellite airports in a study area that includes all or parts of 58 counties in four states: Michigan, Ohio, Pennsylvania, and West Virginia.

Most of the airspace changes involve the redesign of standard instrument arrival and departure procedures to more efficiently service the Cleveland/Detroit Metroplex airports.

The FONSI, the FAA said, “enables the agency to move forward with modernized, satellite-based procedures to replace dozens of existing, decades-old conven-

(Continued on p. 70)

Heathrow Airport

UK GOV'T APPROVES NEW THIRD RUNWAY; UP TO \$3.47 BILLION TO ADDRESS NOISE

After years of debate and delay, on June 5, the British Government told Parliament that it approves construction of a controversial 6,560 foot third runway at London Heathrow Airport on the condition that it includes up to \$3.47 billion for noise mitigation and compensation.

The new Heathrow runway is part of the UK Government’s final Airport National Policy Statement (NPS), which was presented to Parliament by Secretary of State for Transport Chris Grayling.

Parliament must approve the policy statement in the next few weeks for the runway, which will be privately financed, to move forward. The target date for opening the new runway is 2026. But, even if approved by Parliament, the runway project will almost certainly be challenged by community groups or local governments.

“This is a bad day for residents,” said John Stewart, chair of the Heathrow anti-noise community group HACAN. Many communities will face “a tsunami of noise” if a third runway is added to Heathrow, he predicted.

(Continued on p. 70)

In This Issue...

Metroplex ... FAA issues a FONSI/ROD for the Cleveland/Detroit Metroplex project; finds that 71 new Next-Gen procedures to make the airspace more efficient will have no significant environmental impact, including on noise and air quality - p. 69

Heathrow ... UK Government approves controversial third runway at Heathrow Airport; supports up to \$3.47 billion to address noise impact; Parliament must still vote on runway - p. 69

Reagan National Airport ... Arlington County, VA, and Montgomery County, MD, will jointly fund \$250,000 noise study to find ways to mitigate noise impact of NextGen departure routes to the north of airport - p. 71

Briefs ... FAA announces market survey to get information on firms able to teach course on aircraft noise measurement to FAA aerospace engineers ... FAA reroutes aircraft away from Lake Arrowhead - p. 72

Cleveland, from p. 69

tional air traffic control procedures. Travelers will benefit with safe and more efficient optimized routing through precise flight tracks that keep routes automatically separated. This in turn reduces the need for vectoring and controller-pilot workload.”

FAA plans to begin phasing in the NextGen satellite-based navigation procedures this month and continuing through September 2018. In all, the Cleveland/Detroit Metroplex project includes 71 new satellite-based procedures.

The project also expands the number of entry and exit points into and out of the Cleveland/Detroit airspace, which is like creating more on- and off-ramps in the sky. It includes two major airports and 10 satellite airports.

No Significant Noise Impact

The FAA’s environmental analysis for the project calculated noise at locations throughout the study area. The analysis concluded the proposed action would not result in any significant noise increases under the National Environmental Policy Act as defined in FAA’s environmental order.

“A total of 335 people, associated with six population centroids located in Sumter Township southwest of DTW would experience a DNL 5 dB increase in areas exposed to DNL between 45 dB and 60 dB,” FAA noted in its FONSI/ROD.

“This reportable noise increase is attributable to aircraft operating on the proposed KAYLN1 and CCOBB1 SIDs [Standard Instrument Departures], FAA explained.

“Although there is a reportable noise increase in 2018, these results indicate that the Proposed Action would not result in a significant noise exposure impact on population exposed to DNL 65 dB or higher levels under the Proposed Action. Thus, the Proposed Action would not result in significant noise impacts. Accordingly, no mitigation is required per FAA Order 1050.1F, Appendix A, paragraph 14.4c.”

FAA considers a proposed action to have a significant noise impact only if it would result in a DNL 1.5 dB or higher increase in noise-sensitive areas exposed to aircraft noise at or above DNL 65 DNL.

The agency said some people in the study area will experience slight noise decreases, some will see no changes, and some will experience small noise increases.

“Some flight track dispersion will continue to occur after the new procedures are implemented because the Metroplex project would not change a number of existing procedures. Also, air traffic controllers will need to occasionally vector aircraft for safety or efficiency reasons or to reroute them around weather systems,” FAA said.

“When the Cleveland/Detroit Metroplex procedures are implemented, some people might see aircraft where they did not previously fly. This is because some air route changes will occur, and because satellite-based procedures create more concentrated flight paths than conventional procedures,” FAA noted in its announcement.

The Finding of No Significant Impact/ Record of Decision, as well as the Final Environmental Assessment, are available on the Cleveland/Detroit Metroplex website:

http://www.metroplexenvironmental.com/cle_dtw_metroplex/cle_dtw_docs.html

Does FAA Action Start Clock on Challenge?

ANR asked aviation attorney John Putnam with the Denver law firm Kaplan Kirsch & Rockwell if FAA’s issuance of the FONSI/ROD for the Cleveland/Detroit Metroplex project starts the 60-day clock on filing challenges of the project?

He replied, “FAA has taken the position that the issuance of the ROD triggers the start of the 60-day clock and the D.C. Circuit agreed in the *Georgetown* case. However, the precedent would not bind the Sixth Circuit, which could hear any possible challenges [of the Cleveland/Detroit Metroplex project]. But, it would be persuasive. Parties that are thinking about challenging the decision should avoid any doubt by filing within 60 days of the ROD.”

Heathrow, from p. 69

“Many people who will be under new flight paths will find their lives changed forever. We will continue to oppose a new runway but, obviously if it becomes inevitable, we will fight for the best conditions possible for residents.”

If Parliament backs a third Heathrow runway, Stewart said, it becomes Government policy and Heathrow will start drawing up its detailed plans, which will be put out to public consultation next year and laid before a planning inquiry in 2020. If the plans are approved, Heathrow hopes to start building the runway in 2021.

Binding Noise Conditions

In his statement to Parliament approving the new Heathrow runway, Secretary of Transport Grayling said he recognized “the strong convictions many members of this House and their constituents have on this issue, and the impacts on those living in the local area. It is for this reason that we have included strong mitigations in the NPS to limit these impacts.

“Communities will be supported by up to £2.6 billion (\$3.47 billion) towards compensation, noise insulation, and improvements to public amenities – 10 times bigger than under the 2009 third runway proposal.

“This package is comparable with some of the most generous in the world and includes £700 million (\$934.8 million) for noise insulation for homes and £40 million (\$53.4 million) to insulate schools and community buildings.

“The airport has offered 125% of the full market value for homes in the compulsory and voluntary purchase zones, plus stamp duty, moving costs and legal fees, as well as a legally-binding noise envelope and more predictable periods of respite.

“For the first time ever, we expect a 6 and a half hour ban

on scheduled night flights,” Grayling said but *The Guardian* newspaper pointed out that waters down Grayling’s previous commitment to “guarantee” a 6.5 hour night ban on flights.

Grayling noted that earlier this year a Community Engagement Board was established. He said it will focus on “building relations between Heathrow and its communities, considering the design of a Community Compensation Fund which could be worth up to £50 million (\$66.7 million) a year, and holding the airport to account when it comes to delivering on its commitments today and into the future.”

If Parliament approves the new Heathrow runway, the next step would be for Heathrow officials to develop their runway plans, including details of the scheme design and air-space changes, and hold a further consultation.

This allows the public a further say on the next phase of Heathrow’s plans and provides additional opportunities to have their voices heard.

Noise Increase for More than 2 Million People

The Guardian reported on April 9 the “more than 2 million people would be exposed to additional aircraft noise if Heathrow builds a third runway, according to a government analysis.”

The newspaper’s story is based on UK Department of Transport documents released by the Civil Aviation Authority in response to the newspaper’s freedom on information request.

“Ministers have argued that Britain’s biggest airport will affect fewer people with noise in future, due to quieter planes. But government calculations suggest a new runway would still have a negative impact on nearly a million households, or 2.2 million people,” *The Guardian* reported.

Data obtained in the freedom of information request show that the government expects 973,000 households around Heathrow to experience increased daytime noise by 2050 after a third runway is built.

The Government expects that 673,000 households affected by Heathrow’s two existing runways will experience less noise once expansion occurs, making a net 300,000 households worse off, *The Guardian* reported.

Washington, DC, Metroplex

MD, VA COUNTIES AGREE TO JOINTLY FUND NOISE STUDY

Arlington County, VA, and Montgomery County, MD, have agreed to jointly fund a \$250,000 study seeking ways to mitigate the increased noise impact of NextGen airspace changes affecting residents of both counties living north of Reagan National Airport.

The airspace changes were made in 2014 under its D.C. Metroplex project.

The Counties expect to issue a request for proposals soon seeking a consultant to conduct the study, which is expected

to begin this fall and be completed in fiscal year 2019. The counties will split the \$250,000 cost they agreed on for the study.

The goal of the study “is to quantify the noise impacts on our community, to determine what specifically is driving the increase in those impacts in recent years, and to identify and evaluate all actions that could reasonably be taken to reduce and mitigate them,” Arlington County Board Members John Vihstadt and Libby Garvey explained in a June 1 bulletin to County residents.

“It is our hope that this study will result in concrete recommendations to achieve the County’s and the region’s goal of reducing aircraft noise where possible and to equitably share it where necessary. These findings and recommendations will then be sent to the FAA through the DCA Community Working Group for their consideration and action.”

Since October 2015, Arlington County, VA, has participated in the DCA Community Working Group, which was convened by the Metropolitan Washington Airports Authority as the venue for a regional discussion of ways to mitigate the noise impact of FAA’s NextGen airspace changes made in the metropolitan Washington, DC, area.

“Despite what look like promising recommendations for operations south of the airport, the fact remains that we do not appear to be any closer to a solution today for those communities north of the airport than we were when this effort was initiated,” Vihstadt and Libby explained in their bulletin.

“In order to advance this effort, Arlington County and Montgomery County have committed to funding necessary to jointly engage a technical consultant to examine these issues.”

Update on Rehearing Request

Residents of the historic Georgetown area of Washington, D.C., also received increased aircraft noise impact from the NextGen airspace changes made out of Reagan National Airport.

Georgetown University and six Georgetown neighborhood associations challenged FAA’s approval of the RNAV departure procedures out of the airport but their case was dismissed in March by a three judge panel of the U.S. Court of Appeals for the D.C. Circuit on the grounds that it was filed too late and that there were no “reasonable grounds” for doing so (30 ANR 37).

In May, the plaintiffs in the case requested a rehearing or rehearing *en banc* of the ruling, asserting that the question at issue in the case – whether actual community involvement, not merely a legal notice of a study in a newspaper, is required before FAA can move a major flight path – is of “exceptional importance” and will affect other communities under new NextGen flight paths (30 ANR 57).

On May 16, the Court ordered the FAA to file a response to the petition for rehearing or rehearing *en banc* by May 31. DOJ asked for a 14-day extension of that date, which the plaintiffs did not object to. The FAA reply is now due on June 14.

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FAA Market Survey on Noise Training

On June 6, FAA issued presolicitation notice 30398 announcing a market survey that will be used for information purposes only in FAA's effort to find firms that are interested and capable of providing training on aircraft noise measurement and evaluation for aerospace engineers employed by the agency.

The course should enable such engineers to determine compliance with the FAA's Part 36 aircraft noise standards.

FAA stressed that its notice is not a screening information request or a request for proposals of any kind. At this time the nature of the competition to conduct the training course has not been determined. The purpose of the market survey is only to solicit statements of interest and capabilities of firms of all types interested in conducting the course.

FAA's notice is on FAA's Contracting Opportunities website at www.faaco.faa.gov. Click on "Announcements" on left hand side of page; search for active announcements; scroll down to No. 30398: Market Survey: Aircraft Noise Measurement and Evaluation Training.

FAA Reroutes Aircraft Away from Lake Arrowhead

The FAA recently notified San Bernardino, CA, County Supervisor Janice Rutherford and other officials that the agency plans to implement a new nighttime route to address residents of Lake Arrowhead's concerns about commercial aircraft noise.

"Hopefully, the new route will lessen the impacts of the FAA's poor decision to reroute flights over Lake Arrowhead last year," Rutherford said. "But we aren't spiking the football yet. We have to continue working to encourage the FAA to make additional changes to fully address residents' concerns about commercial jets buzzing their community."

The FAA implemented the SoCal Metroplex Project last spring. It replaced dozens of conventional air routes with ones based on satellite navigation. One of the routes takes planes over the Lake Arrowhead communities, which are more than 5,000 feet above sea level.

In January, FAA officials attended a Lake Arrowhead Municipal Advisory Council meeting to announce the agency was working on rerouting the night flights. Supervisor Rutherford met with FAA officials in Washington, D.C., in March to continue discussions about noise problems the mountain communities have experienced since the new route was implemented.

AIRPORT NOISE REPORT

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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Europe

WHO EXPECTED TO APPROVE UPDATED ENV. NOISE GUIDELINES IN NEXT FEW WEEKS

The World Health Organization expects to have its new Environmental Noise Guidelines for the European Region approved within the next few weeks. Soon after that they will be issued.

The updated guidelines were developed by teams of experts who assessed the impact of noise from aircraft, rail, road, wind turbines, and personal electronic devices on annoyance, sleep disturbance, cognitive impairment of children, mental health/quality of life, tinnitus/hearing impairment, cardio-metabolic diseases, and adverse birth outcomes.

The guidelines are expected to include analysis of dose-response relationships whenever possible but at least for annoyance, sleep disturbances/awakenings, and cardio-vascular effects. Because of the strict evidence review criteria adopted by WHO to ensure that only the best quality study data were included in the guideline update, the new WHO Environmental Noise Guidelines are expected to be influential far beyond Europe.

(Continued on p. 74)

Research

ENZYME RESPONSIBLE FOR VASCULAR DAMAGE FROM AIRCRAFT NOISE IDENTIFIED

Scientists in the Department of Cardiology at the University Medical Center Mainz, Germany, announced June 14 that they have identified an enzyme responsible for aircraft noise-related vascular damage.

Their finding that eliminating this enzyme completely prevents vascular damage may enable development of drug strategies to reduce the negative effects of aircraft noise on the vascular system, they said.

The researchers also were able to show from their study of mice exposed to aircraft noise around-the-clock or during sleep/awake phases that nighttime noise has a particularly harmful effect on vessels and the brain.

Preventive measures that reduce nighttime exposure to aircraft noise are warranted, they stressed.

The study, "Crucial role for Nox2 and sleep deprivation in aircraft noise-induced vascular and cerebral oxidative stress, inflammation and gene regulation," was published in the June 14 issue of the peer-reviewed *European Heart Journal* (<https://doi.org/10.1093/eurheartj/ehy333>)

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Europe ... The World Health Organization is expected to approve updated Environmental Noise Guidelines for European Region in next few weeks - p. 73

Research ... German heart researchers identify enzyme that regulates vascular damage caused by aircraft noise; eliminating the enzyme prevents the damage - p. 73

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FAA had said earlier in the year that it also expected to release in June the findings of its annoyance survey in communities around 20 U.S. airports. However, more recently the agency has refused to say when those findings will be released.

Aircraft noise observers want to know if the FAA annoyance survey findings match those of recent European surveys, which show that the percentage of people highly annoyed by aircraft noise has increased over time.

FAA's current aircraft noise policy is based on data that is almost 40 years old. The annoyance survey findings will determine whether FAA will update its aircraft noise policy, conduct additional research, or do nothing.

Data collection for FAA's annoyance survey, which the agency describes as "the most comprehensive study using a single noise survey ever undertaken in the United States – began in 2015 and was expected to be completed in 2016.

On April 13, the FAA asked the Office of Management and Budget, for the second time, to renew its approval for FAA to collect the annoyance survey data. However, FAA did not explain why it needs to keep collecting data.

NextGen Advisory Committee**LESSONS LEARNED ON PUBLIC ENGAGEMENT TO BE DISCUSSED**

A "guided discussion" of lessons learned in FAA's efforts to engage the public in implementing NextGen performance-based navigation procedures will be held by the NextGen Advisory Committee (NAC) at its upcoming June 27 meeting in Washington, D.C.

The discussion also will address FAA's plans going forward for engaging the public on NextGen procedures that will be implemented in the agency's NextGen Northeast Corridor Initiative, which covers airspace and airports stretching from Washington, D.C., to Boston and includes Philadelphia and the New York City area.

FAA and the NAC have made the Northeast Corridor (NEC) a NextGen priority focus area because the region contains the most congested airspace in the country and accounts for nearly half of aviation delays in the entire national airspace system.

While the FAA has developed detailed plans for implementing NextGen airspace procedures, updating airport infrastructure, and enhancing NextGen air traffic control technologies in the Northeast Corridor to improve traffic flow and airspace efficiency, the agency has not yet developed specific recommendations for mitigating the noise impact of NextGen procedures on communities.

In an October 2017 report setting NextGen priorities in the Northeast Corridor and elsewhere for the following 18 months, FAA acknowledged that "Noise impacts on commu-

nities from [NextGen procedure] implementations are an important consideration, and several studies are ongoing in the NEC (for example the New York and New Jersey Part 150 studies, the MIT PBN Boston Noise Mitigation Study, and community roundtables reviewing the D.C. –area metroplex procedures).

"Specific [noise mitigation] recommendations are not now included to avoid pre-deciding or assuming the outcome of these activities. Results and recommendations from the studies may be included in future deliberations."

But FAA is reaching out to communities about its Northeast Corridor NextGen plans. In mid-April, FAA Eastern Region Regional Administrator Jennifer Solomon gave a presentation on the initiative to the New York Community Aviation Roundtable.

Broadway-Flushing resident Maria Becce – who represents U.S. congresswoman Grace Meng (D-NY) on the roundtable – called Solomon's presentation "wonderful," but added, if the controversial TNNIS climb out of LaGuardia Airport "is the best example of what we can do from NextGen to alleviate the complexity of the airspace, it's not helping ... We implore you to come up with better and more diverse flight patterns."

"We hear you ... We want to be productive partners," FAA's Solomon responded, the *Queens Chronicle* newspaper reported April 19.

The continuing noise impact of the TNNIS RNAV departure procedure on residential areas of northeast Queens launched one of the most potent anti-noise groups in the New York City area: Queens Quiet Skies.

Pre-Registration Required to Attend Meeting

Pre-registration is required for those interesting in attending the June 27 NAC meeting, which will be held from 8:30 a.m. to noon, at the U.S. DOT Conference Center, 1200 New Jersey Avenue, SE, Washington, DC, 20590.

To pre-register, send your full name, company/organization you are representing, title/position, and contact information (telephone number and e-mail address) no later than June 20 to NACRegistration@Concept-Solutions.com.

For further information, contact Greg Schwab at FAA: tel: (202) 267-1201; e-mail: gregory.schwab@faa.gov.

The full agenda for the NAC's June 27 meeting is included in the FAA's June 13 *Federal Register* notice.

NASA**RESEARCH CENTER EVALUATING NOISE OF FUTURE AIRCRAFT**

[NASA issued the following press release on June 12.]

As air traffic continues to surge in the U.S., neighbors who live near airports are complaining about the escalating noise. All the while, the demand for faster aircraft that travel

at supersonic speeds is accelerating.

To address the expected noise levels of future aircraft, NASA's Commercial Supersonic Technology project is already developing technologies focused on reducing the noise produced by an aircraft's engine exhaust.

Acoustics experts at NASA's Glenn Research Center in Cleveland recently used the center's Aero-Acoustic Propulsion Laboratory (AAPL) to complete an evaluation on a small-scale model of a Learjet engine exhaust, or nozzle, system.

The blue, curved array at the top of the AAPL dome holds microphones for making the noise measurements and simulating a flyover. The large door to the right opens to exhaust the air from the jet during tests.

[To see the dome, go to https://www.nasa.gov/sites/default/files/thumbnails/image/learjet_aapl_model.jpg]

"This recent test succeeded in creating a simulated environment which closely matched flight tests, and the results provide us with a unique opportunity to investigate how well noise levels produced in the lab can be compared with flight test noise data," said Research Engineer Dennis Huff.

Remotely-Piloted Aircraft Flies Alone

In related news, NASA also announced June 12 that its remotely-piloted Ikhana aircraft, based at the agency's Armstrong Flight Research Center in Edwards, CA, successfully flew its first mission in the National Airspace System without a safety chase aircraft on Tuesday.

"This historic flight moves the United States one step closer to normalizing unmanned aircraft operations in the airspace used by commercial and private pilots," NASA said.

"Flying these large remotely-piloted aircraft over the United States opens the doors to all types of services, from monitoring and fighting forest fires, to providing new emergency search and rescue operations. The technology in this aircraft could, at some point, be scaled down for use in other general aviation aircraft.

"This is a huge milestone for our Unmanned Aircraft Systems Integration in the National Airspace System project team," said Ed Waggoner, NASA's Integrated Aviation Systems Program director. "We worked closely with our Federal Aviation Administration colleagues for several months to ensure we met all their requirements to make this initial flight happen."

Flights of large aircraft like Ikhana, have traditionally required a safety chase aircraft to follow the unmanned aircraft as it travels through the same airspace used by commercial aircraft. The Ikhana flew in accordance with the Federal Aviation Administration's (FAA) Technical Standard Order 211 - Detect and Avoid Systems -- and Technical Standard Order 212 -- Air-to-Air Radar for Traffic Surveillance."

Research, from p. 73

Prof. Dr. Thomas Münzel, Director of Cardiology I at the Department of Cardiology at Mainz University Medical Center, and Prof. Dr. Andreas Daiber, Head of Molecular Cardiology at the Department of Cardiology, led the study.

In a university press release, they noted that earlier studies they conducted have shown "unequivocally" that aircraft noise in the long term leads to increased development of cardiovascular diseases.

Professor Münzel said that in 2013 his research group succeeded in demonstrating that simulated nocturnal noise increases the stress hormone epinephrine, reduces sleep quality, and damages the vascular system, which is called endothelial dysfunction.

Further studies on a newly developed animal model showed last year that aircraft noise leads to a significant increase in stress hormones, vascular dysfunction, increased oxidative stress and inflammatory processes in the vessels, as well as a marked change in the expression of genes in the vessel wall, he added.

Night Noise Causes Vascular Dysfunction

"With this new study, we can demonstrate for the first time that nighttime noise (during the sleep phase of the mice) and not noise during the waking phase is responsible for vascular dysfunction," said Professors Münzel and Daiber.

"We can also show that the elimination of the enzyme phagocytic NADPH oxidase (Nox2), which is located mainly in inflammatory cells, completely avoids aircraft noise-induced negative effects on vessels and brain."

This enzyme also was the focus of the scientists in their last study. "The current investigation finally proves [Nox2's] central role and also provides proof that the negative aircraft noise effects are mediated by this enzyme," they said.

In their current studies, the scientists also examined the effects of aircraft noise on the brain.

"Here, the focus was on neuronal nitric oxide (NO) synthase, an important enzyme in the brain. Responsible for learning and memory, this enzyme is down-regulated [suppressed] by aircraft noise and its function is impaired. This new finding may explain the described cognitive developmental disorders in children after exposure to aircraft noise," Professors Münzel and Daiber said.

Another finding is that the transcription factor FoxO3 plays a central role in noise-induced vascular and brain damage.

Transcription factors are proteins that help ensure that the right genes are expressed in the right cells at the right time.

"The consequence of the observed down-regulation [suppression] of this transcription factor [FoxO3] by nighttime noise leads to a defective gene expression network that controls cellular events as a function of circadian rhythm," the researchers explained. "Disturbance of the circadian rhythm can lead to sleep disorders and subsequently to more cardiovascular, mental, and metabolic disorders."

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But the scientists also recognized through extensive genetic analysis by means of Next Generation Sequencing (NGS) that treatment with Bepredil, which activates the FoxO3 transcription factor, prevents the cellular damage caused by nighttime noise exposure.

The study authors said their findings represent a further breakthrough in noise research. "With our findings, especially with regard to nighttime noise, we can now explain clinical results, e.g. according to the so-called HYENA [Hypertension and Exposure to Noise Near Airports] study, where nighttime noise in particular can trigger high blood pressure."

The HYENA study, published in 2008, found a statistically significant effect on blood pressure from nighttime noise exposure. The study included 4,861 men and women 45-70 years of age who had lived at least five years near one of six major European airports.

Both authors concluded from their findings that it must be an important goal to protect sleep at night from noise and, in particular, to implement a "legally defined night's sleep" from 10 p.m. to 6 a.m.

In the study, mice were exposed to aircraft noise (maximum sound level of 85 dB (A), average sound pressure level of 72 dB(A) around-the-clock or during sleep/awake phases for one, two, and four days.

In Brief...

Long Beach Airport Noise, Env. Officer Opening

Long Beach Airport (LGB) has an opening for a Noise and Environmental Affairs Officer.

Serving the City of Long Beach and the Los Angeles and Orange County metropolitan areas, LGB is one of the most noise restrictive airports in the nation. The Airport's Noise Compatibility Ordinance is grandfathered under the Airport Noise and Capacity Act. Flight activity, including commercial airline flight slots, is managed via cumulative noise levels.

This position reports to the Airport Director. Applications must be submitted by July 6, 2018. For additional information, please visit: <https://www.governmentjobs.com/careers/longbeach/jobs/2082725/noise-and-environmental-affairs-officer>

Modification of Florida Metroplex Routes

On June 8, FAA proposed establishing 16 high altitude area navigation (RNAV) routes (Q-routes) and modifying seven existing Q-routes in support of the Florida Metroplex Project. The routes were developed to improve airspace efficiency and reduce dependency on ground-based navigation systems. Comments on the Notice of Proposed Rulemaking, published in the June 8 *Federal Register*, are due by July 9.

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A weekly update on litigation, regulations, and technological developments

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Santa Monica Airport

NBAA DISAPPOINTED THAT COURT DENIED PETITION TO OVERTURN SMO SETTLEMENT

The National Business Aviation Association (NBAA) called “disappointing” a June 12 federal appeal court decision denying, on procedural grounds, the association’s petition to overturn a settlement agreement between the FAA and the City of Santa Monica allowing the city to close Santa Monica Airport (SMO) at the end of 2028.

“We’re obviously disappointed by this decision, but it’s important to note the court did not make a determination as to the merits of our arguments against the validity of the original settlement agreement,” said NBAA President and CEO Ed Bolen.

“This ruling was purely a matter of procedure, and in no way does it establish a precedent by which the FAA may enter into similar agreements affecting the fates of other vital general aviation airports.”

NBAA had urged the U.S. Court of Appeals for the D.C. Circuit to vacate the January 2017 settlement agreement on the grounds the FAA exceeded its authority and defied requirements established by Congress, as well as the agency’s own re-

(Continued on p. 78)

San Jose Int’l

ADVISORY COMMITTEE RECOMMENDS WAYS TO REDUCE SOUTH FLOW ARRIVAL NOISE

An *ad hoc* committee of elected officials of communities under an alternative “south flow” arrival path into San Jose International Airport recently submitted 49 recommendations, developed with input from airport staff and FAA, for reducing the noise impact of the flight path.

The south flow arrival path into SJC is used under certain wind and weather conditions. Its noise impact has been accentuated since 2012 when FAA began implementing NextGen airspace procedures that narrowly concentrated the flight path.

Normally, aircraft at SJC land from the south over parts of downtown San Jose and depart to the north. But under south flow conditions, aircraft approach the airport from the north, descending over parts of San Jose, Cupertino, Sunnyvale, Mountain View, Palo Alto and other communities.

In November 2016, residents of Sunnyvale and Mountain View, asked the SJC Airport Commission to address their noise concerns regarding south flow opera-

(Continued on p. 80)

In This Issue...

Santa Monica ... Appeals Court will not vacate settlement agreement allowing airport to close; NBAA vows to keep fighting - p. 77

San Jose Int’l ... Committee of local elected officials recommends ways to reduce noise from south flow arrivals - p. 77

NEPA ... CEQ considering major update of rules implementing National Environmental Policy Act - p. 78

SSTs ... Libertarian think tank urges leaders of Senate Commerce Committee to repeal ban on overland flights of commercial supersonic aircraft - p. 78

Dulles Int’l ... MWAA will hold two workshops on its plans to update airport’s noise contour map - p. 78

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NBAA, from p. 77

sponsibility to support the country's aviation interests.

However, in its ruling, the court sided with the FAA's contention the settlement agreement "does not constitute final agency action reviewable" by the D.C. court, and that a subsequent consent decree remains binding to enforce the city's actions against SMO. That decree was issued by the Central District of California, and according to the court ruling, it is only reviewable by the Ninth Circuit Court of Appeals.

Prior to the settlement agreement, the FAA had maintained the city's obligation to preserve SMO not only endured until 2023 based on federal grant assurances, but also lasted in perpetuity under obligations included in a 1948 surplus-property deed.

NBAA contended the FAA offered no explanation for the settlement agreement, which came as a great surprise to the aviation community, and failed to engage the public, including airport users and tenants, beforehand. The petition further asserted the settlement did not comply with the Airport Noise and Capacity Act of 1990 and violated several other statutes.

Bolen emphasized that NBAA continues to be engaged on matters related to SMO, including a pending FAA administrative complaint alleging violations of the city's grant-based obligations to the airport. "NBAA remains a determined advocate on behalf of this important Southern California airport, so that it may endure today, tomorrow and beyond 2028," he said.

The Aircraft Owners and Pilots Association and the General Aviation Manufacturers Association also filed amicus briefs in support of NBAA.

Environmental Review**CEQ MULLING MAJOR UPDATE OF RULES IMPLEMENTING NEPA**

The White House Council on Environmental Quality (CEQ) announced June 20 that it is considering embarking on a major update of its implementing regulations for the procedural provisions of the National Environmental Policy Act (NEPA), which was enacted in 1970.

"Over the past four decades, CEQ has issued numerous guidance documents but has amended its regulations substantively only once. Given the length of time since its NEPA implementing regulations were issued, CEQ solicits public comment on potential revisions to update the regulations and ensure a more efficient, timely, an effective NEPA process consistent with the national environmental policy stated in NEPA," the CEQ explained in its Advance Notice of Proposed Rulemaking.

The public has until July 20 to respond to 20 questions posed by CEQ in its *Federal Register* announcement on potential revisions it should make in terms of the NEPA process, scope of NEPA review, and other issues.

CEQ wants to know if terms used in NEPA regulations – such as 'cumulative impact' and 'significantly' – should be revised. It also wants to know if provisions in its regulations relating to categorical exclusions, environmental impact statements, records of decisions, or findings of no significant impact – need to be revised.

Many environmental groups fear the Trump administration will use an update of NEPA regulations to gut the environmental law, which FAA must follow in enacting NextGen airspace changes and airport enhancement projects.

Comments on whether CEQ's NEPA regulations should be updated must be identified by docket identification number CEQ-2018-0001 and submitted through the Federal eRulemaking portal at <https://www.regulations.gov>.

Follow the online instructions for submitting comments.

SSTs**LIBERTARIAN THINK TANK WANTS OVERLAND FLIGHT BAN DROPPED**

The Competitive Enterprise Institute (CEI) – a Libertarian think-tank that supports minimal government regulation – is urging Congress to repeal the ban on overland operation of civil supersonic aircraft.

The Institute told the Chairman and Ranking Member of the Senate Commerce Committee in a June 18 letter that it supports "the return of supersonic transport in the strongest terms and as a form of transportation that will be far more accessible to ordinary people than the Concorde ever was. We urge you to ensure it remains a key priority of the FAA Reauthorization Act of 2018."

Advancements in materials science, aerospace design, and noise abatement technologies have made it possible "to substantially mitigate the noise created by sonic booms – so much so that to a person on the ground, an overhead sonic boom could one day soon 'sound about as loud as a lawn mower or motorcycle, and only last about half a second," the Institute wrote.

"Now is the ideal time for Congress to repeal the ban on operating civil supersonic aircraft in the United States, and direct the FAA to develop a sonic boom noise standard that is, in the words of the amendment [to the Senate FAA Reauthorization bill] put forward by Sens. Mike Lee (R-UT) and Cory Gardner (R-CO) 'economically reasonable and technologically practicable' ..." the Institute wrote.

The Secretary of Transportation would have to define what the imprecise terms "economically reasonable and technologically practicable" in the Lee-Gardner amendment mean. The vagueness of these terms leaves a lot of wiggle room to define them as desired.

The Lee-Gardner amendment (29 ANR 91) also would require the FAA to specify a noise standard for landing and take-off of civil supersonic aircraft "that is no more stringent than large subsonic aircraft in use for transporting passengers

in the United States on Jan. 1, 2017,” which means Stage 4 standards and not the more stringent Stage 5 standards, which became effective on Nov. 3, 2017 (29 ANR 127).

Manufacturers of low-boom SSTs are likely concerned that their aircraft engines may be loud on takeoff and unable to meet the more stringent Stage 5 noise standards.

Asked why CEI is interested in removing the overland ban on supersonic flights, Senior Fellow Marc Scribner, who is the Institute’s transportation policy expert, told ANR: “The Competitive Enterprise Institute supports the Lee-Gardner amendment because an overland civil SST prohibition makes no sense if the underlying noise issue can be resolved through technological innovation and performance-based standards rather than heavy-handed prescriptive regulation.”

However, the International Civil Aviation Organization (ICAO) is in the process of developing noise standards for future supersonic aircraft sonic booms. They will be based on data NASA will collect from 2022-2025 on community reaction to flights of a low-boom demonstrator aircraft.

Dulles Int’l

MWAA TO HOLD WORKSHOPS ON NOISE CONTOUR MAP UPDATE

The Metropolitan Washington Airports Authority will hold two public workshops on June 27 and 28 to provide details on its plan to update the noise contour map for Dulles International Airport.

The Airports Authority said it decided to embark on this effort at this time for several reasons:

- There have been changes in the aviation environment since the early 1990s, when the existing Airport Overlay Districts were established, and the future vision for Dulles International should reflect these changes;
- Flight tracks and overall utility of the airfield at Dulles International have evolved and will continue to evolve with implementation of FAA’s NextGen modernization program; and
- The FAA is modifying flight procedures to allow for the triple simultaneous runway operations at Dulles International during low visibility conditions or Instrument Flight Rules (IFR), which will likely increase utility and capacity at Dulles International.

In addition, land developers want the map updated to determine if the 65 DNL contour has shrunk enough to allow them to add homes and other high-density residential units in coveted areas around two new metro stops near the airport currently under construction and expected to open in 2020.

Portions of the areas around these metro stops are in the 65 DNL contour under the current map, which has not been updated since 1993. The map serves as the basis for Loudoun County and Fairfax County, VA, Airport Impact Overlay District zoning.

Earlier this year, to help it update the Dulles noise contour

map, MWAA formed a Local Jurisdictional Stakeholder Group, comprised of its interdisciplinary staff, appointed professional technical staff from Fairfax and Loudoun Counties and the Town of Herndon, airline representatives, and FAA officials.

The Stakeholder Group will meet on a regular basis and is expected to complete its work by February 2019.

The two public workshops will provide an overview of the map update study, including airfield plans, existing airport operations, and basic information regarding aircraft noise and noise modeling standards.

Litigation

DOJ SAYS REHEARING OF GEORGETOWN CASE IS NOT WARRANTED

The U.S. Department of Justice told the U.S. Court of Appeals for the D.C. Circuit on June 14 that no grounds exist for reconsidering a ruling by a three-judge panel of the Court dismissing a lawsuit challenging FAA’s approval of flight path changes for aircraft departing Reagan National Airport.

At issue in the case, *Citizens Association of Georgetown, et al v. FAA* (No. 15-1285), is whether actual community involvement – not merely a legal notice of a study in a newspaper – is required before the FAA can move major flight paths as it implements NextGen airspace changes across the country.

On May 9, the plaintiffs in the case (Georgetown University and several neighborhood associations in the historic Georgetown section of Washington, D.C.) filed a petition seeking a rehearing or rehearing *en banc* of the March ruling by the three-judge panel of the D.C. Circuit, which dismissed the case for being filed too late.

The panel never considered the merits of the case, which some legal experts believe the judges would have supported.

The Georgetown plaintiffs asserted that the rehearing they seek is warranted because the ruling by the three-judge panel was based on a misreading of the facts in the record and directly conflicts with the Court’s recent decision in *City of Phoenix v. Huerta* in several critical aspects (30 ANR 57).

But DOJ told the Court that the petition seeking a rehearing should be denied because it “identifies neither a conflict with other opinions of the Court nor any question of exceptional importance that would warrant rehearing *en banc*.”

“Petitioners instead re-litigate matters already resolved by the panel, without identifying any genuine conflict of law or error of fact that could justify rehearing,” DOJ Attorney Lane M. McFadden asserted.

Now that the Court has received DOJ’s input on the rehearing request, it should soon make a decision on the matter.

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San Jose, from p.77

tions. In response to this request, the Commission recommended the formation of a body to address south flow noise issues and asked that FAA participate on it.

FAA agreed to participate on the body, which was called the *Ad Hoc* Advisory Committee on South Flow Arrivals. It includes 14 elected officials from 11 Santa Clara County communities and the cities of San Jose and Santa Clara.

The committee is an advisory body with no legal authority. "Its purpose is to provide potentially feasible and consensus-based recommendation to the FAA to mitigate the noise impacts of the south flow procedure," the committee explained in its report.

Committee Recommendations

The Committee said its noise reduction recommendations to FAA can be prioritized in the following way:

- Fly more dispersed western approaches to limit the concentrated negative noise effects on neighborhoods;
- Explore other approaches and maintain the use of eastern vectoring for south flow arrivals as much as operationally feasible;
- Modify procedures to reduce the ground noise generated by aircraft by keeping aircraft higher to reduce noise impact;
- Implement FAA policy changes (use monitored rather than modeled noise data and improve public outreach on new airspace procedures);
- Avoid noisy flight maneuvers;
- Implement noise management measures at SJC (modify arrival flight profiles to capitalize on advanced navigation technologies; review airport noise curfew); and
- Explore a single regional noise reporting system.

The Committee noted in its report that "In April, it was discovered that the FAA was in the process of evaluating a new approach procedure for SJC Instrument Landing System (ILS), which would take effect in July of 2018. Neither the FAA meeting representatives, Committee, or the public were aware this change was being considered.

"The lack of public outreach to potential affected communities highlights the need for transparency and improved public process and communication. There needs to be a better regional and local outreach process that informs public officials and members of the public when [airspace] changes are being proposed in their region," the Committee told the FAA.

The report is at www.flysanjose.com. Click on "Community & Environment" at bottom of page; click on "Ad Hoc Advisory Committee on South Flow Arrivals"; click on "meetings." The report is the first document listed.

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Litigation

STATE OF MD FILES PETITIONS CHALLENGING FLIGHT PATH CHANGES MADE AT BWI, DCA

On June 26, Maryland Governor Larry Hogan (R) made good on his promise to challenge airspace changes at BWI International and Washington Reagan National airports that have significantly increased noise impact on Maryland residents located under new concentrated NextGen flight paths.

The State of Maryland filed a petition with the U.S. Court of Appeals for the D.C. Circuit seeking review of FAA changes to the approach flight path for Runway 19 at Reagan National (DCA) and asserting that FAA had failed to conduct the appropriate environmental review of them.

In addition, the State of Maryland also filed a separate administrative petition with the FAA requesting a supplemental environmental assessment as well as revisions to area navigation routes and procedures for BWI airport.

“The FAA must follow required procedures before implementing changes to flight paths that impact thousands of Maryland residents,” MD Attorney General Brian Frosh asserted in a prepared statement.

(Continued on p. 82)

NextGen Advisory Committee

NAC CHAIR SAYS COMMUNITY ENGAGEMENT IS NO. 1 PRIORITY FOR PBN IMPLEMENTATION

Getting the public to understand and accept performance-based navigation (PBN) procedures will be the NextGen Advisory Committee’s number one priority as it moves to reduce aircraft delay in the crowded Northeast Corridor – the airspace between Boston and Washington, D.C. – NAC Chair and FedEx President and COO David Bronczek announced at the June 27 meeting of the NAC.

He and FAA Acting Administrator Dan Elwell urged airline officials to take a more active role in FAA community engagement efforts, which they believe are crucial to successfully implementing PBN procedures in the Northeast Corridor, where over half of the delays in the U.S. airspace system occur.

Airlines need to do a lot more in terms of community involvement “or we’re not going to get there,” warned Bronczek, who has agreed to chair the NAC for two more years.

At its June 27 meeting, NAC members approved a new charter formally turning the group into a federal advisory committee that operates under the Federal Advisory Committee Act and no longer an advisory committee managed by the RTCA

(Continued on p. 83)

In This Issue...

Litigation ... The State of Maryland challenges FAA’s environmental review of changes to an arrival path at Reagan National Airport; demands that FAA prepare a supplemental EA for flight path changes at BWI; challenges FAA catexing of BWI arrival procedures - p. 81

NextGen Adv. Committee ... Community engagement will be the number one priority of the NAC in implementing PBN procedures in the Northeast Corridor airspace, NAC chair says. Representative of community group tells NAC that living under concentrated NextGen flight paths has “devastated” lives; says NAC needs more community representation and/or dedicated forum for addressing community impacts of NextGen - p. 81

NASA ... X-59 QueSST is the new name for NASA’s experimental supersonic X-Plane, which was formerly known as the Low-Boom Flight Demonstrator, the agency announces - p. 84

Litigation, from p.81

“Thousands of Marylanders have had their lives disrupted since the new flight paths were implemented without the appropriate level of environmental review, public input, and transparency.”

Said Gov. Hogan, “Maryland is taking this important action on behalf of our many citizens who continue to suffer from intolerable noise pollution due to the NextGen program’s flight paths. Our administration remains committed to bringing relief and restoring the quality of life for tens of thousands of Marylanders living around our airports.”

Lawsuit Filed Beyond 60-Day Window

The State of Maryland filed its lawsuit against FAA beyond the 60-day window allowed under federal law to challenge FAA final orders in federal courts of appeal.

At the end of March, the D.C. Circuit dismissed as untimely a similar lawsuit challenging flight path changes at DCA filed by residents of the Georgetown area of Washington, D.C. (30 ANR 37). A three-judge panel of the Court found there were no grounds for filing the lawsuit beyond the 60-day window. The plaintiffs are currently seeking a rehearing of the case. However, a different panel of the Court allowed a similar lawsuit filed by the City of Phoenix to be filed late and ruled in favor of the plaintiffs on the merits.

The flight path changes made at BWI and DCA were part of the Washington, D.C., Metroplex plan that FAA began implementing in 2014. FAA issued a Finding of No Significant Impact and Record of Decision on the project in December 2013, at which point the clock started ticking on the 60-day filing window.

ANR asked John Putnam of the Denver law firm Kaplan Kirsch & Rockwell, who represents the State of Maryland in its litigation and guided the City of Phoenix to its legal victory, how he will deal with the problem of the lawsuit being filed beyond the 60-day window.

“The limitations period issue will be fully briefed as part of the case coming up,” he replied.

The case is *State of Maryland v. Daniel Elwell, Acting Administrator of the FAA* (No. 18-1173).

FAA Petition

In a separate petition with the FAA, the State of Maryland asked the agency to take the following action regarding flight path changes at BWI:

- Prepare a supplement to the D.C. Metroplex Environmental Assessment (EA) “in light of unanticipated and undisclosed impacts” associated with FAA’s recent airspace changes.

The petition contends that the EA did not show the actual proposed routes with sufficient specificity to allow residents and other stakeholders to determine exactly what changes were proposed and how they would affect particular homes, schools, parks, churches, etc.

- Undertake the review of categorical exclusions for Run-

way 33L and Runway 10 arrivals, as required by the National Defense Authorization Act; and

- Continue, accelerate, and expand efforts to adjust RNAV routes at BWI to improve compatibility with neighborhoods, including arrival routes to Runways 33L and 10.

“These steps are necessary because the noise impacts of the FAA’s route changes have caused greater community noise concerns than FAA predicted. These greater concerns are in large part due to the inadequate disclosure of the proposed airspace changes in the original D.C. Metroplex EA and contemporaneous categorical exclusions that never involved the surrounding community,” Maryland told FAA.

“These process failures are part of a nationwide problem with community engagement and communication on Metroplex and similar airspace efforts (including in Phoenix, Northern California, Boston and Southern California), which FAA has been working to address through improvements in community outreach, environmental documentation, and communications. The State of Maryland insists that its residents also receive the benefits of enhanced environmental process and community engagement.”

FAA Accused of Violating Defense Act

The State of Maryland argued in its petition to FAA that the agency violated a provision of the National Defense Authorization Act (NDAA) that requires FAA to notify and consult with airport operators – and to consider using alternative flight paths – before granting a categorical exclusion to NextGen procedures enacted on or after Feb. 12, 2012, when NextGen procedures at Phoenix Sky Harbor International Airport went into effect.

A categorical exclusion (catex) allows FAA to assume that a flight procedure will have no significant environmental impact and is thus not subject to preparation of an EA or environmental impact statement (EIS).

Arizona Sens. John McCain (R) and Jeff Flake (R) added the provision to the NDAA in 2017 to force FAA to review controversial catexed flight path changes out of Sky Harbor International that outraged communities there (29 ANR 1).

The State of Maryland is now using the NDAA provision to demand that FAA review catexed RNAV arrival procedure changes for Runways 10 and 33 at BWI that were also implemented after Feb. 12, 2012.

FAA implemented those catexed procedures despite concerns expressed by the Maryland Aviation Administration that the procedures would lead to significant concentration of flight tracks over residential and other noise-sensitive areas outside the 65 DNL contour and cause a public controversy, an outcome that bars the FAA from granting a catex.

Maryland told FAA that it is aware of no review required by the NDAA conducted by FAA prior to enacting the catexed airspace provisions at BWI.

“FAA must discharge this mandatory duty imposed by Congress immediately and must consult with the State regarding the effects of the procedures subject to categorical exclusion,” the State told FAA.

NAC, from p.81

standards organization.

Elwell said he wants the reconstituted NAC to become more “action-oriented” and to improve its collaboration with communities.

As evidence of the NAC’s desire to interact more closely with communities, Bronczek welcomed to the NAC meeting representatives of two grass-roots community groups formed to protest NextGen flight path changes in the Washington, D.C. – Baltimore area. They were each given two minutes to address the committee.

NextGen Has ‘Devastated’ Lives

“It is not an overstatement to say that the implementation of NextGen has devastated the lives of residents in our communities,” Anne Hollander, who represents the Montgomery County, MD, Quiet Skies Coalition, told the committee.

“People under channelized flight paths are no longer able to go about their daily lives in peace. They suffer from sleep deprivation, loss of ability to concentrate, increased anxiety, inability to work in their own homes, damage to their health from both the relentless noise and the emissions, and damage to the most important economic asset they own: their homes.

“As the federal committee that advises the FAA about NextGen, we believe the NextGen Advisory Committee should be working with urgency to address the collateral damage to underlying communities from NextGen’s implementation,” Hollander told the committee.

In a prepared statement, she wrote: “According to the NextGen Advisory Committee’s *Blueprint for Success to Implementing PBN*, the input of community leaders is critical to the successful implementation of Performance-Based Navigation procedures. We couldn’t agree more. We believe that the current makeup of the NAC, which is dominated by industry representatives and which has only one community representative, is not consistent with that goal.

“In order to solicit appropriate community input nationally and foster a collaborative working relationship between the aviation industry and communities and their elected officials, we recommend that you include more community representation on the NAC and also establish a national forum for addressing community impacts. We are not looking to decrease safety or efficiency, but we do know that these objectives can be met without focusing the entire burden of metroplex air traffic on only a few communities under the new channelized flight paths.

“We further recommend that you address the following issues:

- Noise should be considered in tandem with flight procedure changes, not as an afterthought. NAC should recommend that flight procedure designers be trained to consider this.
- The current metrics used to ascertain whether noise causes significant impacts are completely insufficient to address the recurring impacts of noise from PBN procedures

(i.e., channelized flight paths). NAC should make recommendations for updating those metrics in accord with 21st century aviation.

- Studies and data are helpful, but studies should not be used to indefinitely postpone more concrete recommendations to address impacts on underlying communities. It doesn’t require hundreds of thousands of dollars to figure out that channelized flight paths disproportionately harm the people and communities underneath. NAC should address the harm from these existing paths before recommending further roll-out of PBN procedures in more communities around the nation.

- As mentioned above, NAC needs more community representation and/or a dedicated forum for addressing community impacts.”

Roundtable Given D-Minus Grade

Also addressing the NAC was Paul Harrell, who represents the D.C. Metroplex BWI Community Roundtable, which is one of several roundtables formed at the request of the FAA at airports where NextGen flight path changes have caused a significant community outcry.

He called the development of these roundtables “a knee jerk reaction by FAA in hopes of diminishing the outrage and litigation evident in other metroplexes.” Harrell told the NAC that the experience of his roundtable with the FAA could be rated “no better than a D-minus.”

Harrell said a PBN working group told his roundtable it would address their noise problems but would not give its scope of work to the roundtable or allow input from the roundtable.

FAA Must Lead Community Engagement

Nancy Young, vice president for environmental affairs for Airlines for America, recommended that the FAA develop a strategic plan for implementing a community engagement strategy that is based on the recommendations presented in the NAC’s 2014 *Blueprint for Success to Implementing PBN*.

The *Blueprint* calls for FAA to lead the community engagement effort, she stressed.

The goal of a community engagement strategy, Young said, should be to get communities to understand NextGen procedures and their benefits, at a minimum, and hopefully to obtain acceptance of them.

Little Substantive Discussion

Asked for her reaction to the discussion on community engagement at the NAC meeting, community anti-noise activist Hollander told ANR, “I would say the significant focus on community engagement was quite encouraging but there was very little substantive discussion of how it should be accomplished.

“I sincerely hope the NAC will move promptly and decisively to engage aviation impacted communities in these issues going forward.”

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NASA

NASA'S EXPERIMENTAL SUPERSONIC X-PLANE PROJECT HAS A NEW NAME: THE X-59 QUESST

[Following is a June 27 news feature by Jim Banke of NASA's Aeronautics Research Mission Directorate.]

So, what's in the name? Well, the "X-59" part is a nod back to American X-plane history, which kicked off with the world's first supersonic plane, the Bell X-1, famously piloted by Chuck Yeager in 1947 when it broke the speed of sound. Yeager nicknamed the plane "Glamorous Glenis" after his wife, according to NASA. The "QueSST" part of the X-59 moniker is sort of a NASA inside joke, one that acknowledges the space agency's long-running quest (get it?) for quiet supersonic technology, or SST.

The U.S. Air Force assigned the X-59 number to NASA's experimental supersonic plane and let the agency know on Tuesday, NASA officials said in a statement Wednesday (June 27). Before receiving its X number, NASA's supersonic plane project was called the Low-Boom Flight Demonstration mission. Lockheed Martin is building the jet for NASA to develop the technology needed for quiet supersonic aircraft for future commercial travel.

"For everyone working on this important project, this is great news and we're thrilled with the designation," Jaiwon Shin, associate administrator for NASA's Aeronautics Research Mission Directorate, said in the NASA statement.

The X-59 QueSST supersonic plane was included in the White House's 2019 budget request for NASA earlier this year as part of a \$633.9 million funding proposal for aeronautics research. But NASA has been developing the supersonic plane for years in pursuit of technology that would enable affordable supersonic transportation without the loud sonic booms that come with it.

Two other private projects are considering commercial supersonic travel as well. Virgin Galactic and Boom Technology are working together to build a supersonic jet capable of flying at twice the speed of sound — about 1,451 mph (2,335 km/h) — to cut the travel time from New York City to London down to 3 hours. Another company, Spike Aerospace, is developing its own S-512 Quiet Supersonic Jet, which would have similar performance. That New York-to-London trip typically takes up to 7 hours.

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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Senate FAA Reauthorization

DRAFT AMENDMENT WOULD REQUIRE FLIGHT PATH DISPERSION NEAR AIRPORTS

The Town of Milton, MA, is seeking support for a draft amendment to the Senate FAA Reauthorization bill that would require flights over residential areas within 25 miles of U.S. commercial airports to be returned, as nearly as possible, “to the dispersion of flight paths and altitude levels that prevailed” a year prior to FAA’s implementation of NextGen.

In a June 28 letter, the Milton Selectmen asked Mass. Sens. Elizabeth Warren (D) and Edward Markey (D) to sponsor their draft amendment and noted that it has broader support.

“Our understanding” is that Maryland Sens. Ben Cardin (D) and Chris Van Hollen (D) “have informed residents affected by the RNAV flight paths around Baltimore-Washington Thurgood Marshall Airport that they support this approach and are discussing introducing it in the Senate as well,” the Milton Selectmen told their senators.

The approach of the draft amendment “is not to undo the NextGen technology

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NASA

FLIGHT TESTS SHOW NASA TECH REDUCES AIRFRAME LANDING NOISE BY OVER 70%

[Following is a June 26 NASA news feature.]

A series of NASA flight tests has successfully demonstrated technologies that achieve a significant reduction in the noise generated by aircraft and heard by communities near airports.

The Acoustic Research Measurement (ARM) flights, which concluded in May, at NASA’s Armstrong Flight Research Center in California, tested technology to address airframe noise, or noise that is produced by non-propulsive parts of the aircraft, during landing. The flights successfully combined several technologies to achieve a greater than 70 percent reduction in airframe noise.

While porous concepts for landing gear fairings have been studied before, NASA’s design was based on extensive computer simulations to produce the maximum amount of noise reduction without the penalty of increasing aerodynamic drag. The landing gear cavity was treated with a series of chevrons near its leading edge, and a net stretched across the opening to alter airflow, aligning it more with

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FAA Reauthorization ...

Town of Milton, MA, is seeking support for draft amendment to the Senate’s FAA reauthorization bill that would require flights over residential areas 25 miles from U.S. commercial airports to be dispersed to reduce noise impact - p. 85

NASA ... Flight tests of new technology show it can reduce airframe landing noise by over 70 percent - p. 85

... NASA will use F/A-18s to produce loud and softer sonic booms over Galveston, TX, to determine public reaction to them - p. 87

Litigation ... Adams County, CO, sues County and City of Denver over noise measurement method used to determine fines for exceeding noise level limits around Denver Int’l Airport - p. 87

UK ... Queen Mary University of London gets \$560,000 grant to design quieter jet engines; understand “jet installation effect’ - p. 87

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or any of its benefits,” the Selectmen stressed, “but rather to use that technology to restore the dispersion of flight paths in effect prior to the current RNAV system by creating a number of RNAV paths.”

“We view this approach as the best hope to protect Milton residents, and especially their children, from the polluting effects of the narrow dispersion of flight paths under the current RNAV system,” the Selectmen wrote.

The draft amendment would require FAA “to use all currently and historically available methods, and to develop and implement new methods as needed, in order to mimic the dispersion, altitudes, and historical ground paths within 25 miles of airports that were present before it implemented satellite-based technology as utilized by NextGen,” the Selectmen explained.

“These changes will reduce the impacts of noise and emissions on underlying communities in recognition of the fact that concentrated paths create untenable noise and emissions for citizens on the ground, and that decades of land-use planning and home ownership decisions were based on historical and dispersed flight paths,” they wrote.

Family of Flight Paths

“The concept of using the NextGen technology to implement a family of flight paths rather than a single flight path to/from each runway so that aircraft are dispersed as they were in the year prior to WAAS (Wide Area Augmentation System)-RNAV-GPS implementation has been adopted in The Netherlands,” the Selectmen told their senators.

NextGen era WAAS-enabled RNAV-GPS technology is fully capable of providing multiple, dispersed aircraft flight paths that would relieve the heavy concentration of single-path air traffic over communities, they asserted.

The Senate Commerce Committee approved the FAA Reauthorization Act of 2017 (S. 1405) on June 29, 2017 (20 ANR 91). The bill includes several noise-related provisions (29 ANR 83).

Committee Chairman Sen. John Thune (R-SD) said he expects S. 1405 to come to the Senate floor for a vote in the next few weeks. At that point, amendments could be proposed and voted up or down.

Community groups have been letting their senators know what additional noise-related provisions they would like to see added to the bill.

Flight path dispersion is likely high on their lists.

NASA, from p.85

the wing.

“The number one public complaint the Federal Aviation Administration receives is about aircraft noise,” said Mehdi Khorrani, an aerospace scientist at NASA’s Langley Research Center in Virginia, and principal investigator for Acoustic Research Measurement. “NASA’s goal here was to

reduce aircraft noise substantially in order to improve the quality of life for communities near airports. We are very confident that with the tested technologies we can substantially reduce total aircraft noise, and that could really make a lot of flights much quieter.”

NASA tested several experimental designs on various airframe components of a Gulfstream III research aircraft at Armstrong, including landing gear fairings and cavity treatments designed and developed at Langley, as well as the Adaptive Compliant Trailing Edge (ACTE) wing flap, which had previously been flight-tested to study aerodynamic efficiency. The aircraft flew at an altitude of 350 feet, over an 185-sensor microphone array deployed on the Rogers Dry Lake at Edwards Air Force Base in California.

Landing Gear Noise Reduction

The Landing Gear Noise Reduction technology element addressed airframe noise caused by airflow moving past the landing gear on approach. The experimental landing gear tested by NASA features fairings that are porous along their front, meaning they consist of many tiny holes that, in part, allow some of the air to flow through the fairing, while also deflecting some of the airflow around the landing gear.

Porous concepts have been studied before, but the unique design developed by NASA resulted from highly detailed computer simulations that led NASA engineers to what they believe is the ideal design for maximum noise reduction without increasing aerodynamic drag.

Another area of focus was landing gear cavities, also a known cause of airframe noise. These are the regions where the landing gear deploys from the main body of an aircraft, typically leaving a large cavity where airflow can get pulled in, creating noise. NASA applied two concepts to these sections, including a series of chevrons placed near the front of the cavity with a sound-absorbing foam at the trailing wall, as well as a net that stretched across the opening of the main landing gear cavity. This altered the airflow and reduced the noise resulting from the interactions between the air, the cavity walls, and its edges.

Wing Flap Noise Reduction

To reduce wing flap noise, NASA used an experimental, flexible flap that had previously been flown as part of the ACTE project, which investigated the potential for flexible, seamless flaps to increase aerodynamic efficiency. As opposed to conventional wing flaps that typically feature gaps between the flap and the main body of the wing, the ACTE flap, built by FlexSys Inc. of Ann Arbor, Michigan, is a seamless design that eliminates those gaps.

Significant reduction in aircraft noise must be realized in order for air transportation growth to maintain its current trend. The reduction of airframe noise using NASA technology is an important achievement in this effort, as it may lead to quieter aircraft, which will benefit communities near airports and foster expanded airport operations.

“This airframe noise reduction produced by NASA tech-

nology is definitely momentous, and the best part is that it directly benefits the public,” said ARM Project Manager Kevin Weinert. “While there are obvious potential economic gains for the industry, this benefits the people who live near major airports, and have to deal with the noise of aircraft coming in to land. This could greatly reduce the noise impact on these communities.”

Reaction to Low Sonic Booms

In related news, NASA announced on June 29 that it will use an F/A-18 aircraft flying over Galveston, Texas, in November to produce both loud sonic booms and quieter booms that future supersonic aircraft are expected make.

The flights are being made to determine the public’s reaction to the so-called “low-booms” from new-design SSTs. Later tests of public reaction to low-boom SSTs are planned for 2023 with NASA’s X-59 QueSST aircraft, which is currently being built by Lockheed Martin.

NASA’s press release on the Galveston flights is at: <https://www.nasa.gov/topics/aeronautics/index.html>

Click on “NASA Prepares to Go Public with Quiet Supersonic Tech.”

Litigation

ADAMS COUNTY SUES DENVER OVER NOISE MEASUREMENTS

The Adams County, Colorado, Board of Commissioners filed a lawsuit on July 2 alleging that the City and County of Denver has used insufficient methods to measure violations of noise levels from Denver International Airport agreed to in a 1988 Intergovernmental Agreement that allowed construction of the airport.

That underestimation resulted in Adams County receiving lower payments than it should have for exceedances of noise levels measured at various noise monitoring stations located around the County, the lawsuit asserts.

“Despite months of negotiations, and multiple extensions of a tolling agreement between parties, Denver has not agreed to comply with the measuring system required by the 1988 agreement,” Adams County said in announcing its litigation.

County Board Chair May Hodge said, “We tried everything to avoid having to go down this road, but our residents elected us to advocate on their behalf and to protect agreements in place prior to our arrival.”

“Denver got their airport while moving the noise impacts associated with an airport out of their city and into our municipalities. We have to make sure they’re sticking with the spirit and language of that original pact.”

The original 1988 agreement outlines the use of monitoring stations, not noise modeling. The lawsuit contends Denver had actual knowledge that a noise modeling system being used by Denver understates the actual noise exposure to resi-

dents of Adams County.

“Before we can discuss the impact of noise and the potential violations, we have to ensure the data we are all evaluating is accurate and verifiable information,” said Commissioner Hodge. “Our hope is to continue discussions with our partners in Denver to find a resolution that satisfies our commitment to residents while avoiding lengthy and costly litigation.”

In a July 5 statement, DIA refuted the County’s claims.

“Adams County has chosen to litigate an issue despite Denver’s willingness to address their concerns. Instead, Adams County is making numerous unfounded allegations that are based on unproven and imprecise noise collection and measurement methods. Using industry standard technology, Denver International Airport has diligently monitored noise in Adams County since the airport opened. During that time, Adams County accepted more than \$40 million in payments when aircraft exceeded these noise standards.

“Advances in aircraft engines, fewer planes flying overhead and more precise flight technology have resulted in drastically reduced noise exceedances such that Adams County is no longer benefitting financially from noise payments.

“The airport offered to pay for a pilot program to explore new noise systems, but Adams County walked away from those discussions. Being a good neighbor to our communities is important to us.

“We take noise issues seriously and will continue to comply with the Intergovernmental Agreement as we have since the airport opened.”

The case is *Board of County Commissioners of Adams County v. City and County of Denver* (2018CV31077).

UK

LONDON UNIVERSITY GETS GRANT TO DESIGN QUIETER JET ENGINES

The UK’s Engineering and Physical Sciences Research Council – the main UK government agency for funding research in engineering and the physical sciences – recently awarded Queen Mary University of London a grant of £422,275 (\$559,817) to conduct research that will lead to the design and manufacture of the next generation of quiet jet engines.

The Jet Installation Noise Abatement (JINA) project will bring together experts in experimental and computational aeroacoustics and design optimization, alongside an international advisory and industrial board, the University said in its July 5 announcement.

The work will complement extensive experimental and optimization studies to be performed at University of Bristol as a part of an overall £1m (\$1.3 million) research program.

Aircraft noise is responsible for many physiological and psychological effects, Queen Mary University noted in its an-

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nouncement. “According to recent studies, aircraft noise not only creates a nuisance by affecting amenity, quality of life, productivity, and learning, but it also increases the risk of hospital admissions and mortality due to strokes, coronary heart disease, and cardiovascular disease.”

The World Health Organization estimated in 2011 that up to 1.6 million healthy life years are lost annually in the western European countries because of exposure to high levels of noise. Governments and airport operators also acknowledge the noise as a limit to both airline fleet growth and their operations, with direct consequences to the UK economy, the University noted.

“Based on EUROCONTROL forecasts, the air traffic in Europe is expected to continue its long-term growth trend and the number of flights will increase by up to 2.2 times from 2010 to 2030, with the potential increase in related environmental nuisances, particularly noise.

“Just last month, Members of Parliament voted in favor of plans to build a third runway at Heathrow Airport despite concerns about noise pollution to nearby communities. This research could have an impact such issues.”

‘Jet Installation Effect’

“Ever more stringent environmental regulations are now in place to reduce the impact of aircraft noise. It is, therefore, of great importance for major aviation industries, such as Airbus and Embraer, to better understand the aerodynamic noise generation mechanisms and develop more robust and effective methods to reduce the noise at source,” said Sergey Karabosov of Queen Mary’s School of Engineering and Materials Sciences, who will serve as the principal investigator for the JINA project research.

He said that while improvements in technology like the introduction of high bypass ratio turbofans used on modern commercial aircraft led to better aerodynamic performance of jet engines, it also brought about an aeroacoustical challenge, known as the ‘jet installation effect’. A significant part of aircraft noise, particularly at take-off, is created by this effect, which is due to the jet and jet-wing interaction noise.

“While a number of very recent studies have provided some insights into the physics of the low-frequency noise amplification heard in the jet installation effect, our current understanding remains very limited,” Dr. Karabosov said.

“JINA will help us better understand the noise generation mechanism and for the first time, propose a well-structured methodology to develop a high-fidelity joint computational and experimental optimization platform to reduce the jet installation noise.”

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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SSTs

NEW COMMERCIAL SST UNLIKELY TO MEET EXISTING NOISE, EMISSIONS STANDARDS

New commercial supersonic aircraft are unlikely to comply with existing noise and emissions standards for subsonic jet aircraft and could have large environmental and noise pollution consequences, according to a preliminary assessment by the International Council on Clean Transportation (ICCT).

The ICCT is an independent, non-profit organization founded to provide top quality, unbiased research and technical and scientific analysis to environmental regulators.

A noise assessment done by the ICCT concluded that emerging SSTs are likely to fail current FAA Stage 5/ICAO Chapter 14 landing and takeoff (LTO) noise standards, which became effective on Jan. 1, 2018, and “perhaps” may not meet the less stringent Stage 4 standards, which were in effect from 2006 to 2017.

“The most likely configuration of a representative SST was estimated to exceed limits for nitrogen oxides and carbon dioxide (CO₂) by 40% and 70%, respectively,” ICCT concluded in its July 17 Working Paper: *Environmental performance*

(Continued on p. 90)

BWI Int'l

COUNTY FILES PETITION WITH FAA OVER NOISE IMPACT OF NEXT-GEN FLIGHT PATHS

On July 18, Howard County, MD, filed an administrative petition with the FAA seeking relief for residents impacted by noise from new, focused NextGen flight paths around Baltimore-Washington International Airport that went into effect in 2014.

The County’s action comes three weeks after the State of Maryland filed a similar administrative petition with the FAA requesting a supplemental environmental assessment as well as revisions to area navigation routes and procedures for BWI Airport (30 ANR 81).

At the same time, the State of Maryland also sued FAA in the U.S. Court of Appeals for the D.C. Circuit asserting that FAA had failed to conduct the appropriate environmental review for changes it made to an approach flight path at Reagan National Airport.

Howard County Executive Allan Kittleman said that many people who live around BWI Airport “have had their lives disrupted by the considerable noise from flights taking new routes at lower altitudes because of the NextGen system. Even

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SSTs ... New commercial supersonic aircraft are unlikely to meet existing noise and emission standards for subsonic aircraft, ICCT concludes in preliminary assessment - p. 89

... France’s national aerospace research center signs agreement with NASA that could make supersonic passenger flights over land practical; will work together on sonic boom prediction research - p. 90

BWI Int'l ... Howard County, MD, files administrative petition with FAA seeking relief from NextGen flightpath noise - p. 89

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Unmanned Aircraft Systems ... Boeing will collaborate with artificial intelligence technology leader SparkCognition to shape unmanned aircraft air traffic management system - p. 91

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of emerging supersonic transport aircraft.

The representative commercial SST that the ICCT assessed is expected to burn five to seven times as much fuel per passenger as comparable subsonic aircraft.

‘Representative’ SST Design

The ICCT’s assessment of the environmental performance of emerging SSTs is based on a “representative commercial SST design” the ICCT developed based on publicly available information on the website for Colorado-based Boom Supersonic, which is the only company currently developing a commercial supersonic aircraft: a 55-seat jet capable of operating at Mach 2.2.

“Boom is not developing a specific technology or design to suppress sonic boom; instead, it is relying on the use of a newer engine and better aerodynamics than Concorde’s to manage sonic boom. It is developing a one-third-scale supersonic airplane that will demonstrate Boom’s technology prior to finalizing its airliner design. Boom claims that its aircraft ‘won’t pollute any more than the subsonic business class travel it replaces,’” ICCT noted in its paper.

The ICCT said that building a sophisticated noise model was beyond the scope of its paper, so instead they used exit jet velocities to investigate likely noise characteristics. The ICCT paper explains how these exit velocities relate to aircraft noise standards.

The exit velocities from the representative SST design, the ICCT concluded, “implies that the aircraft would not meet existing (ICAO Chapter 14/U.S. Stage 5) standards.

“Engine de-rating, combined with modified landing and takeoff procedures, is believed to be needed to bring new SST aircraft into compliance with the 2006 ICAO Chapter 4/U.S. Stage 4 noise standards.

“Certification to current Stage 5 subsonic noise standards is likely to require additional technological solutions – for example, a clean-sheet advanced variable-cycle engine – that are currently not being considered for near-term SSTs.”

Boom Comments

Asked to comment on the ICCT’s working paper, Eli Dourado, Head of Global Policy and Communications for Boom Supersonic, did not comment on the noise assessment but told ANR:

“Our analysis shows that travel on Boom’s supersonic airliner is at parity with subsonic business class on fuel burn per seat-mile. In any case, under the [ICAO Carbon Offsetting and Reduction Scheme] (CORSIA) framework, if supersonic emissions increase total aviation carbon emissions after 2020, they will be fully offset. Therefore, supersonic operations categorically will not increase net carbon emissions at all. More and faster travel with no increase in net emissions is an unequivocal win for humanity.”

To download ICCT working paper, google “Environmental performance of emerging supersonic transport aircraft.”

AIP Grants**BURLINGTON, TWEED AWARDED NOISE MITIGATION GRANTS**

Tweed-New Haven Airport in Connecticut and Burlington International Airport in Vermont will receive Airport Improvement Program (AIP) grants for noise mitigation projects, DOT announced on July 16.

Tweed-New Haven Airport will receive a \$2,504,946 AIP grant for noise mitigation measures (sound insulation) of residences within the 65-69 DNL noise contour.

Burlington International will receive a \$67,500 grant for noise mitigation measures (sound insulation) for public buildings.

These are the only two AIP noise mitigation grants that have been awarded in fiscal year 2018, which ends on Sept. 30. So, expect additional noise mitigation grants to be awarded in the next two months.

The grants to Tweed and Burlington airports were part of DOT Secretary Elaine Chao’s announcement that FAA will award 450 AIP grants, totaling \$659.8 million, to fund 664 airport infrastructure projects at airports around the country.

Chao said that these grant awards do not include any funds from the \$1 billion supplemental funding for the AIP program that Congress appropriated under the Consolidate Appropriations Act of 2018. The availability of that funding was recently announced in the *Federal Register*.

NASA**NASA, FRENCH AEROSPACE LAB TO COLLABORATE ON SONIC BOOM PREDICTION RESEARCH**

[Following is a July 18 NASA news release.]

NASA and France’s Office National d’Etudes et de Recherches Aérospatiales (ONERA), the French national aerospace research center, signed a research agreement Wednesday that could make supersonic passenger flights over land practical, dramatically reducing travel time in the United States or anywhere in the world.

NASA and ONERA agreed to collaborate on research predicting where sonic booms will be heard as supersonic aircraft fly overhead. This could lead to alleviating the effects of the loud noise caused by sonic booms.

The agreement, signed during bilateral meetings held in conjunction with the 2018 Farnborough International Air Show in the United Kingdom, is the 12th agreement between the two organizations and the third that is still active. The most recent agreement, signed in September 2016, involved collaboration on aircraft noise research.

“This partnership shows there is interest in supersonic

travel all over the world,” said Jaiwon Shin, NASA’s associate administrator for aeronautics. “Solving the issue of annoying sonic booms could ultimately cut travel time to worldwide destinations in half.”

“This new partnership comes as a natural follow-up to a decade of successful cooperation between NASA and ONERA on the topic of aircraft noise mitigation, as well as an exciting perspective to revive the pioneering era of supersonic aviation,” said Bruno Sainjon, ONERA’s chief executive officer.

The cooperation under this agreement will create a forum through which NASA and ONERA can share technical knowledge and data in order to independently improve their own capabilities, with the overall objective of mitigating the effects of sonic booms produced by civil air transportation.

Both organizations will define common verification cases, use numerical tools to predict where sonic booms will reach the ground, and perform detailed analyses and comparisons of the results. NASA’s efforts toward this agreement complement work currently taking place at NASA’s Langley Research Center in Virginia.

NASA is committed to conducting research that will enable a robust commercial supersonic market, including faster-than-sound air travel over land. The agency’s X-59 quiet supersonic technology airplane is the cornerstone of this effort.

BWI, from p. 89

programs at our Robinson Nature Center have been negatively impacted by the noise, and that facility is 10 miles from the airport.”

Kettleman said the County has “exhausted all attempts to discuss this with the FAA and come to any sort of reasonable resolution.”

In its petition, Howard County asks the FAA to promptly restore flight paths to their pre-NextGen status and evaluate any new routes before they are re-implemented, as required by federal statutes.

The County argues that when the NextGen routes were implemented, they were done so in violation of the National Environmental Policy Act, the National Historic Preservation Act, portions of the Department of Transportation Act and FAA policy.

“The County has protested these new routes for three years now, and despite our good-faith efforts to work with the FAA, we’ve made no progress,” said Council Chairperson Mary Kay Sigaty. “There has been continued obfuscation, obstruction, and a lack of any meaningful action.”

The petition contends the intense concentration of flights on one path, significant alterations in traditional departure and arrival trajectories, and the changes in the altitudes of arriving and departing flights were all implemented without notice and without the environmental, historical and other reviews required by federal statutes.

“Dealing with the FAA has been a nightmare since the noise issues started,” said Councilmember Jon Weinstein. “Their withdrawal from the roundtable process they requested and required is a dereliction of their responsibility to the citizens they’re supposed to serve. We are left with no recourse but to pursue legal action.”

Howard County’s petition to the FAA can be found at <https://www.howardcountymd.gov/LinkClick.aspx?fileticket=LA8ISFJlzoI%3d&portalid=0>

FAA Pulls Out of Roundtable

In 2017, at the direction of the FAA and the Maryland Aviation Administration (MMA), Howard County participated in the establishment of the BWI Community Roundtable, which was seeking ways to reduce the noise impact of the flight path changes.

Earlier this month, the FAA withdrew from Roundtable participation. In a statement, that agency said it “has temporarily halted its involvement with the D.C. Metroplex BWI Community Roundtable in light of the legal and administrative petitions filed by the Maryland Attorney General.

The FAA said it “looks forward to resuming its work with the roundtable as soon as the legal issues are resolved.”

Maria Stanco, Deputy Regional Administrator in FAA’s Eastern Region Office, informed MAA in a July 11 e-mail that the State of Maryland’s legal action ended FAA’s ability to move forward with discussions with the state agency or the Roundtable on the noise impact of the new flight paths.

Mary Reese, chairwoman of the BWI Community Roundtable, told the *Baltimore Sun* that she was “frustrated to learn that the [FAA] would no longer be engaging neighbors in the process, especially given that the group had dedicated more than a year to finding a solution.”

“Finding out from the state aviation administration – and not the FAA – that the discussions had ended only added insult to injury,” she told the *Sun*.

“It’s like being broken up with on a Post-It note.”

Into the Future

BOEING, SPARK-COGNITION SHAPING UNMANNED AIRCRAFT TRAFFIC MANAGEMENT SYSTEM

Boeing is collaborating with artificial intelligence (AI) technology leader SparkCognition to shape unmanned aircraft system traffic management (UTM).

Boeing and SparkCognition announced July 17 at the Farnborough Air Show that they will use artificial intelligence and blockchain technologies to track unmanned air vehicles in flight and allocate traffic corridors and routes to ensure safe, secure transportation.

Blockchain technology allows digital information to be distributed across a broad network of computers. It creates the backbone of a new type of internet because no centralized

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version of information exists for a hacker to corrupt.

Through their collaboration, Boeing and SparkCognition also will provide a standardized programming interface to support package delivery, industrial inspection, and other commercial applications.

“Estimated by some analysts at \$3 trillion, the urban aerial mobility opportunity will lead to the creation of the largest new market in our lifetimes,” said Amir Husain, founder and CEO of SparkCognition.

“The world’s number one aviation leader partnering with the world’s most innovative industrial AI company means that unparalleled experience in safety, innovation, scale, and reliability will be brought to bear to address this monumental opportunity.”

Boeing NeXt

To help advance UTM and next-generation travel, and evolve the transportation ecosystem, Boeing said it is standing up a new organization, Boeing NeXt. It will leverage Boeing’s research and development activities and investments in areas such as autonomous flight and advanced propulsion, as well as focus on modeling smart cities and exploring new market opportunities to solve for the transportation challenges of the future.

“We’re at a point in history where technological advances and societal trends are converging to demand bold solutions and a different way to travel,” said Greg Hyslop, Boeing chief technology officer. “Boeing has the experience and expertise to safely and efficiently shape this emerging world of travel and transport. Through Boeing NeXt, we intend to build on our legacy of opening up new frontiers to move people and goods with proven technologies.”

To reimagine how products and people move around the world, Boeing is pursuing technology development in emerging fields, including AI and hybrid and fully electric propulsion that will help ensure safe, efficient flight. In a new video, the company outlines how these enablers will come together with digital systems to make the introduction and integration of autonomous and piloted air vehicles a reality.

“By taking a holistic approach that combines Boeing’s strength in technological innovation with new business models and nontraditional partnerships, we are laying the foundation for the future commercial mobility ecosystem,” said Steve Nordlund, who will lead Boeing NeXt in addition to his role as vice president of Boeing HorizonX. “We are shaping the physical and connectivity infrastructure to ensure new air vehicles safely operate in the global air space.”

The Boeing NeXt portfolio will include the recently unveiled passenger-carrying hypersonic concept, as well as electric vertical takeoff and landing (eVTOL) vehicles that will provide on-demand cargo transport and urban air travel in the future mobility ecosystem.

AIRPORT NOISE REPORT

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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July 27, 2018

ACRP FY 2019 Program

PROJECT WILL IDENTIFY WAYS TO MODIFY NEXTGEN TRACK DESIGN TO REDUCE NOISE

On July 26, the Transportation Research Board announced the 21 projects that will be included in its Fiscal Year 2019 Airport Cooperative Research Program (ACRP).

Only one of these projects directly addresses aircraft noise but it is aimed at solving perhaps the most significant problem jeopardizing FAA's implementation of NextGen: tightly concentrated flight paths over communities.

ACRP Project 02-88, Techniques for Modifying NextGen Flight Track Design to Reduce Noise Exposure and Annoyance, will be funded at a level of \$400,000.

"Implementation of performance-based navigation (PBN) across the entire National Airspace System is a key NextGen goal. PBN is a critical enabler of trajectory-based operations, which are intended to reduce delays through increased operational predictability," the Transportation Research Board explained in its summary of the project.

"With the implementation of PBN flight procedures through FAA's Metroplex

(Continued on p. 94)

Litigation

FEDERAL APPEALS COURT DENIES PETITION FOR REHEARING OF GEORGETOWN CASE

The U.S. Court of Appeals for the D.C. Circuit said July 20 that it will not rehear a March ruling in *Citizens Association of Georgetown v. FAA* dismissing the case on the ground that it was filed beyond the 60-day window for challenging FAA final orders and there were no reasonable grounds for having done so.

In May, the plaintiffs in the case – neighborhood community groups in the historic Georgetown district of Washington, D.C. and Georgetown University – filed petitions with the Court seeking a rehearing or rehearing *en banc* of the case, which challenged FAA's approval of NextGen flight paths out of Reagan National Airport.

The Court's July 20 order denies both the plaintiffs' request for a rehearing in front of the three-judge panel that previously heard that case and their petition for a rehearing *en banc* (before the full Court).

"The Court is being very clear: they do not want to hear this case again," a legal expert told ANR.

The D.C. Circuit's ruling could pose a problem for the State of Maryland, which filed litigation before the Court on June 26 challenging FAA's approval of

(Continued on p. 95)

In This Issue...

ACRP ... A project to identify techniques for modifying NextGen flight track design to reduce noise exposure and annoyance is among the 21 projects included in the Airport Cooperative Research Program's Fiscal Year 2019 program, which was just announced by TRB - p. 93

Litigation ... The U.S. Court of Appeals for the D.C. Circuit denies petitions to rehear its ruling that the *Georgetown* case challenging NextGen flight paths at Reagan National Airport was filed too late - p. 93

FAA Reauthorization ... With the Senate's FAA reauthorization bill expected to be voted on as early as next week, community groups are seeking support for language being developed by Maryland Sens. Cardin and Van Hollen to address the noise impact of NextGen focused flight paths; community groups seek support for eight measures they want to see added to the Senate FAA reauthorization bill - p. 95

ACRP, from p. 93

and related processes, some communities have expressed concern regarding increased aircraft noise exposure. Multiple lawsuits have been filed, and in some cases, FAA has been directed by the courts to return to the pre-area navigation (RNAV) flight procedures, negating the benefits of reduced fuel consumption and air emissions.

“It is likely that, to ensure the continued successful roll-out of NextGen procedures, consideration will need to be given not only to efficiency improvements but also to minimizing community impacts; yet there is no established technique to balance these two goals.

“The objective of this research is to identify viable techniques for considering both capacity/efficiency and community impacts when modifying NextGen flight tracks.”

UAS/Electric Aircraft

Two other projects in the FY 2019 ACRP program will be of interest to airports and other stakeholders concerned about aircraft noise:

ACRP Project 03-50: An Airport-Centric Study of the Urban Air Mobility Market, will be funded at a level of \$350,000.

The goals of this research are to (1) assess whether a legitimate UAM market exists, and, if so, anticipate the general timing of the market’s growth; (2) understand potential political, social, technological, environmental, and legal implications; and (3) identify possible effects on airports and how airports can prepare for this potential market.

“Urban air mobility (UAM) is a safe and efficient system for passenger and cargo air transportation within an urban area. It includes small package delivery and other urban unmanned aerial systems (UAS) and supports a mix of on-board/ground-piloted and, increasingly, autonomous operations,” TRB explained in the project summary.

“UAM has developed rapidly due to advances in technology. A number of firms are developing automated aerial vehicle and piloted aerial vehicle prototypes, and pilot projects are underway in Dubai and planned for Dallas and Los Angeles in the early 2020s.

“The UAM market is potentially broad (e.g., personal commuting, air ambulance, law enforcement). Due to the recent emergence of this technology, there is little research on the topic, yet airports need to understand and anticipate the effects of a potential UAM market, including anticipated market growth, vehicle types and uses, airspace impacts and management, community and environmental impacts, regulatory changes, financial implications, and other issues.”

ACRP Project 03-51, “Electric Aircraft on the Horizon – an Airport Planning Perspective, will be funded at a level of \$450,000.

“Design innovation for electrically powered and hybrid-electric aircraft is accelerating rapidly, with the possibility of

electric aircrafts being rolled out in the next 2 to 5 years,” TRB explains in the project summary.

“Electric motors have far fewer moving parts compared to combustion engines and electric energy costs less than liquid fuels. But not all air service can be replaced by electrically powered aircraft, as batteries are heavy and significantly less energy dense compared to AvGas, and electric aircrafts will fly more slowly than jet aircraft. Yet in certain applications (e.g., short-haul and cargo service), electric power is optimal compared to combustion engines.

“The advent of electric aircraft offer both significant opportunities and disruptions for airports and their surrounding communities. Airports may have new roles to play regarding energy generation and transmission; at the same time, electric aircraft may impact revenue from fuel sales. Communities could benefit from potential environmental improvements. Airports need guidance not only to be ready for the introduction of electric aircraft but to help influence their transition into the airport environment.

“The objective of this research is to develop guidance to help plan for the operation of electric aircraft at airports. The research should describe current and emerging technology and address facility requirements, implications for commercial service and general aviation airports, power demand requirements, potential impacts and opportunities for revenue generation, regulatory issues, and environmental impacts.”

Cultivating Airport Industry Professionals

Two other projects in the FY 2019 ACRP Research Program may be of interest to aircraft noise stakeholders because they address the aviation industry’s challenge of cultivating professional talent in technically demanding fields.

Although airport noise office professionals are not specifically mentioned in these projects, they would fall under their purview.

ACRP Project 06-06: Cultivating Talent in the Airport Environment will be funded at a level of \$250,000.

“The airport industry is facing a challenge of cultivating talent, especially in technically demanding professions such as planning, engineering, construction, operations, and facility maintenance” TRB explained.

“Airports are facing a shortage of individuals who can lead, guide, manage, and carry out airport centric initiatives. Yet there are few resources for managers to attract, cultivate, and retain talented individuals at airports, and most are academic research reports that make implementation of their findings difficult.

“The objective of this research is to develop a airport industry talent cultivation “playbook” that would provide inspiring, tested, and readily implementable techniques to enhance talent cultivation and knowledge transfer in their organizations. The playbook should be designed for quick, easy access with key talent planning ideas that can be implemented immediately and utilized by airports of different types and sizes.”

ACRP Project 06-07: Building Academic Programs to Cultivate Future Airport Industry Professionals will be funded at a level of \$300,000.

The objective of this research is to develop updated academic curriculums and requirements to cultivate airport industry professionals to meet existing and future needs.

“Airports and their support industries have changed significantly over the past several decades; however, many academic programs have remained stagnant in their requirements, and have not evolved with the industry reliant on their training,” TRB noted.

“Current academic curriculums generally still prepare students for initial positions in airport airfield operations, while most current and future trends in the profession are reliant on a comprehensive approach to airport management and consulting careers incorporating engineering, finance, planning, technology, and operations.

“As a means to prepare students for careers in the airport industry, research is needed to develop a model academic curriculum template to provide a foundation for career success.

“This effort would likely focus on an evaluation of the current and future succession requirements as outlined by both airport sponsors and consultants, followed by a comparison of existing academic curriculums and graduation requirements.

“The comparison of industry needs versus the current academic environment would establish a “gap” from which to build a refined track for future students to fulfill positions in current and future airport and consulting professions. Ultimately, this research would seek to bridge the gap that currently exists to ensure both employee, organizational and industry success.

TRB said that requests for proposals formally soliciting research proposals for the projects included in the FY 2019 research program are expected to start being released in the fall.

The list of projects included in the ACRP FY 2019 research program is not yet posted on the ACRP’s web site: <http://www.trb.org/acrp>.

Until it is, contact Michael Salamone, manager of the ACRP Program, at msalamone@nas.edu for the list.

Self-nominations to serve on the panels that will oversee the ACRP project will be accepted until September 21, 2018 at MyACRP

Litigation, from p. 93

NextGen flight path changes into Reagan National Airport (31 ANR 81).

As in the *Georgetown* case, the State of Maryland’s litigation was filed beyond the 60-day window.

John Putnam of the Denver law firm Kaplan Kirsch & Rockwell told ANR in June that “The limitations period issue will be fully briefed as part of the case coming up.”

FAA Reauthorization

MD SENS. ADDRESSING NEXT-GEN NOISE IMPACT ON COMMUNITIES

Maryland Senators Ben Cardin (D) and Chris Van Hollen (D) are working with staff of the Senate Commerce Committee on potential language addressing NextGen noise impact on communities that might be included in a manager’s amendment to the Senate FAA reauthorization bill, a spokeswoman for Sen. Cardin told ANR July 26.

“At this time, however, we are not privy to what has made it into the package,” Sen. Cardin’s spokeswoman added, declining to confirm information released by grassroots community anti-noise groups that the Maryland senators would introduce the following four amendments to the FAA reauthorization bill:

- The “Noise Dispersion” amendment, which would require dispersion of flights, higher altitudes, and research/implementation of technologies to improve safety in crowded airspace while also achieving dispersion and altitudes;
- The “Subtitle E” amendment, which is a compilation of the noise-related amendments that passed in Subtitle D of the House version of the FAA reauthorization bill in April (30 ANR 45);
- The “21st Century Noise Measuring” amendment, which would require the adoption of updated noise measuring and assessment methods, including measuring and accounting for actual noise on the ground rather than just modeled noise; and
- The “Cumulative Impacts” amendment, which would require the FAA to calculate noise on a cumulative rather than average, single event, or “per flight” basis.

The Montgomery County Quiet Skies Coalition of Maryland is urging other community groups around the country to contact their senators and urge them to support the Maryland senators amendments to the FAA reauthorization bill.

What Community Groups Want in the Bill

The Montgomery County Quiet Skies Coalition is also seeking strong support from community groups for eight measures they want to see added to the Senate FAA reauthorization bill to address the “collateral damage to communities” they assert NextGen is causing:

1. Require the FAA to use currently available technology to recreate, to the greatest extent possible, the historical dispersion, airspeeds, altitudes and flight ground paths that were present before PBN was implemented; recognizing that concentrated paths at low altitudes create untenable noise and emissions for citizens on the ground and that decades of land-use planning and home ownership decisions were based on those historical paths.

2. Require the FAA to use relevant noise metrics to evaluate the impacts of airspace redesigns and new procedures. Use supplemental noise metrics beyond DNL; develop new metrics.

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3. Mandate a robust community engagement process. Require that approach and departure routes may only be created if they are environmentally sound and if they are created with input from affected communities in advance of decision-making by the FAA. Include community stakeholders from the 10 busiest airports in the country on advisory forums such as the NextGen Advisory Committee, and/or new forums developed for this purpose, to ensure that their input is considered during the planning and use of the National Airspace. Hire a full-time professional ombudsperson for each FAA regional office with the authority to get answers to questions at every level of the agency and facilitate the resolution of disputes between the public and the FAA.

4. Develop and implement technologies that will reduce noise impacts to people beneath flight paths in terminal airspace. Create incentives for airlines to install noise reducing technology to engines and airframes. Require certain Airbus aircraft to have vortex generators installed; require airport operators at all airports that have implemented Performance Based Navigation to implement new landing technologies to enable distributed and quieter approaches at all metroplex airports while maintaining the faster landing rates the airline industry demands. Such technologies might include Ground Based Augmentation System (GBAS) and GBAS Landing System (GLS), however these should be evaluated regionally based on the local metroplex.

5. Commission an expert consensus report by the National Academies of Science / Division of Health and Medicine. Direct the National Academies to review the existing research findings on the harmful health impacts of PBN procedures and report its findings no later than 2 years from the date of enactment of this legislation.

6. Amend the FAA Mission Statement to include noise, health, and environmental impacts as co-equal priorities with efficiency while retaining safety as the number one priority, in recognition of the fact that the FAA's control of the National Airspace involves great power and the responsibility to act in the public interest.

7. Empower the Environmental Protection Agency (EPA) to regulate aviation noise pollution and reinstate the EPA Office of Noise Abatement and Control (ONAC), in recognition of the fact that noise pollution is an established cause of harm to human health.

8. Oppose legislation that would require adoption of any technology or methodology that would force the additional concentration of flights over residential areas, such as Terminal Sequencing and Spacing (TSAS) or codifying a directive of President Clinton's 1993 Executive Order 12866, Section 1(b)(8), which stipulates that, whenever possible, any new standards promulgated by the FAA shall be performance-based standards providing an equal or higher level of safety.

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FAA Reauthorization

TRADE GROUPS WANT NO CHANGES TO NOISE METRICS, THRESHOLDS, NEW FLIGHT PATHS

Eight aviation trade groups urged the Senate Commerce Committee in a July 26 letter to include no amendments to the Senate FAA reauthorization bill “that decree new noise measuring protocols, metrics, or thresholds; dictate flight paths; and/or adopt airport-specific flight procedures or aircraft operating restrictions.”

“Such legislative mandates would be shortsighted and counterproductive because they would seriously undermine the wide range of safety and environmental benefits associated with NextGen and the stability and connectivity of the national airspace system,” the trade groups told the Chairmen and Ranking Members of the Senate Commerce Committee and its Aviation Subcommittee.

The letter was signed by the Aerospace Industries Association, the Air Line Pilots Association, Airlines for America, the Cargo Airline Association, the General Aviation Manufacturers Association, the National Air Carrier Association, the National Business Aviation Association, and the Regional Airline Association.

The Airports Council International – North America was not a signatory to the

(Continued on p. 98)

AIP Grants

FAA AWARDS A TOTAL OF \$61.4 MILLION IN NOISE MITIGATION GRANTS TO 11 AIRPORTS

On July 27, the FAA awarded Airport Improvement Program (AIP) grants totaling \$61,423,547 to 11 airports for noise mitigation projects.

The grants were part of \$770.8 million in infrastructure grants awarded to 522 airports as part of a third increment of AIP grant funds issued in fiscal 2018. A total of \$3.18 billion in AIP grant funds will be awarded this fiscal year.

The following noise mitigation grants were among the grants announced on July 27:

- City of Fresno, CA, received a \$1 million grant for noise mitigation measures for residences within the 65-69 DNL contour of Fresno Yosemite International Airport;
- City of Inglewood, CA, received a \$15 million grant for noise mitigation measures within the 65-69 DNL contour of Los Angeles International Airport;
- County of Los Angeles received a \$5 million grant for noise mitigation measures within the 65-69 DNL contour of Los Angeles International Airport;
- San Diego County Regional Airport Authority received two grants:

(Continued on p. 100)

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FAA Reauthorization ...

Eight aviation trade groups tell leaders of Senate Commerce Committee that FAA reauthorization bill should include no noise amendments that mandate new noise measuring protocols, metrics, or thresholds; dictate flight paths; and/or adopt airport-specific flight procedures or operating restrictions - p. 97

AIP Noise Grants ... FAA awards a total of \$64.1 million to 11 airports for noise mitigation projects; mostly sound insulation - p. 97

Legislation ... Bill that would reorder priorities that FAA must consider when designing new flight procedures to make aircraft noise the agency’s second highest priority after safety is introduced by Rep. Dana Rohrabacher (R-CA) - p. 95

Part 150 Program ... FAA approves update to Part 150 Program for Jackson Hole Airport located in Grand Teton National Park - p. 95

FAA Reauth., from p. 97

letter but it is unclear whether ACI-NA was not asked to sign it or chose not to sign it. ANR is awaiting an answer from the airport trade group to clarify why its signature is not on the letter.

‘Tremendous Noise Reductions’

“While appreciating that aircraft noise exposure is an issue in certain communities, U.S. aviation has achieved tremendous noise reductions and the aviation industry remains committed to further advancements,” the eight aviation trade groups that signed the letter asserted.

They urged the Senate Commerce Committee “to recognize the vast array of aircraft noise management and community outreach provisions already in place and to decline to adopt further legislative measures that would undermine the wide-range of safety, connectivity and environmental benefits associated with NextGen and the National Airspace System (NAS).”

The trade groups’ letter comes as the Senate Commerce Committee is considering what to include in a manager’s amendment to S. 1405, the Committee’s FAA reauthorization bill, which could be presented for a floor vote before the end of August.

The trade groups’ letter is targeting some of the top provisions that grass-root community anti-noise groups hope to see added to the Senate FAA bill and/or have already been included in the House FAA reauthorization bill, such as developing a new metric to replace or supplement DNL, dispersing or rolling back PBN flight tracks, and requiring measurement of aircraft noise instead of modeling it.

But the aviation trade groups argue that such amendments are not needed.

“The number of people exposed to significant levels of aircraft noise [65 dB DNL or greater] in the United States has dropped by 94 percent since the late 1970s, even as enplanements have more than quadrupled. More recently, such noise exposure decreased 53 percent between 2000 and 2016, while enplanements rose 22 percent. And additional improvements are on the way,” the trade groups asserted in their letter.

“As detailed in the attached fact sheet,” the trade groups wrote, “U.S. airlines and aircraft operators are continuing to update their fleets, new aircraft noise certification standards are being implemented, and the aviation community is working with FAA on new technologies to further advance aircraft noise reduction through the “Continuous Lower Energy, Emissions, and Noise” (CLEEN) program.

“In addition, federal legislation approved in December 2016 as an amendment to the National Defense Authorization Act added additional requirements for community outreach when FAA considers new ATC procedures, on top of reforms that FAA made based on recommendations from the NextGen Advisory Committee.”

“Against this backdrop, the aircraft-related noise proposals included in the Senate’s FAA Reauthorization bill, which

include additional provisions on noise exposure assessment, community outreach and review of FAA’s processes for approving new air traffic procedures, while arguably not necessary, are more than sufficient to augment the rigorous noise assessment and mitigation statutes.

“But, in any event, amendments that decree new noise measuring protocols, metrics, or thresholds; dictate flight paths; and/or adopt airport-specific flight procedures or aircraft operating restrictions would be highly concerning.”

‘Unbearable Noise Pollution’

Asked to comment on the trade groups’ letter, Janet McEneaney, president of the Queens (NY) Quiet Skies community group, told ANR:

The aviation industry groups assert that Performance-Based Navigation routes have decreased noise. Those routes – which were designed to increase profits for the airline and tourist industries – have created a new kind of aviation noise that brings constant, unbearable noise pollution in ever-widening swaths through the large, densely-populated metropolitan areas surrounding our airports.

The FAA doesn’t know whether noise has decreased because they don’t yet have tools to measure adequately or appropriately the new kind of noise they’ve created.

Our reality now is airplanes over our homes every 60 seconds at 75 decibels each. That’s why communities throughout the country insist on a mandate from Congress to the FAA: find and use the right tools to control this growing public health disaster.

We can design NextGen to benefit the flying public and the communities on the ground, too, not just the airlines’ bottom line.

Fidell Comments

ANR also asked Sanford Fidell, an acoustician noted for his decades of work developing and analyzing airport noise metrics and community reaction to aircraft noise, to comment on the trade groups’ letter. Following is his response:

The claims made in the current trade association letter to members of Congress are not new. They recycle, essentially verbatim, several of the same canards contained in a 2015 letter addressed to FAA Administrator Huerta from the same groups (Airlines for America, Air Line Pilots Association, Aerospace Industries Association, Cargo Airline Association, General Aviation Manufacturers Association, NBAA, National Air Carrier Association and the Regional Airline Association.)

The bulk of the noise reductions cited in the current letter coincided with airlines’ economic self-interests in reducing operating costs. In reality, Stage II jet transports such as the B-727 were not retired from the fleet serving U.S. airports because airlines were (as insinuated in the letter) concerned primarily with their noise emissions. Most of the ANCA-induced “tremendous noise reductions” prior to 2000 had far more to do with aircraft operating economics than with airline interests in “quieter technology” per se. Industry self-in-

terests in “quieter technology” were due principally to 1) lower labor costs of two-pilot cockpits (enabled by digital automation, which eliminated the position of flight engineer), and 2) to lower direct operating costs due to the far greater fuel efficiency of later generation, high bypass ratio engines and larger airplanes.

Likewise, many PBN-based airspace utilization changes (Metroplex/NextGen, continuous descent landing profiles, and the like) are motivated less by concerns for minimizing aircraft noise impacts on residential neighborhoods near airports than by reductions in airline operating costs (e.g., crew time and fuel burn) during a few minutes of airport-vicinity flying time.

The claim that “the number of people exposed to significant levels of aircraft noise in the United States has dropped by 94 percent since the late 1970s...” is a narrow and conditional one that is valid only with respect to an arbitrary definition of the level of aircraft noise exposure that FAA has considered “significant” for decades. Although fewer people today than in the 1970s are exposed to levels of aircraft noise at levels in excess of $L_{dn} = 65$ dB, many more are exposed today to slightly lower levels of aircraft noise. As Schultz (1982) observed, a slightly weaker odor of rotting fish is not necessarily greatly preferable to a somewhat stronger odor of rotting fish.

The same trade groups have previously congratulated FAA on its supposedly “fact- and science-based” aircraft noise regulatory policies. The current claim that “the Aviation Safety and Noise Abatement Act (ASNA) established a science-based approach to assessing and addressing aircraft noise exposure” slightly re-states this assertion. FAA’s regulatory policies demand non-technical value judgments, however. No regulation can escape such judgments about “acceptable” balances between conflicting societal interests – in this case, between public demand for safe and efficient air transportation services on the one hand, and habitable residential neighborhoods on the other.

Technical information does not interpret itself, and cannot be converted into regulatory policy positions without “subjective” value judgments. FAA has yet to revise or provide a systematic rationale for its noise exposure thresholds for regulatory policy, which were established long prior to the loss in 1996 of its Congressional charter to promote civil aviation.

Reference: *Schultz, T. J. “Community Noise Rating,” Applied Science Publishers (Elsevier), New York, 1982, p. 327.*

Legislation

BILL WOULD MAKE AIRCRAFT NOISE A HIGHER FAA PRIORITY

On July 30, Rep. Dana Rohrabacher (R-CA) introduced legislation that would reorder the priorities that FAA considers when designing new flight procedures to make noise the agency’s second highest consideration following safety.

H.R. 6558, the National Overflight and New Onerous, Incessant Sound Elimination (NO NOISE) Act, would amend Section 40101 of title 49, United States Code by requiring FAA to assign and maintain “community concerns, including noise, as the second highest priority in air commerce.”

It also would require FAA, before authorizing new air transportation services, to evaluate “the implications of such services on the communities which will be impacted” and to be “informed by engagement with the impacted communities, both through local governments and the general public.”

The congressman said his legislation “comes after decades of prioritizing the needs of airlines over all non-safety considerations. FAA policy has certainly led to more efficient operations, which has reduced prices for everyone.

But that has come at a cost. Airplane noise impacts many more lives now than when those policy choices were first made. Technological advancements have made individual planes quieter, but the total impact on people’s lives is much greater. This requires a shift toward the needs of local people, Americans who have almost no way to get the government to consider the impact on their lives without this change in law.”

The congressman is in a tight race for his House seat. Opponents call his bill a political stunt designed to get votes in his district, which includes the coastal communities of Huntington Beach, Newport Beach, and Laguna Beach, south of Los Angeles, where the noise impact of FAA’s Southern California Metroplex Project is a major concern of residents.

The House rejected similar provisions he tried to amend to H.R. 4, the House FAA reauthorization bill.

Part 150 Program

FAA APPROVES PART 150 UPDATE FOR JACKSON HOLE AIRPORT

On Aug. 7, FAA announced its approval of an update to the Part 150 Airport Noise Compatibility Program for Jackson Hole Airport, which is located in pristine Grand Teton National Park in Wyoming.

FAA approved five of the 15 measures proposed in the update and disapproved 10 measures because they did not meet the purpose of the Part 150 program.

Most of the measures FAA did not approve were Performance-based Navigation (PBN) arrival and departure procedures designed to have aircraft avoid flying over the core of Grand Teton National Park or to avoid residential areas near the park.

FAA also did not approve several land use planning measures that do not require FAA action because they fall under local jurisdiction.

But FAA stressed that its disapproval of these PBN and land use measures means only that they are not consistent with the purposes of the Part 150 program and does not preclude the airport from working with the FAA and communities outside the Part 150 process to implement them.

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Measures in the Part 150 update that got outright approval from FAA are:

- Develop a voluntary Fly Quiet Program report card and Pilot Awareness Program (two measures);
- Make the Part 150 Study Committee a permanent body;
- Continue an earlier approved measure to use the airport's noise complaint system "to record noise complaints received from citizens to monitor the noise situation at JAC"; and
- Review and update the Part 150 Program as needed.

Greater detail on the measures proposed in the update to the Jackson Hole Part 150 Program is included in FAA's Record of Decision on the program, which is at

http://www.faa.gov/airports/environmental/airport_noise/part_150/status/

Click on Wyoming and then on Jackson Hole Airport.

For further information, contact Kandice Krull in FAA's Denver Airports District Office; tel: 303-342-1261.

Grants, from p. 97

- a \$1,350,000 grant to conduct a noise compatibility plan study for San Diego International Airport and;

- a \$12 million grant for noise mitigation measures for residences within the 65-69 DNL contour of San Diego International Airport;

- Tweed-New Haven Airport Authority in Connecticut received a \$2,504,946 grant for noise mitigation measures for residences within the 65-69 DNL contour of Tweed-New Haven Airport;

- Broward County, FL, received a \$20 million grant for noise mitigation measures for residences within the 65-69 DNL contour of Fort Lauderdale/Hollywood International Airport;

- Monroe County, FL, Board of Commissioners received a \$4,102,442 grant for noise mitigation measures for residences within the 65-69 DNL contour of Key West International Airport;

- Indianapolis (IN) Airport Authority received a \$262,500 grant to conduct a noise compatibility plan study for Indianapolis International Airport;

- City of Westfield, MA, received a \$35,192 grant to conduct a noise compatibility plan study at Westfield-Barnes Regional Airport;

- City of Philadelphia, PA, received a \$100,967 grant to install an outdoor noise monitoring system/equipment at Philadelphia International Airport; and

- City of Burlington, VT, received a \$67,500 grant for noise mitigation measures for public buildings near Burlington International Airport.

AIRPORT NOISE REPORT

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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Research

HEALTH COSTS OF ‘TNNIS’ RNAV DEPARTURE AT LGA OUTWEIGH REDUCED FLIGHT TIMES

The health costs associated with the year-round use of the controversial TNNIS RNAV departure procedure out of LaGuardia Airport – which directs aircraft over densely populated areas of Queens, NY – far outweigh the benefits of reduced flight times provided by the departure procedure, researchers at Columbia University’s Mailman School of Public Health concluded in a study released on Aug. 15.

“The Trade-Off between Optimizing Flight Patterns and Human Health: A Case Study of Aircraft Noise in Queens, NY, USA,” was published in the peer-reviewed *International Journal of Environmental Research and Public Health*.

A member of Queens Quiet Skies, a grass-roots anti-noise community group formed in response to the noise impact of the TNNIS departure procedure, also participated in the study.

Prior to 2012, the RNAV departure procedure, known as the TNNIS Climb, was used only occasionally to divert aircraft departing LaGuardia from flying over U.S. Open tennis matches held at the U.S. Tennis Center in Queens. However, beginning

(Continued on p. 102)

East Hampton Airport

HELICOPTER TRAFFIC ROSE 29 PERCENT AFTER NOISE RESTRICTIONS OVERTURNED

Helicopter operations at East Hampton, NY, Airport increased 29 percent in just one year – between 2016 and 2017 – and Town of East Hampton officials are blaming it on a federal appeals court’s ruling striking three noise restrictions the Town imposed to address aircraft noise during the busy summer season.

In an Aug. 9 statement, East Hampton Supervisor Peter Van Scoyoc reported that the number of total aircraft operations at East Hampton Airport increased 7 percent between 2016 and 2017, while turboprop and jet aircraft operations decreased, according to data reported to the Town by Vector Airport Systems.

“The overall increase in airport operations is the direct consequence of the decision by the U.S. Court of Appeals for the Second Circuit late last year to enjoin three Town laws designed to relieve residents” on the East End of Long Island, NY, from excessive aircraft noise, the release said.

“You can see the immediate impact of the Court’s decision,” said East Hampton Councilman Jeff Bragman. “When two curfews were in effect between July 2015 and November 2016, overall traffic stayed level and helicopter traffic actually de-

(Continued on p. 103)

In This Issue...

Research ... The health costs associated with moving the controversial ‘TNNIS’ RNAV departure procedure out of LaGuardia Airport over densely populated areas of Queens year-round far outweigh the benefits to aviation of reduced flight times, a Columbia University public health study finds - p. 101

East Hampton Airport ... Helicopter traffic increased 29 percent between 2016 and 2017; Town officials blame it on a federal appeals court ruling striking their airport noise restrictions - p. 101

Litigation ... U.S. Court of Appeals for the D.C. Circuit will hold an oral argument on Oct. 18 in consolidated case challenging FAA’s approval of Southern California Metroplex project - p. 103

News Briefs ... ACI-NA was not asked to sign letter asking Senate Commerce Committee to exclude noise amendments to FAA reauthorization bill sought by community groups - p. 104

Study, from p. 101

in 2012, the TNNIS Climb began being used on a year-round basis, directing flights constantly over residential areas of Queens.

FAA prepared no environmental assessment or environmental impact statement for the new route.

Route Change Used as Case Study

The researchers at Columbia's Mailman School of Public Health used this flight path change as a case study to explore the trade-offs between more efficient flight routes and increased risk for cardiovascular disease and anxiety disorders from exposure to aircraft noise.

"Airports in the U.S. have gradually been transitioning to automated flight systems," said Peter Muennig, MD, professor of Health Policy and Management at the Mailman School. "These systems generate new flight paths over populated areas. While they can improve flight efficiency, the increased noise associated with these novel flight patterns potentially poses serious health threats to nearby communities – including cardiovascular disease and anxiety disorder as consequences of noise."

"Flights from LaGuardia airport have historically flown over Flushing Meadows in Queens," noted Muennig, who also leads Global Research Analytics for Population Health at Columbia. "During U.S. Open tennis matches, the residents of certain neighborhoods in Queens had to endure heavy airplane traffic over their homes, but it only lasted a few weeks. Now, they have to contend with it year-round."

The TNNIS climb increased airplane noise to above 60dB DNL over some of the most densely populated areas of Queens. The researchers conservatively assumed that the 60 dB DNL threshold is the line above which health problems arise from aircraft noise exposure.

To identify the health impacts of aircraft noise after the year-round use of TNNIS, the researchers estimated the number of persons in the Community Boards 7 and 11 of Queens (under the flight track) who were living within the 60 dB DNL noise contour.

They modeled the increased risk only for cardiovascular diseases and generalized anxiety disorder associated with aircraft noise exposure because they did not have adequate data to assess the increased health risks from sleep disruption and other broader effects aircraft noise has on health.

The researchers could find no real world data showing that the year-round use of the TNNIS Climb departure improved runway utilization or delay at LaGuardia or JFK International airports. So they used data in a report by the aviation advocacy group Global Gateway Alliance claiming that making TNNIS year-round reduced the number of delayed flights from 204 to 12 over a five-day test period. They multiplied those numbers by 73 to obtain the annual number of delayed flights before and after the year-round use of TNNIS.

They developed an analytical model to compare the costs and quality adjusted life years (QALYs) gained associated

with the pre-2012 limited use of TNNIS (old status) with the year-round use of TNNIS (current status).

The QALY is a generic measure of disease burden, including both the quality and quantity of life lived. One QALY equates to one year of perfect health. If an individual's health is below this maximum, QALYs are accrued at a rate of less than 1 per year.

The QALY per person associated with the limited use of TNNIS was 1.13, which translated to a \$10,006 gain in health care cost effectiveness due to reduced risk of health burden.

"Our study focuses on health and economic impacts of a single flight route as a result of flight automation, however, our analysis uses inputs that may be generalizable to other settings," observed Muennig. "The results point to the strong need for careful study of public health impacts of such changes before they are implemented."

Limits of Study

The study authors listed the following limits of their study:

- It focused on the increased use of one flight route that might have been influenced by the implementation of Next-Gen in one location. It does not speak about the broader trade-offs produced by NextGen in other locations. The study authors deem it critically important to explore impacts locally on a case-by-case basis. Therefore, their model is available on demand to the research community so that it can be modified for nearly any local context.

- It was challenging to estimate the exact noise exposure associated with overflights on the ground. The researchers used sound corridor data from the Port Authority of NY/NJ and real-time sound data. While the real-time observations of sound monitors showed sounds in excess of 90 dB when an aircraft overflew the residential areas of Community Boards 7 and 11 of Queens, the study team did not have continuous sound monitoring data.

- They only modeled cardiovascular disease and anxiety as health consequences of noise even though there are a wider array of potential health and economic endpoints of aircraft noise.

- The anxiety risk study used by the researchers provided an overall estimation for risk of anxiety due to aircraft noise with no specification for noise levels. To account for such uncertainty, in their sensitivity analyses, they used a wide range of error in their measure of association of anxiety and the noise categories of their model.

- Finally, flight efficiencies are associated with fewer emissions and air pollution. However, there is little information on how varying flight patterns over urban areas impacts particulate concentration on ground, and this potentially important benefit of the year-round use of TNNIS was not included.

Not a Blanket Assessment

"Our study should by no means be taken as a blanket assessment of changes to flight patterns that might reduce air-

line fuel consumption, increase productivity, and reduce global warming,” the study authors said. However, their findings point to the strong need for careful study of public health impacts of such changes before they are implemented.

“NextGen holds great potential for improving our lives. However, it also appears to produce an increase in disability and death, at least in New York City. Most people have some experience with unpleasant noise in their environment (be it sirens, honking, or aircraft), yet remarkably little is known about it or is done about it. We hope that models such as ours can be used to better understand the trade-offs that new technologies bring.”

Co-authors of the study are Zafar Zafari, Boshen Jiao and Shukai Li of Global Research Analytics for Population Health; and Brian Will, Queens Quiet Skies. The study was supported with internal funds at the Global Research Analytics for Population Health.

To download the study, google the study title.

Litigation

ORAL ARGUMENT SET FOR OCT. 18 IN CASE CHALLENGING SOCAL

On Oct. 18, the U.S. Court of Appeals for the District of Columbia Circuit will hold an oral argument in a consolidated case challenging FAA’s approval of its vast Southern California Metroplex project, which made 179 air route changes at 21 large and small airports in Southern California.

The three-judge panel that will conduct the oral argument will be announced 30 days prior to Oct. 18.

Plaintiffs challenged the SoCal Metroplex project on the grounds that FAA did not comply with the National Environmental Policy Act or its own regulatory requirements in its environmental analysis of the project.

Unlike the *Georgetown* case – in which the D.C. Circuit dismissed a challenge to NextGen flight path changes out of Reagan National Airport on the ground that it was filed too late – the SoCal case was filed on time so the Court will consider the merits of the case.

The SoCal case originally consolidated eight separate lawsuits that had been filed against the airspace changes made under FAA’s SoCal Metroplex project. But, through a court-ordered mediation process, four of the plaintiffs (City of Newport Beach, City of Laguna Beach, Benedict Hills Estates Association, and Benedict Hills Homeowners Association) settled their cases (30 ANR, 1,9, 37).

Four plaintiffs remain in the consolidated case: City of Culver City, Santa Monica Canyon Civic Association, and two individuals Donald Vaughn and Stephen Murray. The consolidated case is *Donald Vaughn v. FAA* (No. 16-1377).

Attorney Steven Taber of the Pasadena, CA, law firm Leech Tishman, represents plaintiffs Donald Vaughn and the Santa Monica Canyon Civic Association.

Attorney Barbara Lichman of the Irvine, CA, law firm

Buchalter Nemer, represents the City of Culver City.

Attorney Mitchell Tsai of the Law Offices of Mitchell Tsai in Pasadena, CA, represents plaintiff Stephen Murray.

Amicus briefs were filed by the City of Los Angeles and West Adams for Clear Skies. However, the *amici* do not make presentations during oral argument.

East Hampton, from p. 101

creased. Now that the Court has usurped the Town’s ability to exercise local control, operations are on the rise, and helicopter traffic has returned with a vengeance.”

Added Town Councilwoman Sylvia Overby, “What is really frustrating is that we followed the process dictated by FAA and the federal District Court had found that our two curfews were reasonable but we still cannot escape the federal bureaucracy.”

In November 2016, the Second Circuit overturned the District Court’s ruling and, in June 2017, the U.S. Supreme Court denied the Town’s petition to review the Second Circuit’s ruling.

Town Supervisor Van Scoyoc said, “Ever-increasing air traffic continues to degrade the quality of life in East Hampton and across the East End, and must be addressed to insure residents’ quiet enjoyment of their homes and surroundings.”

“The Town remains committed to exploring every available option so that the residents of the East End can get much-needed relief from aircraft. It is working with the Eastern Regional Helicopter Council to identify and promote voluntary noise abatement routes; consulting with the federal delegation to identify legislative options for meaningful relief; and pursuing a formal Part 161 [cost-benefit] study to satisfy the Second Circuit’s mandate,” Supervisor Scoyoc’s statement said.

The Second Circuit struck the Town’s noise restrictions on the ground that East Hampton had enacted them without complying with the procedural requirements of the Airport Noise and Capacity Act of 1990 (ANCA) which, the Court said, “apply to public airport operators regardless of their federal funding status” (28 ANR 151).

Part 161 Application

Regarding its Part 161 study, Town Attorney Michael Sendlenski told ANR: “the Town has retained and is currently working with our outside legal advisor (Bill O’Connor of Cooley LLP); our noise consultants (HMMH) and our economic and planning consultants (HR&A Advisors) on collecting the data and doing the analysis required by the FAA application process for a Part 161 application.”

He expects that East Hampton’s Part 161 application will be submitted to the FAA in the fourth quarter of this year, or the first quarter of 2019.

ANR EDITORIAL ADVISORY BOARD

In Brief...

ACI-NA Not Asked to Sign Letter

The Airports Council International – North America (ACI-NA) was not asked to sign a July 26 aviation trade group letter urging the Senate Commerce Committee not to include noise amendments sought by community groups in its FAA reauthorization bill.

The letter from eight aviation trade groups was reported in last week's issue of ANR. It asked the Senate Commerce Committee to include no amendments to its developing FAA reauthorization bill "that decree new noise measuring protocols, metrics, or thresholds; dictate flight paths; and/or adopt airport-specific flight procedures or aircraft operating restrictions" (30 ANR 97).

Scott Elmore, ACI-NA's vice president for Marketing & Communications, told ANR that his airport trade group also was not involved in a similar 2015 letter sent to then-FAA Administrator Michael Huerta by the same trade groups: Airlines for America, the Cargo Airline Association, the General Aviation Manufacturers Association, the National Air Carrier Association, the National Business Aviation Association, and the Regional Airline Association.

"ACI-NA is continuing to work with Congress and the FAA to support research to inform ongoing noise policy discussions. We also continue to work with many of the organizations that signed the letter referenced in the [ANR] article," Elmore explained.

Senate Urged to Act on FAA Reauthorization

Nearly 30 aerospace industry groups urged the Senate leadership in an Aug. 15 letter to swiftly consider a long-term reauthorization of the FAA before the current authority for FAA's activities expires on Sept. 30.

"Adopting a long-term reauthorization bill will provide stability for the FAA to uphold the highest levels of safety we have today, while providing the certainty that employers need to continue creating new jobs, investing in crucial infrastructure and new technology, and encouraging innovation that will move the industry forward," Airlines for America President Nicholas Calio said.

The industry groups' letter said that the FAA and the traveling public have been subjected to short-term extensions of the FAA's authority since 2015, and these stopgap measures have negatively impacted the FAA's activities. Prompt consideration by the Senate will enable discussions with the House to resolve any outstanding differences between the two bills before the expiration of authority, the letter said.

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Health Effects

FUNDING SOUGHT TO EXPAND STUDY SHOWING HEALTH IMPACTS OF RNAV DEPARTURE

New York State Sen. Tony Avella (D) and Assemblyman Edward Braunstein (D) announced Aug. 22 that they are committed to obtaining state funding to expand a study released last week showing that some residents of Queens could lose up to one year out of their lifespan due to the negative noise effects of the ‘TNNIS’ RNAV departure procedure out of LaGuardia Airport.

The landmark study – believed to be the first ever to assess the health impacts of tightly concentrated NextGen flight tracks – was conducted by the Columbia University Mailman School of Public Health and reported in the *International Journal of Environmental Research and Public Health* (30 ANR 101).

The current study relied on secondary data sources: a 2013 study by Hansell et al. that found an increased risk of hospitalization and death from stroke, coronary heart disease, and cardiovascular disease among 3.6 million people exposed to day-time and night noise around Heathrow Airport (25 ANR 134) and a 2005 study by Hardoy et al. on exposure to aircraft noise and risk of psychiatric disorders.

(Continued on p. 106)

Toronto Pearson Int’l Airport

REPORT DEFINES SIX IDEAS, DEVELOPED WITH COMMUNITY INPUT, TO REDUCE NOISE

Six ideas for reducing the noise impact of Toronto International Airport – identified in a consultation with airport neighbors – are defined in a report by the Greater Toronto Airports Authority (GTAA) and NAV CANADA released Aug. 9.

“A Quieter Operations Roadmap: Six Ideas to reduce noise impacts for our neighbours,” reflects feedback from nearly 1,500 residents who live in communities surrounding the airport.

Ideas for reducing noise impact include new flight paths for overnight flights, increased use of continuous descent operations, changes to the preferential runway system, and a summer weekend runway alternation program.

The goal of these measures is to employ air routes that impact fewer people or provide them with predictable respite from aircraft noise.

Community outreach on the consultation began in February 2018. Automated calls, newspaper advertisements, emails, and social media reached more than 2.9 million people with invitations to participate in the consultation.

The consultation period ran from March 3 to April 20 and included public

(Continued on p. 107)

In This Issue...

Health Effects ... State funding being sought to expand study showing health impacts from RNAV departure procedure out of LaGuardia Airport - p. 105

Toronto Pearson Int’l ... Report defines six ideas, developed with community input, for reducing impact of aircraft noise - p. 105

ACRP ... New Synthesis report addresses sustainability’s role in enhancing airport capacity; compiles successful examples - p. 107

Westchester County Airport ... County announces it is adding portable noise monitors, upgrading fixed noise monitors, and automating complaint handling - p. 107

London Stansted Airport ... Public consultation launched on draft five-year noise action plan proposing further restrictions on noisiest aircraft at night, stricter penalties for noisy aircraft, and improvements to departure route accuracy - p. 108

Health Effects, from p. 105

Peter Muennig, MD, professor of Health Policy and Management at the Mailman School of Public Health and co-author of the current study, told ANR that the expanded study will be done in a community that is affected by NextGen concentrated flight path noise and “will look for everything that a person might go to the doctor for. We will have Medicaid and hospital records,” he explained.

Asked how his study arrived at the conclusion that using the TNNIS Climb year-round would reduce the lifespan of those under it by about one year, Dr. Muennig replied, “We used studies that were published that look at the association between airplane noise and health. We then put these data into a model that calculates changes in life expectancy and costs when people are exposed to noise.”

The study model is available to anyone who wants to use it. “Anyone who can use software can use our model. It is a bit tricky to learn, but an intern could do it in a few weeks,” Dr. Muennig explained.

The TNNIS study was funded by Global Research Analytics for Population Health (GRAPH), an organization within the Mailman School of Public Health that Dr. Muennig directs.

GRAPH explains on its website that it “provides the health sector, businesses, non-profits, governments, and others with the analysis and insights to guide preventive health decisions and measure their effectiveness.”

GRAPH had no financial stake in the TNNIS study results.

New Kind of Public Health Hazard

Janet McEaney, President of the community group Queens Quiet Skies, which participated in the study, told ANR:

“The Columbia University study makes official what we’ve guessed for six years: the incessant 70+ decibel noise along the TNNIS RNAV in northeastern Queens is hazardous to the health of those who live under the flight path.

“Once again we ask, who will protect the public’s health from reckless aviation expansion?”

“The FAA is responsible for safety in the skies. It is not tasked with safety on the ground. The agency has never pretended that it cares. It continues to frame skyrocketing noise complaints as “annoyances.” That only minimizes the problem and makes us look like whiny crybabies.

“Now we have proof that the new kind of NextGen noise is a public health hazard. It’s time for our regulators to take this seriously.

“Sens. Charles Schumer and Kirsten Gillibrand and Rep. Grace Meng introduced the Quiet Communities Act of 2017 [H.R. 2539] into Congress to protect us, by tasking the EPA with regulating the effects of aviation noise on our communities. Queens Quiet Skies would like to see substantive progress on this serious health problem, starting with passage of the Quiet Communities Act.”

In a press release on the study, Dr. Muennig said the FAA “places a very high value on lives inside airplanes but places a low value on those inside their homes. Reducing airplane noise would prevent more deaths than screening for breast or colon cancer, and it would do so at a lower cost.”

Commitments to Expand Funding

Sen. Avella said that in the summer of 2012, residents of Northeast Queens started to notice a huge increase in the noise from aircraft over their heads, much more than they had ever experienced. Upon investigating, he and Assemblyman Braunstein found out that the FAA had begun to use a new type of flight pattern without notice to residents.

“Fast forward six years and the residents of this community continue to suffer the extreme noise impacts from this and other new flight patterns and procedures – procedures the FAA says will continue to be rolled out in the months and years to come,” Sen. Avella stressed.

The state senator said he “always believed there were very likely to be negative health impacts from this onslaught of concentrated airplane noise over these communities, and now this study helps confirm those beliefs.

“Not only have residents been bombarded with noise for years, this study confirms that their health may have been impacted, too. With completion of this study, we can begin to see what the actual public health effects are due to these flight patterns.

“In fact, the study shows that people could lose up to one year out of their lifespan due to these negative effects. This is shocking and requires further study to reveal any additional impacts on human life. That is why, in conjunction with Assemblyman Braunstein, I am committing to obtaining additional state funding for the Mailman School of Public Health to expand this study,” Avella said.

Added Assemblyman Braunstein, “the study confirms what we have believed all along: that year-round use of the TNNIS climb has a detrimental impact on the health of residents who live within its path. The study also shows that the economic benefits generated through the use of this new NextGen departure procedure are not as significant as we have been led to believe and do not outweigh the costs associated with the negative health effects it has created.”

Braunstein said he remains committed to working with Sen. Avella and congressional Reps. Grace Meng (D) and Thomas Suozzi (D) “to obtain resources to expand the scope of this study and will keep fighting to reduce the unfair burden of airplane noise that has been forced upon our community.”

Said Congresswoman Meng, “I join my colleagues in seeking an expanded study, and legislation I am sponsoring, the Airplane Noise Research and Mitigation Act of 2018 [H.R. 6454], would help increase noise-related studies by FAA Centers for Excellence. We must do all we can to combat the excessive airplane noise that continues to take a toll on the health and quality of life of Queens residents.”

*ACRP Report***SUSTAINABILITY'S ROLE IN ENHANCING AIRPORT CAPACITY**

On Aug. 16, the Transportation Research Board issued Synthesis Report 93, "Sustainability's Role in Enhancing Airport Capacity."

The report "compiles information and examples that successfully demonstrate the value of building sustainability concepts into capacity-enhancing projects and describes additional resources and tools that provide guidance on how to select, apply, and communicate sustainability measures," TRB Staff Officer Gail Staba explains in a Preface to the report.

The intended audience for the report is airport leaders and their teams working on capacity-enhancing projects.

The report "highlights that sustainability efforts often build on themselves, lessons learned from one initiative are carried through to the next, and this progressive learning process can enhance sustainability's role in capacity-enhancing projects over time," Staba wrote.

Personnel from seven commercial service airports were interviewed for the report in order to learn how airports integrate sustainability with capacity-enhancing projects, identify the resulting benefits, and understand how airport staff communicate their sustainability efforts.

The interviewees were chosen from projects that showcase diverse strategies used to address capacity needs.

Damon Fordham, Mia Stephens, Oana Leahu-Aluas, and Cian Fields of The Cadmus Group LLC synthesized the information and wrote the report, which can be downloaded at <http://www.nap.edu/download/25159>

*Westchester County Airport***AIRPORT UPGRADING, EXPANDING ITS NOISE MONITORING SYSTEM**

On Aug. 13, Westchester County, NY, Executive George Latimer announced new initiatives to reduce noise, air emissions, and water pollution that will be implemented as the County moves forward with planning the future of Westchester County Airport.

"Back in May, we announced a series of public meetings, where we heard from everyone who wished to speak, and each had a chance to talk about the challenges facing the airport. This is a continuation of that dialogue which has begun already," Latimer said in a prepared statement.

"Regarding airport operations, by no small margin, the largest numbers of concerns relayed revolved around noise," he said.

In response to those noise concerns, the Latimer Administration has developed both immediate and longer terms actions to reduce noise and to better respond to noise complaints. These actions include:

- **Portable Monitors** – the Administration has ordered 10 portable noise monitors that will be ready to be placed in key locations by August 31. Those locations will include areas that are the source of a large portion of the complaints, but where there is currently insufficient coverage by fixed noise monitors. They will also be placed in locations that will enable the Administration to check the accuracy and validate the data from current fixed monitors.

- **Upgrade Fixed Monitors** – the current fixed noise monitoring system includes some monitors that are more than 20 years old, using obsolete technology. In response, the Administration will be hiring a consultant to assess the number, locations, and the best state of the art technology for the best way to replace our older fixed monitors with newer state of the art equipment.

- **Complaint Handling** – The Administration is in the process of automating the complaint response system. The new system will provide quicker responses and a much more significant level of detail. It will streamline the process of filing a complaint, and provide greater public access to noise complaint information and trends. The Administration will have this system up and running by September, including specific complaint handling protocols for response timelines and information.

Director of Operations Joan McDonald said: "These new portable noise monitors will be in place by August 31 and will be located in places where the sources have the largest numbers of complaints and where there is currently insufficient coverage by noise monitors. They will also be placed in locations that will allow us to check the data from the current fixed noise monitors. Once we have sufficient data from these new monitors we will be better prepared to move forward and address longer term actions."

Toronto, from p. 105

meetings, presentations from industry experts and one-on-one discussions about what the initiatives would mean for individual residents.

Feedback was gathered through a survey, available both online and in printed format at events. More than 430 residents attended 15 public meetings in communities across the region and more than 900 residents provided feedback via the survey.

"As an airport, we understand that noise from airport operations impacts surrounding communities and we are committed to engaging in meaningful conversations about ways to address and reduce those impacts for our neighbours. The results of this process have led to action on ideas that were developed in part with our neighbours and we're proud to be taking steps, together, that will move the dial on noise," Hillary Marshall, Vice President, Stakeholder Relations and Communications, Greater Toronto Airports Authority.

The report can be downloaded at <https://torontopearson.com/en/publications/#SixIdeas>

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London Stansted Airport

AIRPORT LAUNCHES CONSULTATION ON DRAFT 5-YEAR NOISE ACTION PLAN

London Stansted Airport has launched a public consultation on its draft Noise Action Plan (NAP) setting out the airport's approach to managing aircraft noise and reducing its impact on the local community.

The five-year action plan – the third for the airport – looks to build on the extensive progress that has already been made in managing the effects of aircraft noise on local people and proposes a range of new measures, including:

- Further restricting the use of the noisiest types of aircraft that can operate at night;
- Proposing stricter penalties for noisy aircraft; and
- Looking to implement further improvements to the flying accuracy of aircraft using departure routes.

Since the publication of the first NAP in 2011 the number of people within Stansted's noise contours has been reduced, even though the airport has returned to significant growth, the airport said. This is largely due to the introduction of new, quieter aircraft – Stansted said its fleet of aircraft is one of the most modern in Europe. Other measures that have reduced the impact of noise includes the introduction of satellite navigation to further improve aircraft track keeping.

The draft Noise Action Plan considers the airport's future growth while also assessing potential associated noise disturbance to communities living near Stansted. It also explores the likely benefits of new aircraft technology and operating procedures, plus, where necessary, the introduction of enhanced noise controls and tracking capabilities.

Following consultation during 2018 with a range of stakeholders who have an interest in the airport, the new plan will be presented for formal adoption by the UK Department for Environment, Food and Rural Affairs (DEFRA) in 2019.

"We recognise that some communities around the airport are affected by aircraft noise and we want to work in partnership with local residents, airlines, regulatory agencies and the Government to reduce these impacts where possible," said Ken O'Toole, CEO of London Stansted.

"This new draft Noise Action Plan will provide us with a roadmap for tackling noise disturbance which range from restricting the use of the noisiest aircraft at night through to investigating the use of steeper approaches to keep aircraft higher for longer. It also shows how we have performed in relation to our previous commitments to managing noise."

The draft Noise Action Plan is at:

<https://www.stanstedairport.com/community/noise/noise-action-plan/>

AIRPORT NOISE REPORT

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

Volume 30, Number 28

August 31, 2018

AIP Noise Grants

FAA AWARDS 16 NOISE MITIGATION GRANTS TOTALING \$74.9 MILLION TO 14 AIRPORTS

On Aug. 24, FAA announced 16 noise mitigation project grants, totaling \$74,911,618, for 14 airports. They were part of \$616.9 million in Airport Improvement Program (AIP) infrastructure grants announced that day.

Following are the airport noise mitigation grant awards:

- City of Fresno, CA, received a \$1 million grant for noise mitigation measures (sound insulation) for residences within the 65-69 DNL noise contour for Fresno Yosemite Airport;
- City of Inglewood, CA, received a \$15 million grant for noise mitigation measures for residences within the 65-69 DNL contour of Los Angeles International Airport;
- County of Los Angeles Community Development Commission received a \$5

(Continued on p. 110)

Legislation

NY SENATORS REINTRODUCE BILL TO REVIVE EPA NOISE OFFICE, STUDY AIRCRAFT NOISE

On Aug. 24, U.S. Senate Minority Leader Charles Schumer (D) and Sen. Kirsten Gillibrand (D) introduced the Quiet Communities Act, legislation that would require the Environmental Protection Agency to reestablish its Office of Noise Abatement and Control (ONAC), which was defunded 37 years ago.

The legislation would reauthorize the Office's activities through fiscal year 2023 and would require the EPA Administrator to conduct a study of airport noise and examine the FAA's selection of noise measurement methodologies, health impact thresholds, and abatement program effectiveness.

The text of the bill and the bill number are not yet available but it appears to be nearly identical to the Quiet Communities Act of 2016 (S. 3198), which the senators introduced two years ago.

That bill died in committee and the current bill likely awaits the same fate as long as the Republicans control the Senate. But elected representatives of communities impacted by aircraft noise are under strong pressure from their constituents to act on their behalf. Reviving EPA's noise office is a goal of many community anti-

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Noise Guidelines ... WHO-Europe will finally release its updated environmental noise guidelines on Oct. 10. They are expected to include analysis of dose/response relationships for sleep disturbance/awakenings, annoyance, and cardio-vascular effects - p. 111

Webinar ... Aviation attorney Steven Taber will conduct a one-hour webinar on Sept. 13 on the topic "Aviation Noise Claims: Information & Courses of Action for Residents Living Near Airports" - p. 112

Grants, from p. 109

million grant for noise mitigation measures within the 65-69 DNL contour for Los Angeles International Airport;

- San Diego County Regional Airport Authority received a \$1,350,000 grant to conduct a Noise Compatibility Plan Study for San Diego International Airport;

- San Diego County Regional Airport Authority received a \$12 million grant for noise mitigation measures for residences within the 65-69 DNL contour of San Diego International Airport;

- City of Bridgeport, CT, received a \$170,435 grant to conduct a Noise Compatibility Plan Study for Igor Sikorsky Memorial Airport;

- Tweed-New Haven Airport Authority, CT, received a \$2,504,946 grant for noise mitigation measure for residences within the 65-69 DNL contour of Tweed-New Haven Airport;

- Broward County, FL, received a \$20 million grant for noise mitigation measures for residences within the 65-69 DNL contour of Ft. Lauderdale-Hollywood International Airport;

- Monroe County, FL, Board of County Commissioners received a \$4,102,442 grant for noise mitigation measures for residences within the 65-69 DNL contour of Key West International Airport;

- City of Chicago received a \$10,717,636 grant for noise mitigation measures within the 65-69 DNL contour of Chicago O'Hare International Airport;

- Indianapolis, IN, Airport Authority received a \$262,500 grant to conduct a Noise Compatibility Plan Study for Indianapolis International Airport;

- City of Westfield, MA, received a \$35,192 grant to conduct a Noise Compatibility Plan Study for Westfield-Barnes Regional Airport;

- City of Philadelphia, PA, received a \$100,967 grant to install an outdoor noise monitoring system/equipment at Philadelphia International Airport;

- City of Fort Worth, TX, received a \$600,000 grant to conduct a Noise Compatibility Plan Study for Fort Worth Alliance Airport;

- City of Laredo, TX, received a \$2 million grant for noise mitigation measures for residences within the 65-69 DNL contour of Laredo International Airport; and

- City of Burlington, VT, received a \$67,500 grant for noise mitigation measures for public building near Burlington International Airport.

Hollywood Burbank Airport**CONGRESSMAN, L.A. OFFICIALS
OPPOSE RNAV DEPARTURES**

California Congressman Brad Sherman (D), Los Angeles City Councilman Paul Krekorian, and L.A. City Attorney Michael Feuer are pushing back on FAA's proposal to implement two RNAV departure procedures out of Hollywood Burbank Airport because of the noise impact they would have.

They say the proposed OROSZ THREE and SLAPP THREE RNAV departure procedures would shift and concentrate southbound departures, increasing noise over many schools, residential neighborhoods, parks, and other noise-sensitive areas in the San Fernando Valley and Santa Monica Mountains.

FAA explained in a statement that it "is proposing to update two existing routes for aircraft that depart off Runway 15 at Hollywood Burbank Airport. The purpose of the updates is to keep Burbank Runway 15 departures better separated from LAX arrivals to the south and from aircraft that are arriving to Burbank's Runway 8.

"The navigation points for the proposed route updates are over the mountains south of Sherman Oaks. However, air traffic controllers would vector some aircraft off the proposed routes, just as they do today. The FAA has not completed the environmental review for the proposed route updates, and has not made a final decision on implementing them."

FAA said it will consider all input the agency receives from the congressman and the Los Angeles city officials.

FAA is still determining the level of environmental review it will do on the proposed RNAV departure procedures.

In an Aug. 22 letter to FAA Acting Administrator Dan Elwell, Rep. Sherman asked FAA to demonstrate why the flight path changes are necessary, to conduct the strongest possible environmental review, and to allow for a public comment period before deciding on any airspace changes.

"The FAA needs to hear from the Valley before they make it impossible for Valley residents to hear themselves think," Rep. Sherman asserted in a prepared statement.

"The FAA has informed me that they may make changes without first informing the public, and listening to public input. That is outrageous. The FAA appears to be moving full steam ahead without regard for either the opposition coming from the management of Hollywood Burbank Airport, or the community," Sherman said.

"The Valley deserves a full environmental impact study comparing current flight routes to any other proposals under consideration, as well as a transparent public comment period allowing residents to express their concerns."

Sherman also invited the Acting FAA Administrator to the

San Fernando Valley to meet with Members of Congress and community leaders to see the impact of the proposed RNAV departures on the community directly and identify ways to reduce aviation noise in the San Fernando Valley.

In an Aug. 23 letter to FAA, L.A. City Councilman Krekorian and City Attorney Feuer asserted that FAA is legally obligated to start a formal environmental review process to consider the impacts of the proposed RNAV departure procedures at Hollywood Burbank Airport.

Pursuant to FAA Order 1050.1F [Environmental Impacts: Policies and Procedures], FAA cannot rely on a categorical exclusion to obviate the need to prepare an environmental assessment/environmental impact statement if “extraordinary circumstances” exist, they reminded FAA.

Krekorian and Feuer said at least three extraordinary circumstances exist that require the preparation of an EA for the two proposed RNAV departure procedures at Burbank Airport:

- They would have an impact on cultural resources protected under the National Historic Preservation Act;
- They would have an impact on properties protected under Section 4(f) of the Department of Transportation Act. This includes parks and wildlife refuges of the Santa Monica Mountains Conservancy; and
- They would have an impact on noise levels of noise sensitive areas and impacts on the quality of the human environment that are likely to be highly controversial on environmental grounds.

They urged FAA to consider an alternative to its proposed RNAV departure procedures that was proposed by the Burbank-Glendale-Pasadena Airport Authority. They said it might reduce aircraft noise impact by taking aircraft along U.S. Highway 101.

Legislation, from p. 109

noise groups.

The new bill would empower the EPA to oversee airplane noise issues across the country. Currently, the FAA oversees airplane noise issues, however, Sens. Schumer and Gillibrand explained that the EPA is better fit to address these matters, as its main focus is to protect human health and the environment.

“Empowering the same agency tasked with protecting our environment to protect our communities from excessive and burdensome aircraft noise while working alongside the FAA makes eminent sense. This legislation will once again set up an Office of Noise Abatement and Control at the EPA so that environmental experts can address airplane noise, continuing to allow science to help lead the way in both studying and crafting workable solutions,” said Sen. Schumer.

“Our communities should not have to endure excessive airplane noise that strongly impacts their quality of life, and this legislation will provide additional tools to assist communities by reestablishing an EPA Office of Noise Abatement &

Control,” said Senator Gillibrand, a member of the Environment and Public Works Committee.

“The federal government must take more proactive steps to address the concerns of New Yorkers who are affected by airplane noise, and this bill will give the EPA the ability to act.”

Due to budget cuts in 1981, the EPA’s Office of Noise Abatement and Control was dismantled and the FAA was given oversight into all matters regarding aircraft noise pollution.

The new legislation defines the following responsibilities of the EPA Office of Noise Abatement and Control:

- Promoting the development of effective state and local noise control programs.
 - Running a national noise control research program.
 - Running a national noise environmental assessment program.
 - Establishing regional technical assistance centers to assist state and local noise control programs.
 - Assessing the effectiveness of the Noise Control Act of 1972.
 - Conducting related outreach and educational activities.
- The office must emphasize noise abatement approaches that rely on local and state activities, market incentives, and coordination with other agencies.
- Using funds made available to the office, the EPA must carry out a study of airport noise.

The legislation also would amend the Noise Control Act of 1972 to expand the quiet communities grant program to include grants for establishing and implementing training programs on use of noise abatement equipment and implementing noise abatement plans.

Last May, Rep. Grace Meng (D-NY) introduced a similar bill (H.R. 2539) to reestablish the EPA’s Office of Noise Abatement and Control, which now has 14 co-sponsors. The bill was referred to the House Transportation and Infrastructure Committee where not action has been taken on it.

In Brief...

WHO Env. Noise Guidelines

On Oct. 10, the World Health Organization (WHO) will finally release its new Environmental Noise Guidelines for the European Region.

The updated guidelines were developed by teams of experts who assessed the impact of noise from aircraft, rail, road, wind turbines, and personal electronic devices on annoyance, sleep disturbance, cognitive impairment of children, mental health/quality of life, tinnitus/hearing impairments, cardio-metabolic diseases, and adverse birth outcomes.

The guidelines are expected to include analysis of dose-response relationships whenever possible but at least for annoyance, sleep disturbances/awakenings, and cardio-vascular effects.

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Because of the strict evidence review criteria adopted by WHO to ensure that only the best quality study data were included in the guideline update, the new WHO Environmental Noise Guidelines are expected to be influential far beyond Europe.

Webinar on Aviation Noise Claims

A one-hour webinar entitled “Aviation Noise Claims: Information & Courses of Action for Residents Living Near Airports,” will be held on Sept. 13 beginning at 1 p.m. PDT/ 12 p.m. CDT/ and 1 p.m. EDT.

Steven Taber, a partner in the Pasadena, CA, law firm Leech Tishman Fuscaldo & Lampl, will outline how to potentially use the Federal Torts Claims Act (FTCA) as a method of pursuing claims against the FAA for damages caused by aviation noise.

“Historically, residents living close to an airport have taken legal action against the owner/operator of the airport for damages they have suffered as a result of aircraft noise. Two of the legal actions for combating aviation noise are called ‘trespass’ and ‘nuisance,’” Taber explains in promotional information.

“Changes made by the FAA to the use of national airspace have caused residents living some distance from an airport to now experience damaging aircraft noise. As a federal agency, however, the FAA cannot be sued in state court for trespass and nuisance. Because state law claims of trespass and nuisance are not allowable in federal court, these types of claims have not been brought against the FAA.

“However, the Federal Torts Claims Act (FTCA) allows citizens to file a claim against a federal agency for injuries caused by the federal agency because of its negligence. This type of claim is called a ‘tort’. Since ‘nuisance’ and ‘trespass’ are considered to be torts, the FTCA may apply to aviation noise claims.”

The webinar will address these aviation noise concerns, as well as potential courses of actions for residents.

You must register in advance to attend the webinar. Register at:
<http://conta.cc/2wmLfNO>

Updated NEMs for Chicago Executive Airport

FAA announced Aug. 20 that updated noise exposure maps for Chicago Executive Airport meet applicable federal requirements.

For further information, contact Amy Hanson, an environmental protection specialist in FAA’s Chicago Airport District Office; tel: 847-294-7354; email: amy.hanson@faa.gov

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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Metroplex

FAA BEGINS MAKING 71 AIRSPACE CHANGES UNDER CLEVELAND/DETROIT METROPLEX

Starting in mid-September, the FAA will make airspace changes in and around Cleveland and Detroit area airports under its Cleveland-Detroit Metroplex project.

Some 71 satellite-based airspace procedures will be implemented to improve traffic flow at two major airports: Detroit Metropolitan Wayne County Airport and Cleveland Hopkins International Airport, as well as at 10 satellite airports in a study area that includes all or parts of 58 counties in four states: Michigan, Ohio, Pennsylvania, and West Virginia.

The project expands the number of entry and exit points into and out of the Cleveland/Detroit airspace, which is like creating more on- and off-ramps in the sky, FAA explained in a Sept. 5 press release.

In most cases, the agency said, aircraft will follow the same tracks that they do today. The difference is that aircraft will be using modernized procedures that replace dozens of decades-old conventional air traffic control procedures.

The Cleveland/Detroit Metroplex project is a key component of the FAA's Next

(Continued on p. 114)

SSTs

38 ENV., HEALTH, COMMUNITY GROUPS URGE SENATE NOT TO LIFT OVERLAND FLIGHT BAN

Some 38 environmental, public-health, and community groups called on the Senate in an Aug. 27 letter to reject a provision in the Senate FAA reauthorization bill that would lift the ban on civilian supersonic flight over U.S. soil.

The provision would boost the return of luxury supersonic planes projected to burn five to seven times more fuel per passenger than typical airliners, the groups asserted.

“Resurrecting these flying gas-guzzlers would cause the aviation industry’s already massive climate damage to skyrocket,” said Bill Snape, senior counsel at the Center for Biological Diversity. “Supersonic planes are a gratuitous luxury for the super-rich and a dirty burden for everyone else. This bill would clear the runway for their comeback.”

In a press release on their letter to the Senate, the groups explained, “Because the loud sonic booms from aircraft breaking the sound barrier harm people and wildlife, a 1973 Federal Aviation Administration regulation banned civilian flight at supersonic speeds over U.S. soil, restricting supersonic speed to travel over the

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Cleveland/Detroit Metroplex

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FAA Reauthorization ... Montgomery County, MD, Quiet Skies Coalition urges Senate Commerce Committee leaders to support noise amendments to FAA reauthorization bill; refutes claim by aviation trade groups that “tremendous noise reductions” achieved in last decades negate need for legislative protections - p. 115

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Generation Air Transportation System (NextGen) and a nationwide effort to build the foundation for future safety and efficiency improvements.

“Travelers will benefit from safe and more efficient routing,” FAA said.

The agency issued its Final Environmental Assessment and Finding of No Significant Impact/ Record of Decision for the Cleveland/Detroit Metroplex project on June 1 (30 ANR 69).

The FAA’s environmental analysis for the project calculated noise at locations throughout the study area. It showed the proposed action would not result in any significant noise increases under the National Environmental Policy Act [a 1.5 dB DNL increase in the 65 dB DNL contour].

However, there would be a reportable noise increase that could potentially affect approximately 335 residents in the Sumpter Township, Wayne County, MI, southwest of Detroit Metro Airport.

These people would experience a 5 dB DNL increase in areas exposed to DNL between 45 dB and 60 dB, FAA noted in its FONSI/ROD.

The FAA said it held six public workshops on the project before releasing the Draft Environmental Assessment in November of 2017. Agency officials conducted approximately 78 briefings for stakeholders including community groups, airport officials and local, state and federal officials.

Six additional workshops were held after the release of the Draft Environmental Assessment on November 10, 2017.

Additionally, following a 30-day public comment period, the FAA evaluated and responded to comments before making a final decision on the project.

Some Will Experience ‘Small Noise Increases’

“When the Cleveland/Detroit Metroplex procedures are put into effect, some people might see aircraft where they did not previously fly. This is because some air route changes will occur, and because satellite-based procedures create more concentrated flight paths than conventional procedures,” FAA said.

“Some people will experience slight noise decreases, some will see no changes, and some will experience small noise increases,” FAA said.

“Some flight track dispersion will continue to occur after the new procedures begin, because the Metroplex project would not change a number of existing procedures. Also, air traffic controllers will need to occasionally vector aircraft for safety or efficiency reasons or to reroute them around weather systems.”

Whether the concentration of flight tracks under the Cleveland/Detroit Metroplex results in lawsuits remains to be seen. However, FAA will argue that any such litigation filed at this date comes too late because it will have been filed beyond 60 days of the June 1 issuance of the FONSI/ROD, which FAA considers the deadline for challenging final

agency orders.

The Finding of No Significant Impact/ Record of Decision, as well as the Final Environmental Assessment, are available at: http://www.metroplexenvironmental.com/cle_dtw_metroplex/cle_dtw_docs.html

San Diego Int’l Airport**AIRPORT AUTHORITY LAUNCHES MOBILE NOISE COMPLAINT APP**

On Aug. 24, the San Diego County Regional Airport Authority launched a new mobile app that provides the public with an easy-to-use, no-cost option for submitting aircraft noise complaints about operations at San Diego International Airport.

The app is part of an upgraded Airport Noise and Operations Monitoring System (ANOMS). It uses near real-time flight tracking (5-minute or less delay), which is the most accurate data of aircraft movement that is available from the FAA.

“We recognized there was a gap between a convenient, easy-to-use tool for the public to submit aircraft noise complaints, and our ability to obtain the accurate data we need from the public to help influence change with our industry stakeholders,” said Dennis Probst, Airport Authority Vice President of Development.

“This system upgrade and app incorporate state-of-the-art software and equipment to provide that solution with a few simple clicks.”

The upgrade complements the airport’s existing Web-Trak™ flight tracking system, which allows the public to monitor the movement of flights and air traffic patterns and submit a complaint to the airport directly from the website.

In addition to the near real-time flight tracking data, the ANOMS upgrade includes replacement of 23 permanent noise monitoring devices with advanced equipment. The devices are located at sites within communities surrounding the airport to monitor aircraft noise 24-hours a day and transmit data real-time into the airport’s system.

Five workshops will be held in September in communities where aircraft noise complaints have been received in order to help community members set up the new mobile app on their devices.

SSTs, from p. 113

ocean. Section 5017 [of the FAA Reauthorization Act of 2017 (S. 1405),] a bill pending in Congress, would reverse that protection.” The press release continues:

“Quiet efforts to build the high-speed planes are again underway, despite the Concorde’s flop decades ago. Boom Supersonics is developing an airliner it says could fly

commercially by 2023. Supersonic business jets are in development by Spike Aerospace and Aerion Supersonic with the goal of being in service by the mid-2020s.

“A return of supersonic aircraft threatens to greatly worsen aviation’s contribution to the climate crisis. A recent analysis by the International Council on Clean Transportation found that new commercial supersonic planes will likely emit 70 percent more carbon dioxide than comparable new subsonic airplanes will be allowed to emit (30 ANR 89).

“New supersonic airliners will also likely exceed international subsonic limits for nitrogen oxides by 40 percent, according to the analysis. Exposure to nitrogen oxides is linked to respiratory disease, heart attacks and strokes.

Said Garrett Blad, executive coordinator of SustainUs, “Supersonic planes might help the one percent zip around the world faster, but they would jeopardize my generation’s shot at inheriting a livable planet. With the Trump administration killing climate protections left and right, a return of these dirty planes is the last thing we need.”

According to a Center for Biological Diversity, international aviation is among the fastest-growing sources of greenhouse gas pollution. Even without supersonic aircraft, the industry is already expected to generate 43 metric gigatons of CO₂ through 2050, consuming more than 4 percent of the world’s remaining carbon budget.

“At a time when we need to reduce carbon dioxide emissions from aviation, not increase them, incentivizing commercial use of supersonic aircraft is a huge step in the wrong direction,” said Sarah Burt, an attorney at Earthjustice.

Supersonic planes’ potential return comes as the Trump administration pushes forward proposals to roll back pollution rules for power plants and vehicles, the nation’s two largest sources of greenhouse gases.

Among the groups that signed the letter are EarthJustice, Friends of the Earth, the National Organization to Insure a Sound Controlled Environment (NOISE), the Sierra Club, and the UK’s Transport & Environment.

Senate FAA Reauthorization

MD QUIET SKIES COALITION URGES COMMERCE COMMITTEE TO SUPPORT NOISE AMENDMENTS

The Montgomery County, MD, Quiet Skies Coalition urged leaders of the Senate Commerce Committee in an Aug. 27 letter to support NextGen noise amendments to the FAA reauthorization bill that senators from Maryland, Massachusetts, New York, and California are expected to offer.

The Coalition represents approximately 7,500 homes and 20,000 residents of the most populous county in Maryland, which is located adjacent to Washington, DC.

“The pending FAA reauthorization, S. 1405, presents an important opportunity to restore the health and welfare of

hundreds of thousands of Americans who unwillingly find themselves living under highly channelized flight paths that send hundreds of disruptively loud, low-altitude flight over our homes, school, parks and businesses each day,” leaders of the grass-roots anti-noise group wrote.

They urged the Senate Commerce Committee to adopt amendments to be offered by Maryland Sens. Ben Cardin (D) and Chris Van Hollen (D) that would require FAA (1) to safely restore dispersion and altitudes of aircraft and (2) to measure and assess aircraft noise using state-of-the-art technologies, metrics, and methodologies. And they urged strong support for an amendment mandating that the National Academies of Medicine prepare a Consensus Report on the health impacts of air traffic noise and pollution.

Airlines’ Claims Refuted

The Montgomery County Quiet Skies Coalition refuted claims made by eight aviation trade groups in a July 26 letter to the Committee that “tremendous noise reductions” achieved in past decades negated the need for Congress to incorporate any legislative protections from noise and emission in the pending FAA reauthorization bill (30 ANR 97).

“This is not the case. In fact, such protections are desperately needed now more than ever,” Coalition leaders Anne Hollander, Janelle Wright, and Gretchen Gaston asserted in their letter to the leaders of the Senate Commerce Committee.

“As you undoubtedly know,” they wrote, “where Performance Based Navigation (PBN) procedures are implemented, formerly peaceful residential areas, schools, parks, and places of worship very far from airports (10-20 miles away) are now under 24/7 siege with highly concentrated levels of noise and emissions. Airplanes fly much lower than they used to as they approach airports, bringing the noise closer to people’s homes.

“Because aircraft are on average much larger than they used to be, the air displacement creates powerful sound booms. Airplanes also fly closer together than before, often only 90 seconds apart, and this reduced spacing requires them to fly “dirty” on approach (flaps down, speed brakes screeching, making thrust adjustments, etc.) to maintain distance between aircraft.

“Worst of all, they repeatedly traverse the same narrow flight corridors while flying at these lower altitudes and while using these noisy procedures. All of this means an explosion of life-disrupting noise for the victims beneath these new flight paths.

“As if all of this were not enough, the FAA and airlines have abandoned historical flight paths that resulted from carefully negotiated noise abatement agreements. They have done so with no consideration for the collateral damage these new flight paths and procedures impose on people on the ground. Wholesale discarding of historical flight paths breaks faith with the American principle that people can plan and make decisions about where to buy a home, which for most of us is the largest financial decision and investment of our lives.

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“The airline industry and the FAA attempt to justify this explosion of concentrated noise pollution by asserting that it is an unintended consequence of the need to increase airport throughput while maintaining safety, and that they are in any event conducting research to make things better in the future. They also assert that they have made so much progress in reducing noise in past decades that surely this new type of harm can be disregarded.

“While increased efficiency is certainly a worthwhile goal, and we agree that research on methods to reduce noise is desirable, neither of these arguments creates a tenable excuse for damaging the health and well-being of Americans with no recourse or option to protect themselves.

“We find it particularly disturbing that the FAA and the airlines continue to assert that concentrating noise over *fewer people* is a valid method of ‘noise reduction’. In their July 26, 2018, letter, airline industry groups claim that “noise *exposure* (emphasis added) decreased 53 percent between 2000 and 2016, while enplanements rose 22 percent.”

“The noise did not just disappear; rather, it was deliberately funneled into narrow and concentrated sacrificial noise corridors where fewer people are now exposed to 100% of the unrelenting noise.

“Complaints about noise have skyrocketed in metroplexes around the country since these new procedures were introduced, which certainly suggests that noise has not decreased. In fact, neither the airlines nor the FAA knows whether noise has decreased or actually increased, because they do not employ appropriate tools and methods to measure the new kind of noise exposure they have created with these new procedures.”

Trade Group Letter

In their July 26 letter to the Senate Commerce Committee, eight aviation trade groups said they want the FAA reauthorization bill to include no amendments that “decree new noise measuring protocols, metrics, or thresholds; dictate flight paths; and/or adopt airport-specific flight procedures or aircraft operating restrictions.

It is unclear at this point how many noise amendments the Senate FAA reauthorization bill will include and when the bill will be presented for a floor vote.

Politico reported earlier this week that Congress most likely will enact a short-term extension of FAA’s current authorization, which may go to the end of the calendar year, to allow the Senate enough time to pass its new FAA reauthorization bill.

FAA’s current authorization expires on Sept. 30 at the end of the fiscal year.

AIRPORT NOISE REPORT

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Airport Noise Report



A weekly update on litigation, regulations, and technological developments

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Litigation

DOJ, FAA ASK APPEALS COURT TO DISMISS MD LAWSUIT OVER ARRIVAL PATH CHANGES

On Aug. 13, attorneys for the U.S. Department of Justice and the FAA asked the U.S. Court of Appeals for the D.C. Circuit to dismiss a lawsuit filed by the State of Maryland challenging changes to arrival paths into Washington Reagan National Airport on the ground that it was filed too late.

The litigation was filed on June 26, 2018, more than two years after FAA published in 2015 what the agency describes as “minor amendments” to air-traffic procedures used by aircraft arriving at National Airport.

That is well beyond the 60-day window allowed for challenging FAA final orders and there are no reasonable grounds for allowing such a delay, DOJ and FAA asserted in their brief to the Court.

However, those three airspace changes to DCA arrival paths shifted aircraft – and noise – away from communities in Virginia on the south side of the Potomac River noise abatement corridor and over communities in Maryland on the north side of the river.

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Research

MENG ASKS DOT TO REVIEW HEALTH EFFECTS STUDY, RELEASE ANNOYANCE SURVEY

In a Sept. 6 letter, Rep. Grace Meng (D-NY) asked Transportation Secretary Elaine Chao to review what she calls the “shocking” findings of the first-ever study on the health effects of living under a concentrated NextGen flight path.

The landmark study by Columbia University’s Mailman School of Public Health estimated that some residents of Queens, NY, could lose up to one year out of their lifespan due to the negative noise effects of the ‘TNNIS Climb’ RNAV departure out of LaGuardia Airport (30 ANR 101, 105).

Some of Rep. Meng’s constituents live in areas of Queens being affected by the TNNIS RNAV departure, which was originally used only during the U.S. Open tennis tournament to move aircraft away from the tennis venue. But, since 2012, the departure procedure, which routes planes over densely populated areas of Queens, is being used year-round.

Rep. Meng urged the DOT Secretary to require FAA to conduct a review the TNNIS Climb flight path, which she said is “destroying my constituents’ quality of life, and, according to this study, even leading to premature deaths. In America in

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Research ... NY Rep. Grace Meng asks DOT Secretary to review “shocking” findings of first-ever study of health effects of living under NextGen flight path - p. 117

Baltimore-Washington Int’l Airport ... BWI Community Roundtable petitions MD Aviation Administration to halt airport expansion projects until NextGen noise problems mitigated - p. 118

NASA ... In an agency news feature, NASA discusses three ideas it has selected to pursue that could help transform aviation - p. 119

News Briefs ... HMMH will conduct a two-day Airport Noise Control Practices course in West Palm Beach, FL, on Dec. 5 and 6 - p. 121

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All three amendments were categorically excluded from review under the National Environmental Policy Act (NEPA), “so they were not circulated for public comment prior to their publication,” DOJ and FAA acknowledged in their brief.

MD Compares Its Case to *Phoenix* Ruling

In response to DOJ and FAA’s petition to dismiss their case, attorneys for the State of Maryland asserted that FAA has not met its “heavy burden” to show that Maryland’s claims are conclusively time-barred, especially given the Court’s August 2017 decision in *City of Phoenix v. FAA*.

In the *Phoenix* case, a three-judge panel of the D.C. Circuit made the rare finding that reasonable grounds did exist for filing the case beyond the 60-day window (29 ANR 111).

The panel held that the City of Phoenix reasonably refrained from filing suit challenging catexed RNAV departure procedures at Sky Harbor International Airport because FAA “repeatedly communicated ... that the agency was looking into the noise problem, was open to fixing the issue, and wanted to work with the City and others to find a solution.”

Given those “serial promises,” the panel in the *Phoenix* case held that FAA’s comments “could have confused the petitioners and others about whether a lawsuit was necessary,” attorneys for the State of Maryland explained.

They argued that the same fact pattern exists in their case. “FAA began telling the community that it would explore changes to reduce noise on the same day it implemented the River Visual procedure [one of the three changes made to arrival paths at DCA], attorneys for the State of Maryland told the Court.

Over the course of two years, they said, the FAA repeatedly assured the Reagan National Airport Community Working Group that it was considering its proposals to revise the River Visual procedure and was committed to addressing its concerns.

But FAA did not reveal until April, 27, 2018, in a letter to MD Sen. Chris Van Hollen (D), “the complete lack of environmental documentation to support its original decision to designate the arrival path changes as qualifying for a categorical exclusion under NEPA,” Maryland’s attorneys stressed.

The State filed its lawsuit challenging the arrival path changes on June 26, within 60 days of Sen. Chris Van Hollen (D) having received FAA’s letter.

“FAA’s actions led ‘reasonable observers’, such as Maryland (whose residents and counties were part of the Reagan National Airport Community Working Group), to think that FAA ‘might fix the noise problem without being forced to do so by a court’, as the Court in the *Phoenix* case concluded,” attorneys for the State declared.

The question before the Court, they said, “is whether FAA’s actions reasonably led Maryland to believe that FAA might make changes to those [arrival] procedures.”

“The answer to that question,” they asserted, “is yes.”

Case Not Like *Phoenix* Ruling

But attorneys for DOJ and FAA countered in a Sept. 10 reply brief that FAA’s action did not lead the State of Maryland to believe the the agency might change the new arrival paths into DCA.

“The FAA made no statements that could reasonably have led Maryland to believe that the amendments approved in 2015 were not final at that time,” they told the Court.

“No representative of the FAA suggested that the newly-approved [arrival] procedures [into DCA] were about to be changed, or even that a change would be a good idea.”

“Unlike in *Phoenix*, where the potential petitioner [the City of Phoenix] was actively engaged in seeking changes from the FAA from the outset, Maryland took no action for years. Its *post hoc* explanations for sleeping on its right to judicial review should be rejected, and the petition for review dismissed.”

DOJ and FAA also asserted that FAA’s April 27, 2018, letter to Sen. Van Hollen is not an “order” that can be independently challenged.

And, they told the Court, “To penalize the FAA for participating in public working groups designed to generate ideas for the future by holding that such participation allows out-of-time claims against past decisions creates a perverse incentive for the agency and strongly discourages any form of public engagement.”

Baltimore-Washington Int’l Airport**ROUNDTABLE WANTS EXPANSION HALTED UNTIL NOISE MITIGATED**

The DC Metroplex BWI Community Roundtable wants expansion of Baltimore-Washington International Airport halted until “harms caused by NextGen and other FAA actions are eliminated and harms that may result from any BWI expansion are demonstrated to be properly mitigated.”

In a Sept. 10 petition, the Roundtable told the Maryland Aviation Administration (MAA) that Maryland residents “are suffering substantial mental and physical harm and loss of enjoyment and value of their homes from the implementation of NextGen and other FAA actions at BWI.”

The Roundtable – which was formed to address the noise impact of NextGen flight path changes made in 2014 – accused the MAA of having repeatedly “failed in their role of providing an airport that does not harm the Maryland residents it serves.”

“We have never heard a straightforward statement from the MAA, Maryland Department of Transportation, or state leadership acknowledging acceptance of a trade-off between the \$4.4 million in BWI-generated economic benefit, the 24,000 direct jobs, \$1.6 billion in wages, and the \$175 million in tax revenue used to justify the continued expansion of BWI versus the personal suffering and financial and health

concerns of tens of thousands of Marylanders,” the Roundtable asserted in its petition.

“It is clear that without a fix to NextGen and other FAA actions, further growth at BWI will substantially increase and deepen the effects of aircraft generated noise and air pollution in our area, drawing in more citizens and wider communities over time.”

The MAA told ANR that it “is reviewing the communication from the DC Metroplex BWI Community Roundtable.”

In mid-July, Maryland officials approved a \$60 million project to renovate and expand BWI over the objections of MD State Comptroller Peter Franchot and residents who live near the airport.

Around the same time, the FAA also stopped working with state officials and the BWI Community Roundtable after Maryland Attorney General Brian Frosh filed suit in the U.S. Court of Appeals of the D.C. Circuit challenging FAA approval of arrival path changes into Reagan National Airport that moved noise over Maryland residents on the ground that FAA had failed to conduct the appropriate environmental review of them.

The FAA and Department of Justice asked the Court to dismiss the case on the ground it was filed too late (see related story in this issue).

The State of Maryland also filed a separate administration petition with the FAA requesting a supplemental environmental assessment and revision to area navigation routes and procedures for BWI Airport (30 ANR 81).

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2018, this should not be happening. There are alternative routes, some of which were regularly relied upon as recently as this decade.”

FAA gave a categorical exclusion (CatEx) under the National Environmental Policy Act to the TNNIS RNAV departure procedure, which meant the agency did not have to prepare an environmental assessment of environmental impact statement for it.

Rep. Meng also asked Secretary Chao to do the following:

- Release the results of FAA’s National Aircraft Annoyance Survey and the underlying data generated by the survey;
- Include community representatives as members of the NextGen Advisory Committee (NAC); and
- Provide information regarding the NAC’s plans to improve operational performance in the Northeast Corridor (Boston to Washington, DC), including any relevant upcoming meetings at which the issue will be discussed.

FAA was expected by this past June to release the findings of its community annoyance survey, which was conducted around 20 airports that have not been identified. The agency will not say why the results, which will be used to update its aviation noise policy, are not being released.

NASA

NASA SELECTS THREE IDEAS TO PURSUE THAT COULD HELP TRANSFORM AVIATION

[Following is a Sept. 13 NASA news feature by Jim Banke of NASA’s Aeronautics Research Mission Directorate.]

Like a collection of savvy entrepreneurs gathered to hear new business proposals in a “shark tank,” NASA’s aeronautical innovators always are looking for the “next best thing.”

In the fourth year of NASA’s Convergent Aeronautics Solutions (CAS) project, which is designed to identify and nurture that next best thing, three new ideas will be given time and resources to determine if they are technically feasible and perhaps worthy of additional pursuit within NASA or industry.

“This year’s selections represent a broad range of research topics, yet each could significantly contribute to building future aircraft that are more energy efficient, produce fewer emissions and are quieter,” said John Cavolowsky, NASA’s director of the Transformative Aeronautics Concepts program, which manages CAS.

The selected projects for the 2019 fiscal year that begins October 1 involve a new assembly technique with composites, finding ways to reduce and shed heat generated by an electric motor, and exploring use of a water-based solution for generating electricity to replace lithium-based batteries.

Sticking Together

Future aircraft designs may look much differently than today’s familiar configuration. The wings and tail, for example, might be seamlessly blended with the main hull in one continuous line.

These exotic designs – which could reduce fuel use, emissions and noise – will be easier to build using composite materials, which theoretically can be manufactured in any shape.

But joining larger aircraft parts made of composite material currently requires they be bolted or riveted together as though they were made of metal. That adds weight, and drilling thousands of holes to install those bolts is time consuming and costly.

It would be much better to assemble the composite parts by bonding them together, which in the long run would make the aircraft safer and less expensive to operate and maintain.

“While adhesive bonding is quite reliable, there can be scenarios where they may not meet the stringent requirements for certification from the FAA,” said NASA’s Frank Palmieri, one of the principal investigators of the Adhesive Free Bonding of Composites project chosen as part of this year’s CAS selections.

In a factory setting, when an adhesive is added to a solid surface, there always is some concern of contamination just before the parts are bonded no matter how much care is taken, so there always is a possibility that a weak bond is formed.

“And you can’t inspect it. There’s no measuring method that exists that can say with certainty how strong your joint is unless you break it,” Palmieri said. Solving that inspection dilemma by introducing a new manufacturing technique to safely and reliably bond composite structures together while minimizing – or eliminating – the need for intrusive bolts or rivets is what this project is all about.

That proposed technique involves how and when two composite structures and a layer of composite laminate material in between them are cured such that the result is one complete, fully bonded, seamless part with no concerns the joint isn’t sound.

“This isn’t about making a stronger adhesive or laminate. We’re trying to make a more reliable and predictable interface between the parts,” Palmieri said.

Beating the Heat

Hybrid-electric and all-electric airplanes under study by NASA, such as the general aviation-sized X-57 Maxwell, will rely on motors that generate heat – heat that if not generated would make the motors operate more efficiently.

As the airplanes get bigger – such as NASA’s theoretical, partial turbo electric single-aisle airliner, STARC-ABL – the electric motors need megawatts of energy to operate, and the resulting heat load will be substantially greater.

Today, the traditional way for an aircraft to keep its power system cool is to collect the heat and get rid of it at a single heat exchanger, said NASA’s Ralph Jansen, a principal investigator for the High-Efficiency Electrified Aircraft Thermal Research (HEATheR) project selected this year by CAS.

Such a system adds weight and drag to an airplane, which requires the propulsion system to work harder, which in turn drives up operating and maintenance costs. If successful, HEATheR would provide an option to reduce those burdens.

“What we want to do is minimize the heat from the whole power system by finding different ways of designing the power-related components themselves and coming up with different ways of putting those components together inside the aircraft,” Jansen said.

To reach this goal, the main idea is to reduce the number of parts needed in the motor and at that same time make those parts smaller – both of which would result in less heat generated.

New ideas for shedding that reduced heat will be considered as well, including using the outside skin of the aircraft itself as a sort of radiator. But don’t worry, those in a window seat wouldn’t feel any warmer, Jansen said.

Ultimately, HEATheR researcher’s biggest challenge in making all of this work is to find a new design for the entire power system, from electric motors to power distribution, that is better than the current state-of-the-art.

“Electric motors have been around for a century and power electronics for some 35 years; they are well understood. So, the things we’re trying to do to squeeze out additional improvements in this area are pretty difficult,” Jansen said.

Power in Water

As the desire increases to rely more heavily on aircraft propelled in some fashion using electricity, the demand for lithium-based batteries is growing at a rate that may not be possible to meet some day given the available supply of the element on Earth.

At the same time, lithium batteries, in combination with the cables and electronics associated with current power distribution systems proposed for use in future electric-powered aircraft, have proven to have some safety and operational risks associated with them.

This includes concerns about battery fires, the mass and volume needed for energy storage, managing heat loads, electronic noise from long power cables interfering with onboard systems and logistics related to re-charging the batteries between flights – among others.

The answer to many of these issues might be found by using a specific type of electric motor that is powered by using a water-based, iron-infused solution instead of batteries.

Combining those two technologies together for the first time in an aviation setting is the central idea behind “Aqueous, QUick-charging battery Integration For Electric flight Research,” or AQUIFER.

The electric motor is called a rim motor because instead of turning a central shaft, the energy is applied to the outer perimeter of a spinning propeller or fan. This requires less torque, reduces drag and can even lessen the noise coming from the powerplant.

“Think of a person in a wheelchair who moves around by applying force to the outside rim of the wheels. It’s a lot easier to move the wheel that way than if the person had to twist a shaft at the wheel’s hub,” said NASA’s Kurt Papathakis, an AQUIFER principal investigator.

Use of the rim motor becomes even more ideal when combined with the proposed power source, which is known as a flow battery.

In the case of AQUIFER, the flow battery includes two supplies of a water-based solution, each stored in their own tank. In both tanks the water is infused with a high concentration of very tiny iron particles and other proprietary material.

In one of the tanks, the iron particles have a positive charge, and in the other a negative charge. Both fluids are pumped past a porous membrane, which allows the two fluids to interact and generate a current of electricity.

The bigger the membrane and/or the more volume of fluid that is pumped past the membrane, the more power that is generated. The fluids are then returned to their tanks and are constantly recirculated until the end of the flight, which would happen long before the fluids would lose their charge.

Conceptually, the airplane’s tanks would then be drained, filled with fresh solution and the aircraft would be ready for another flight in a vastly shorter amount of time than it would take to re-charge any batteries.

“Each of these concepts – the rim motor and flow battery – have their own merit, but together they allow us to really showcase the benefits this system could have for an electric-

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powered vehicle of almost any size,” Papathakis said.

But no one has ever tried to put these technologies together and do it in the air, and Papathakis and his team are fully aware they may learn this might not be feasible.

“Who knows? All of us appreciate we’re selling a lot here, but everything we’ve seen so far has looked good and remained on schedule,” he said.

Tough Choices

The three studies were selected by a team of NASA aeronautics managers, led by Cavolowsky, who made their decisions after two days of hearing from principal investigators representing more than a dozen proposals.

To be considered, teams had to form on their own, represent multidisciplinary talents, and have members from more than one of NASA’s field centers in Virginia, California and Ohio, where aeronautics research is a major focus.

The prospect of transitioning these truly unique, out-of-the-box-thinking ideas from feasibility studies to more advanced research opportunities earned increased emphasis in this year’s selections.

“It is important to have a plan in place so that if an idea proves feasible and shows promise, our researchers have a good notion where their results can be helpful in other NASA programs or within industry,” Cavolowsky said.

The three selected proposals this year join three that were selected in 2017, five that were selected in 2016 and six that were selected in 2015.

In Brief...

Airport Noise Control Practices Course

The aviation environmental consulting firm HMMH will hold a two-day Airport Noise Control Practices course on Dec. 5 and 6 in West Palm Beach, FL.

It will cover acoustics terminology, the effects of noise on people, aircraft noise regulations, noise modeling concepts, public information tools, and current events, including PBN implementation.

The course is designed for airport noise officers and other professionals dealing with aircraft noise.

To learn more about the course and to register, go to hmmh.com; click on the menu icon on the top right corner of the web page; and go to “Upcoming Events.”

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FAA Reauthorization Bill

CA, MD SENATORS WANT 11 NOISE PROVISIONS IN HOUSE FAA BILL INCLUDED IN FINAL BILL

On Sept. 19, California Sens. Dianne Feinstein (D) and Kamala Harris (D) and Maryland Sens. Ben Cardin (D) and Chris Van Hollen (D) called on the Senate Commerce Committee to address increased airport noise impact caused by new NextGen flight paths.

The senators told the leaders of the Senate Commerce Committee that they support 11 provisions in the House FAA reauthorization bill that would address the NextGen flight path noise issue and urged that those provisions be included in the final FAA reauthorization bill.

“Since the FAA began implementing changes to flight paths as part of the NextGen modernization program, Americans living near airports across the country have been forced to tolerate new and increased incidents of aircraft noise. Our states are no different. Hundreds of constituents living near major airports have contacted our offices to report that increased noise, more frequent flyovers, and aircraft passing at lower altitudes are causing disruption in their lives,” they wrote.

(Continued on p. 123)

SoCal Metroplex

HUNTINGTON BEACH, CA, CITY COUNCIL VOTES TO CREATE JET NOISE COMMISSION

On Sept. 17, the Huntington Beach, CA, City Council unanimously agreed to create a Jet Noise Commission to address the noise impact of airspace changes made under FAA’s Southern California Metroplex project that affects city residents.

The City Council directed the city manager to work with the city attorney to amend the Municipal Code to create the Jet Noise Commission and to work with City Council liaisons to craft application guidelines for the Commission members within the next 90 days.

While city officials and their representatives often participate in airport/community noise roundtables and *ad hoc* noise working groups, this may be the first instance of a city amending its municipal code to form a standing commission to address NextGen noise impact.

If not, it at least shows the level of importance that finding relief for citizens living under focused NextGen flight paths has risen to in Huntington Beach.

Establishment of the Huntington Beach Jet Noise Commission was recommended by the City’s *ad hoc* Air Traffic Noise Working Group, which the City

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Senators from MD and CA define 11 noise provisions in House bill that they want included in compromise House-Senate bill - p. 122

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City Council of Huntington Beach, CA, votes to create a formal Jet Noise Commission to address NextGen noise impact - p. 122

UK ...

Survey done for NATS ranks public’s goals for reworking UK airspace; aircraft noise reduction is ranked third - p. 124

AIP Noise Grants ...

FAA announces seven more AIP airport noise mitigation grants for fiscal year 2018; the largest award (\$43 million) goes to Broward County, FL, for Ft. Lauderdale-Hollywood Int’l Airport - p. 124

Conferences ...

This year’s AAAE/ACI-NA Airport Noise Conference will be held on Oct. 14-16 in Indianapolis - p. 125

FAA Reauthorization, from p. 122

“Many believe that the FAA has not done enough to monitor and accurately measure true aviation noise levels.

“Several provisions included in H.R. 4 [the House FAA reauthorization bill] would improve data collection methods and encourage the consideration of alternative noise metrics to address the FAA’s outdated noise measurement standards and attempt to capture the cumulative impact of aircraft noise.”

The senators recommended that 11 noise provisions in the FAA reauthorization bill passed by the House (H.R. 4) be included “in any negotiated Senate FAA legislation in order to ensure a modern, accurate account of true aviation noise levels in communities near major airports.”

The senators said that many of the noise amendments they were prepared to offer to the Senate Commerce Committee’s bill are identical to those included in the House bill.

The House and Senate are currently in conference on legislation to reauthorize the programs of the FAA. The House has already passed its FAA reauthorization bill. The Senate is expected to vote on a compromise bill next week.

Following are the 11 noise provisions in the House FAA reauthorization bill that the senators from Maryland and California want to see incorporated into the final FAA reauthorization bill:

Sec. 155. Stage 3 aircraft study: Within six months, the Comptroller General of the United States must conduct a review of the potential benefits, costs, and other impacts that would result from a phaseout of Stage 3 aircraft.

Sec. 156. Addressing community noise concerns: When proposing a new area navigation departure procedure or amending an existing procedure that would direct aircraft between the surface and 6,000 feet above ground level over noise sensitive areas, the FAA Administrator must consider the feasibility of dispersal headings or other lateral track variations to address community noise concerns.

Sec. 157. Study on potential health and economic impacts of overflight noise: Within six months, the FAA Administrator must enter into an agreement with an eligible institution of higher education to conduct a study on the health impacts of noise from aircraft flights, including sleep disturbance and elevated blood pressure, on residents exposed to a range of noise levels from overflights. The study must include residents in the metropolitan areas of Boston, Chicago, the District of Columbia, New York, the Northern California Metroplex, Phoenix, the Southern California Metroplex, Seattle, or “such other areas as may be identified by the [FAA] Administrator.”

Sec. 158. Five-year environmental mitigation pilot programs: The Secretary of Transportation must carry out a pilot program involving not more than six projects at public-

use airports to identify best practices to measurably reduce or mitigate aviation impacts on noise, air quality, or water quality at airports or within five miles of the airport. Individual grants cannot exceed \$2.5 million.

Sec. 159. Aircraft noise exposure: the FAA Administrator must review the relationship between aircraft noise exposure and its effects on communities around airports and submit a report to Congress with the results of the review within two years.

Sec. 160. Community involvement in FAA NextGen projects located in metroplexes: Within six months, the FAA Administrator must complete a review of FAA’s community involvement practices for NextGen projects located in metroplexes identified by the Administration. The review must include, at a minimum, a determination of how and when to engage airports and communities in performance-based navigation proposals.

Sec. 164. An aircraft noise, emissions, and fuel burn reduction research & development program: It must be conducted to support the development of new aircraft, engine technologies, and jet fuels.

Sec. 166. Noise and health impact training: While maintaining safety as the top priority, the Comptroller General of the U.S. must conduct and submit to Congress a study on (1) whether air traffic controllers and airspace designers are trained on noise and health impact mitigation in addition to efficiency and (2) the prevalence of vectoring flights due to over-crowded departure and arrival paths and alternatives to this practice.

Sec. 167. Airport noise mitigation and safety study: Within six months, the FAA Administrator must initiate a study to review and evaluate existing studies and analyses of the relationship between jet aircraft approach and takeoff speeds and corresponding noise impacts on communities surrounding airports.

Sec. 550. Report on air traffic control modernization: Within six months, the Chief Operating Officer of the FAA must submit to Congress a report describing the multiyear effort of the Administration to modernize the air transportation system.

Sec. 569. Study regarding day-night average sound levels: The FAA Administrator must evaluate alternative metrics to the current average day night level standard, such as the use of actual noise sampling and other methods to address community airplane noise concerns. Within six months, the Administrator must submit to Congress a report on the results of the study, including a description of the proposed structure of a recommended pilot program.

UK**SURVEY RANKS PUBLIC'S GOALS FOR REWORKING UK AIRSPACE**

Just over half (52%) of the 1,000 people polled in a survey conducted for the UK's air navigation services provider NATS believe reducing emissions from flying should be the main objective from any reworking of the nation's airspace.

Improving flight paths (36%) was the next highest priority, followed by cutting noise (32%) and flight times (31%).

Much of the UK's network of air routes and flight paths were originally designed in the 1960s and are now in urgent need of modernization, not just to cope with growing demand but to allow for the environmental improvements that people want to see, NATS explained in announcing the results of the survey, which was conducted by the marketing and opinion firm Ipsos MORI.

NATS said the current airspace structure "doesn't allow air traffic controllers to take advantage of the navigation capabilities of modern aircraft, something that would allow for more direct routes and smoother, quieter flight profiles. This would help reduce carbon emissions per-flight while also helping to keep delays low by improving capacity."

The Ipsos MORI survey also reveals that 49% of those surveyed would support changes to flight paths, against only 6% who would oppose any changes, with almost six in 10 saying the process should be given the same priority as the roll-out of high-speed broadband.

Said Ian Jopson, Head of Environment and Community Affairs at NATS, "We know that people still want to fly and that demand is growing but these results show us that people also want to see a reduction in the environmental impact of aviation. Modernizing how our airspace is structured and managed is the main way for us to do that."

Residential Areas Should Be Avoided

While environmental improvements were given top priority, more respondents agreed (45%) than disagreed (21%) that residential areas should also be avoided as far as possible, even if that did mean an increase in fuel burn and emissions.

"These findings are totally in line with the guiding principles around airspace change, with minimizing noise for local communities the top priority at lower levels and reducing carbon emissions at higher altitudes," Jopson said. "That's exactly the balance we'll be looking to achieve and we want to work with communities to achieve that."

The research, dubbed the Aviation Index, provides new insights into people's attitudes to flying; from the factors they take into account when choosing an airline and attitudes to flight safety; through to their concerns about the growing use of drones.

AIP Noise Grants**FAA ANNOUNCES SEVEN MORE AIP NOISE MITIGATION GRANTS**

On Sept. 12, DOT Secretary Elaine Chao announced another 217 Airport Improvement Program (AIP) infrastructure grants totaling \$586 million to 181 airports for FY 2018.

Among them were the following grants for airport noise mitigation projects:

- City of Inglewood, CA, received a grant of \$20 million for noise mitigation measures of residences within the 65-69 dB DNL contour of Los Angeles International Airport. (This award increased by \$5 million the \$15 million total announced for the same project on Aug. 24);
- County of Los Angeles Community Development Commission received a grant of \$10 million for noise mitigation measures within the 65-69 dB DNL contour of Los Angeles International Airport. (This award increased by \$5 million the \$5 million total announced for the same project on Aug. 24);
- San Diego County Regional Airport Authority received a grant of \$1,119,195 to conduct a noise compatibility plan study for San Diego International Airport. (This award decreased by \$230,805 the \$1,350,000 total announced for the same project on Aug. 24);
- City of Bridgeport, CT, received a grant of \$170,435 to conduct a noise compatibility plan study for Igor Sikorsky Memorial Airport;
- Broward County, FL, received a grant of \$43,431,405 for noise mitigation measures within the 65-69 dB DNL contour of Ft. Lauderdale-Hollywood International Airport. (This award increased by \$23,431,405 million the \$20 million total announced for the same project on Aug. 24);
- City of Atlanta, GA, received a grant of \$6,588,658 for noise mitigation measures for residences within the 65-69 dB DNL contour of Hartsfield-Jackson Atlanta International Airport; and
- Port of Seattle, WA, received a \$1,876,800 grant for noise mitigation measures for residences within the 65-69 dB DNL contour of Seattle-Tacoma International Airport.

SoCal, from p. 122

Council formed in January to begin assessing and addressing the SoCal noise impact and to establish a working dialogue with the FAA, the airlines, Long Beach Airport, and others.

Through its regular meetings and a Town Hall meeting with over 200 attendees, the Working Group concluded there

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has been a significant increase in commercial jet noise over Huntington Beach and it is negatively impacting the quality of life of residents, especially those most directly under the new and concentrated flight paths.

The Working Group reached the consensus that a formal commission was needed to provide a long-term commitment to addressing NextGen noise impact on the City.

City Council Members Patrick Brenden and Barbara Delgleize, who proposed the formation of the Jet Noise Commission, said the increase in noise over Huntington Beach is a direct result of FAA's transition to NextGen procedures.

"This is not a unique situation to the City and is actually a nationwide problem, with municipalities across the nation taking action against the FAA," they explained in their proposal to launch the Jet Noise Commission.

The Commission will continually monitor the issue and work collaboratively with neighboring cities, regulatory bodies, airlines, and staff to assess the impact of commercial jet noise on the quality of life in Huntington Beach and to advise the City Council and City Attorney on issues and proposed remedies," they explained.

The Commission will consist of two City Council liaisons, a Staff liaison, and have seven at-large members. The scope of the Commission's work will be limited to commercial aviation traffic over the City.

In Brief...

AAAE/ACI-NA Airport Noise Conference

This year's annual AAAE/ACI-NA Airport Noise Conference will be held on Oct. 14-16 in Indianapolis and hosted by the Indianapolis International Airport.

Monday's conference presentations will address airport noise research, airport noise office best practices, airport-community noise roundtables, noise mitigation beyond airport noise contours, working with airlines and pilots to fly noise abatement procedures, and residential sound insulation.

Sessions on Tuesday begin with a discussion of successful noise management experiences around the world, and later address aircraft noise complaints, implementation of NextGen aircraft procedures, noise of the future, and understanding noise monitoring.

To register for the conference, go to aaae.org; click on "Professional Development," click on "Meetings"; click on "Environmental."

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