



U.S. Department  
of Transportation

**Federal Aviation  
Administration**

Office of the Administrator

800 Independence Ave., S.W.  
Washington, D.C. 20591

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The Honorable Eleanor Holmes Norton  
House of Representatives  
Washington, DC 20515

Dear Congresswoman Norton:

Thank you for the introductory meeting to the Quiet Skies Caucus on October 16, 2019. I appreciated getting to hear your perspective about the way the Federal Aviation Administration (FAA) manages the National Airspace System (NAS), and I am glad to get the opportunity to provide responsive information now. I do want to emphasize that I have not seen evidence of a lack of responsiveness to community concerns from FAA and I will ensure that the agency remains committed to engagement. For me, responsiveness is defined as engagement and dialogue with a community. FAA may or may not be able to adopt changes proposed by a given community, but responsiveness is not dependent on whether or not we agree, it is the willingness to engage meaningfully.

I also hope to remain engaged with you, and I want to set up meetings with your staff at regular intervals in order to provide information and answer questions that may present themselves throughout the year.

There are a couple of additional points I believe are relevant to this ongoing conversation. Number one is that aircraft noise is a shared responsibility by the aviation industry, not solely an FAA issue. While the FAA plays an important role in safely managing the traffic, FAA does not determine how many runways an airport builds, how many people want to fly at 6 a.m. or 11 p.m., what locations people fly to, or how many people use online services to deliver goods rather than going to a store. But all of those factor into how many flights FAA has to manage. More people fly and more people buy goods that are delivered by aircraft, and we anticipate the trend to continue. In turn, airports seek to accommodate that increased demand – and sometimes pursue grants which are generally supported by Members of Congress – by building more infrastructure. FAA manages whatever aircraft are in the NAS but consumer demand drives the time of day that flights occur along with the location at which they occur.

Second, FAA is carrying out NAS modernization including the deployment of performance based navigation (PBN) procedures consistent with congressional direction because it systematically adds safety and efficiency to the NAS we are charged with managing. In both authorization bills and appropriations bills Congress has supported the FAA making these safety

and efficiency improvements and in fact has often directed us to prioritize NextGen and NextGen Advisory Committee recommendations of which PBN procedures are a central feature.

Several factors contribute to the frustration you have heard from some communities. Many of those concerns are out of FAA control, but I am committed to ensuring FAA does its part to contribute to transparency and adherence to all rules and regulations as we continue to improve upon safety and efficiency throughout the NAS.

With that, below please find information responsive to each of the questions you and your colleagues posed in your November 5, 2019, letter:

*Please note that any mention in these responses of a project for which a final agency decision has been issued, including final agency decisions related to Metroplex or other PBN projects, is not intended to imply that FAA is reopening that decision nor is it intended to be a final agency decision. While FAA has and may continue to engage in discussions related to these projects, any request to change the procedures will be considered a new FAA action subject to safety and environmental reviews.*

1. **The FAA 2018 Reauthorization contained an amendment that required the FAA to provide a report on the status of TSAS technology, updates on how pilots are being trained to use TSAS, the status of TSAS installation into existing airplanes and how the FAA plans to implement the program once all these variables are in place. That report was supposed to be provided within 180 days of enactment of the law, but that has not transpired. Please provide an update to the TSAS report.**

Section 178 titled “terminal sequencing and spacing” required FAA to, “provide a briefing to the appropriate committees of Congress on the status of Terminal Sequencing and Spacing (TSAS) implementation across all completed NextGen metroplexes with specific information provided by airline regarding the adoption and equipping of aircraft and the training of pilots in its use.” That briefing was due 60 days after enactment (December 5, 2018). That briefing occurred November 27, 2018.

2. **Multiple cities have seen an increase in airplane noise levels as airports work to accommodate flights during periods of construction. Residents were only able to learn of the change after contacting a member of Congress. Is there a way for us (Congress and FAA) to work together to help notify residents, or even local governments, when there are temporary changes in flight patterns that could impact our constituents?**

An airport is the primary point for communications about short-term changes in noise given that it is the owner and sponsor of the construction work. Airports are also in the best position to keep their communities updated about the schedule of the construction project they are managing. Short-term, temporary changes in airport noise do occur with airport construction because flight procedures to and from a runway may be changed temporarily, or the use of a secondary runway can increase while another runway is closed during construction. Most airports take seriously the responsibility to notify their communities of short-term changes in flight patterns that affect noise. Public announcements, local news,

and social media are used extensively but it can be challenging to gain peoples' interest and attention prior to implementation of the changes. The FAA will support an airport in their communications plans as needed or requested.

- 3. Constituents and advocacy groups have repeatedly requested that an FAA representative attend airplane noise community meeting(s) and have been denied. Congresswoman Rice's district office was told that the FAA will not appear at any community meeting in the 4<sup>th</sup> Congressional District that are not affiliated with the New York Communities Aviation Roundtable (NYCAR). To date, all of NYCAR's meetings have been held in Queens, making it difficult for her constituents to attend and have the opportunity to hear from the FAA directly. Recently, NYCAR said that the FAA will not participate in community meetings unaffiliated with NYCAR without NYCAR's approval. Will you direct the Eastern Region to meet directly with residents in Nassau County, outside of NYCAR's approval process, in order for the Eastern Region to live up to the FAA's commitment of healthy community engagement?**

FAA has embraced community roundtables as the appropriate place to engage with stakeholders, including community members who live near airports, about aviation noise concerns. In situations where aviation noise cannot be eliminated, but can only be moved, it is appropriate for conversations about noise concerns and suggestions for where the noise should go to occur with all the surrounding communities able to listen and weigh in. The New York Communities Aviation Roundtable (NYCAR) was established by New York Governor Andrew Cuomo to serve as the official forum for these conversations, and it is where FAA is able to devote manpower resources to provide the type of technical expertise needed for in depth conversations about managing air traffic.

The FAA will support NYCAR meetings in Queens, Nassau County, or other locations deemed appropriate by the NYCAR leadership and members. While I understand you are conveying frustration that NYCAR has not been willing to hold a meeting in a particular location I believe the solution is appropriately found between you and NYCAR leadership. FAA will continue to attend and provide meaningful information to NYCAR in a technical advisor capacity when requested, and I hope you are able to come to an agreement with them about meeting locations.

- 4. What is the status of the provisions in the 2018 FAA Reauthorization related to noise, especially regarding research on health impacts from aircraft noise?**

Please see enclosure titled, "Status of Subtitle D – Airport Noise and Environmental Streamlining."

- 5. The report accompanying the Transportation, Housing and Urban Development, and Related Agencies FY18 Appropriations bill directed the FAA to increase regional staff to address community concerns with airplane noise. What is the current status and timeline for onboarding these new regional staff?**

- a. **What is the status and timeline for onboarding community engagement officers to be located within the regions they serve?**

FAA has hired and on-boarded these individuals.

- b. **What is the plan for outreach and introduction of the new regional staff to the affected communities?**

Many of the community engagement officers are already attending community roundtables to introduce themselves and begin forming relationships in given communities. However, the Regional Administrator's office for each region remains the place for people to focus comments and concerns about noise. The community engagement officers bolster the reach for the Regional Administrators, but they do not supplant them.

- c. **How will the public within the affected areas be made aware of the new staff and how will they be able to interface with them and present their comments and concerns?**

Same response as "b" above.

6. **There was an agreement with the FAA and TRACON, which was signed June 13, 2019 to be implemented on June 24, 2019, with a cancellation date of April 15, 2020, that would help reduce the noise levels in Nassau County and Western Suffolk with some approved procedures. The first regulation instructs planes to fly at an elevation of at least 4,000 feet when operating west of Deer Park. The second instructs planes flying 15 miles or more from JFK to stay at least 3,000 feet in elevation when 22R is not open. Both regulations would be 24 hours a day.**

**However, the FAA informed Congressman Suozzi that it could not proceed because, the FAA did not follow their own internal procedures properly and the new measures needed to be studied with an Environmental Assessment Study."**

- a. **Why would an environmental assessment study be necessary if the only effect of the June 13, 2019, plan would be to increase the elevation of approaching flights? The only impact for people on the ground is decreased noise level.**

Environmental reviews are a critical element in FAA's efforts to manage the airspace while ensuring that potential environmental impacts are fully and properly analyzed. As required by the National Environmental Policy Act (NEPA) we conduct environmental reviews for FAA's actions concerning air space use and air traffic to obtain factual evidence of potential impacts regardless of what the expected or perceived impacts might be. All environmental reviews of air traffic projects are conducted under the guidelines and regulations of NEPA and related statutory and regulatory environmental laws such as the Clean Air Act and National Historic Preservation Act, as well as internal FAA environmental requirements.

The Standard Operating Procedures manual change that you reference addressed multiple changes to the airspace including changing the preferred arrival runway configuration and increasing arrival altitudes when conditions permit. Changing the preferred arrival runway configuration to keep aircraft from landing on 22L/R to reduce air traffic over certain Nassau County communities would have the effect of increasing traffic over other communities that already experience noise from arrival and departure operations at JFK Airport, LaGuardia Airport (LGA), and Newark Airport. Shifting arrival operations to 4L/R would impact neighborhoods in Far Rockaway, Broad Channel, Seaside, and Long Beach. Shifting arrivals to 13L/R would impact residents of Canarsie, East New York, Ozone Park, Breezy Point, Manhattan Beach, Sheepshead Bay, Brighton Beach, and Manhattan Beach. And shifting arrivals to 31L/R would increase operations over Atlantic Beach, Woodmere, Cederhurst, Arverne, Inwood, Valley Stream, Jones Beach, and others. These areas already experience aircraft noise from operations at JFK, and would be impacted by the increased operations overhead if the preferred runway configuration at JFK is changed. If the Standard Operating Procedures had gone into effect, the communities listed above would receive more aircraft noise for the express purpose of reducing noise in communities that underlie Runways 22L/R.

This type of change highlights the importance of working aircraft noise issues through roundtables, such as NYCAR, as opposed to changes being pursued by a single community, county, or elected official. The virtue of going through NYCAR is that all of the communities that would be poised to receive more noise would be aware and could weigh in to determine if they would accept or reject that proposal. If NYCAR approved such a proposal the FAA would then be able to review it to determine if it is safe and operationally feasible and conduct appropriate – and legally required – environmental review.

How these proposed changes came about was irregular and demanded additional scrutiny and review. The two manual changes referred to above were negotiated between a staff member in a congressional office and staff at the New York Terminal Radar Approach Control (TRACON). The control tower at JFK had not been consulted or even made aware of these changes. FAA management intervened to halt the changes because the way these proposed changes were made raised concerns that vetting for safety and environmental review had not been carried out properly.

**b. What concrete measures have been taken to elevate the height of the flights approaching JFK?**

In April 2019, the Port Authority initiated a construction project on JFK runway 13L/31R, closing the runway until November 16, 2019. This runway closure required operations at JFK to shift to a configuration that increases utilization of runways 22L/R. The increased traffic arriving into JFK 22s during the construction period corresponded with increased community concern over aircraft noise. In response to the concerns provided through NYCAR the FAA took the following action:

In May 2019, the FAA hosted a meeting to discuss the temporary construction impacts, attended by Representative Rice, Representative Suozzi, Nassau County Executive Curran, and staff members representing members of the New York area delegation.

In September 2019, the FAA issued general instructions to air traffic controllers to keep aircraft as high as possible when feasible. This effort to keep aircraft at higher altitudes as well as a new noise abatement procedure into JFK were communicated to NYCAR as well as on a call with staff representing Senator Schumer, Senator Gillibrand, Representative Meeks, Representative Rice, Representative Suozzi, Governor Cuomo, and County Executive Curran.

In November 2019, the FAA implemented procedures to increase the altitude on arrivals into JFK 22L/R. When conditions permit, and LGA is not required to use certain airspace, altitudes up to 4,000 feet will be released for operations into JFK, enabling air traffic to assign higher altitudes on approach. This change was also communicated to the relevant elected offices.

The FAA will continue to seek opportunities to reduce noise for communities when feasible, and will continue to communicate such efforts to the community and elected representatives.

**c. When will the new noise abatement procedures be approved?**

If this question is in reference to releasing certain airspace up to 4,000 feet from LGA to JFK, in November 2019, air traffic was able to begin releasing additional airspace to enable arrivals into JFK to maintain even higher altitudes during the midnight shift.

**d. Where is the FAA regarding the agreement that was signed June 13, 2019, which was to be implemented June 24, 2019?**

In September 2019, the FAA issued general instructions to air traffic controllers to keep aircraft as high as possible when feasible, and in November the FAA began releasing certain airspace up to 4,000 feet to enable aircraft to maintain higher altitudes on approach to JFK 22L/R.

Regarding the runway there is no plan to implement that proposal unless it comes through the roundtable and goes through the appropriate environmental review.

**7. The Noise Annoyance Survey was due in January 2019, and we have been told for months that legal/administrative review continues. We have also heard that scientists at Department of Transportation (DOT) are not satisfied with the rigor of the science in the Survey and it is possible that the reports will never be issued. When will the Noise Annoyance Survey be released to the public?**

I understand there is a great deal of interest in this survey and we are working to understand the full scope of the survey to determine the best path to sharing the information we have

learned from the survey. We have conducted several reviews of the work, including within DOT, and have worked to ensure it is indeed rigorous. There originally was no due date on the Noise Annoyance Survey as it is a survey which was conducted at FAA's discretion. The FAA has publicly stated ballpark timeframes for when we believed the survey would be released but have not yet finalized such a release. This survey is the subject of Section 187 of the 2018 FAA reauthorization which directs FAA to complete the survey, release it and release relevant proposed policy changes to land use compatibility guidelines by October 5, 2020. We intend to comply with Section 187.

- 8. We have been told by (former) Regional Administrators as far back as 2015 that flight path dispersal was being studied. What is the status of research, planning and implementation of dispersed flight paths for NextGen RNAV/RNP flight procedures?**
- a. Are there any reports, white papers, overviews, scientific papers, etc.**
- i. About this kind of dispersion technology in general**
  - ii. About the specific flight path dispersal program being developed under the auspices of the FAA?**

The FAA is modernizing the NAS and is committed to moving to satellite-based navigation, known as PBN. This is consistent with congressional direction and necessitated by growth in the system, which by itself affects a community's perception of noise unrelated to airspace modernization. FAA is studying ways to use PBN technology to create systematic dispersal of flight tracks while maintaining safety and efficiency. It is important to understand however that it is not possible to replicate the kind of random dispersal that occurs when planes are flying using ground based navigation i.e. introducing systematic dispersal using satellite based routes does not achieve an outcome that would resemble "going back to the way it was." That type of dispersal is no longer possible. The options to disperse arrivals are especially limited based on what is required to line up planes for safe landing, and there are no applicable concepts for arrivals or departures that eliminate noise; in general, they only move noise. This underscores the importance of clear communication with communities who will get additional noise based on any given dispersion concept.

To determine what is possible, FAA has been working primarily with the Massachusetts Institute of Technology (MIT) and MITRE. Through a Memorandum of Understanding with the Massachusetts Port Authority (Massport), the FAA has been conducting research with MIT through the ASCENT Center of Excellence<sup>1</sup> to understand potential means to change the noise footprint via changes in operational procedure concepts, including systematic dispersion. Additional information and reports that have come from that work can be found at the site included in the footnote below.

MIT's operational procedure concepts have been notionally designed for Boston Logan Airport, which is bringing valuable real-world information to the researchers both in terms of what is desired by communities and what is possible within the airspace. MIT has also done research on the use of a supplemental overflight metric (basically a metric

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<sup>1</sup> <https://ascent.aero/project/analytical-approach-for-quantifying-noise-from-advanced-operational-procedures/>

to communicate how many airplanes would be clearly heard at a given location) and a method for communicating noise impacts on communities to enable improved communications of altitude-based and divergent heading-based dispersion concepts.

The work done by MIT, Massport, and Massport's selected team of technical advisors will result in two sets of recommendations known as Block 1 and Block 2. Block 1 are recommendations determined by MIT to be easier to achieve. There were nine recommendations presented to Massport within Block 1, and to date, Massport asked FAA to pursue two of them. FAA determined it is possible to meet the intent of these two recommendations and is executing changes consistent with those requests. FAA will give Block 2 recommendations all due consideration when they are proposed to the FAA.

While some research will result in actionable changes, some will not. Research efforts are exploratory in nature, and the concepts that result need extensive review to understand if they are scalable in the real world. For example, early work by MIT identified reduced speed departures as a potential means of noise reduction; however, MIT later refined their analysis using more relevant information from NASA and Boeing, and it now appears that reduced speed departures will not provide noise reductions. This will be fully captured in a report to Congress as required under Section 179 of Reauthorization.

FAA has also worked with MITRE to investigate operational mechanisms to disperse noise. Through that work, we have identified multiple means of providing systematic dispersion that would use altitude, controller actions, divergent headings, and waypoint relocation. Specific examples where these operational concepts have been used are described below. While there are multiple potential mechanisms for introducing dispersion, these concepts come with implementation challenges, such as increased complexity and workload for controllers and operators, which can be a safety concern, adverse impacts to throughput, and additional training requirements. These issues would need to be addressed on a case-by-case basis to ensure safe and efficient operations.

As previously referenced a major challenge associated with any dispersion concept is how communities who will get more noise will be informed; how their concerns should be addressed; and by whom. A core question is, does community A's desire to disperse flights in order to receive less noise trump community B's desire to reject that change, because it results in more noise for community B?

There has been a tremendous amount of conversation about dispersal. It is important to clarify what is meant when discussing dispersal. As previously noted, arrival aircraft inbound to an airport are more difficult to disperse. Pilots are required to align the aircraft with the landing runway, land into the wind, and stabilize the aircraft for a safe landing. Air traffic controllers must sequence aircraft into an established line for the arrival runway to provide adequate separation and safety.



Prior to the introduction of satellite based navigation (Area Navigation (RNAV) procedures and Required Navigation Performance (RNP) procedures, for example), the pattern of departure flights were naturally dispersed, because pilots were navigating toward and over fixed navigation aids to various destinations and in several directions and not a precise or highly predictable path. Variations in aircraft performance, pilot reaction time, rate of climb, etc. all affected when an aircraft would turn, and this resulted in minor differences in the flight tracks, and therefore, dispersion.

The current, more concentrated flight paths created by the use of PBN are inherently safer because aircraft are now on a precise and predictable path that is preplanned and does not require vectoring by an air traffic controller. This reduces frequency congestion (too many people trying to talk at once on the frequencies used between pilots and controllers) and opportunities for missed communication between the pilots and the controllers. When the aircraft is on a procedure, it is designed to be safely separated from other aircraft flying procedures in that airspace.

Due to the complexity of the system, air traffic controllers must often mix in aircraft that are not on procedures. Those aircraft are manually directed, or vectored, by the controller. We often refer to this as adding “complexity” for the controller. This does not just mean more work; this means the level of predictability for both the pilot and the controller is being reduced. When precision and predictability are reduced, risk is introduced. Conventional flight paths using ground-based navigation were and are safe due to the standards we built into the system, but by design, having an aircraft on a precise and repeatable path – “on the rail” – is safer.

As noted, the implementation of dispersion will require coordination across communities as some communities would likely get increased noise exposure to enable others to get a reduction. As such, current efforts focus on metrics and methods for presenting noise exposure data to communities to ensure they are better informed of the trade-offs involved with the deployment of systematic dispersion. Lessons learned from this research are being examined to aid the FAA in responding to Section 175 of the 2018 FAA Reauthorization. The FAA is using the research efforts to inform the development of policies and processes for standardizing how to consider dispersal headings or other lateral track variations to address community noise concerns. The research is also helping the FAA to develop appropriate metrics and mechanisms for assessing dispersion concepts as well as developing guidance on how to provide a Section 175 request to the FAA.

The FAA’s current engagement strategy is ongoing and includes working with airports and community leadership through Roundtables, Ad Hoc Committees, and Task Forces to understand the specific challenge; we can then ascertain if there is an ability to make a change that would alleviate the concern. Multiple parties must engage and collaborate towards agreement to identify possible solutions and/or recommendations to address identified concerns.

Below are several recent examples of engagement with communities resulting in meaningful collaboration to address noise related concerns; some of these examples utilize dispersal concepts. The note in parenthesis conveys if the change is to an arrival or departure.

- In Portland, Maine, we are working with the airport and the community on a short and long term solution to keep aircraft higher and over the water longer. This involves waypoint changes to charted visual procedure to address daytime flights; and with the carriers to develop a longer term RNAV solution that would allow aircraft to fly the harbor at night, which is what the community and airport have requested. This type of approach captures both waypoint relocation and a “noise alternative route,” which are dispersion concepts. (Arrival)
- In Lake Arrowhead, California, the FAA worked with multiple stakeholders including local government, congressional offices, industry and the relevant airport to adjust the flight path so that aircraft now fly over a less inhabited area. Again, this change could be referred to as a noise alternative route. (Arrival)
- In the San Francisco area, based on input and collaboration with affected communities, the San Francisco Airport (SFO), the Oakland Airport, their respective airport roundtables, elected officials and airlines, and FAA agreed to complete analysis to determine if it is operationally feasible to require overnight departures out of SFO to fly over the bay rather than over the city. The FAA has now confirmed it is operationally feasible to do this, and it will now be up to the airlines that fly during those overnight hours to determine if they agree to fly the additional miles associated with this noise alternative route. (Departure)
- In Fort Lauderdale, Florida, when increased operations and runway construction in Ft. Lauderdale caused increased noise complaints west of Ft Lauderdale Airport, the FAA worked with the local airport and local air traffic operational team to encourage flights to stay higher longer. The surrounding community has recognized the effort and the change. (Arrival)
- In Wyoming, we are working with the Jackson Hole Airport, which is the only airport in a National Park and serves as a gateway for hundreds of thousands of visitors to the National Parks in the region every year. FAA is working collaboratively with the Airport, the community, and the leadership at the National Park to determine if it may be possible to introduce an RNAV procedure to adjust the flight path over a less inhabited area, as well as provide less disruption to migrating wildlife in the park. This will require finding a balance for all interested parties. (Arrival)
- In Charlotte, North Carolina, after we introduced satellite based procedures, the Charlotte Airport received complaints from the communities that lay under a departure flight path. The airport requested that FAA disperse the departures using different headings in order to distribute the noise among many communities. In this particular case, FAA analysis revealed it was possible to introduce dispersion in this

way, and we did so. Based on what we have heard from the airport, it has not been our understanding that this action has resulted in satisfaction among the communities that received the new noise. (Departure)

As you can see from the examples above, there is no one single solution, and any changes that may offer a community some relief from overflights require commitments from multiple parties. It is often the use of PBN that provides the mitigation and flight path predictability that allows for overflights of water, industrial or commercial property.

The implementation of any procedure design concept may introduce operational challenges that the FAA will need to assess on a case-by-case basis to ensure the safety and efficiency of operations. Further, the idea of systematic dispersion must be considered within the context of the entirety of the airspace. As we better understand how a given method of dispersion can work in the context of safely and efficiently managing air traffic, it's important to keep in mind there is not one method that would work for all airports. Every airport operation will be unique in terms of what, if anything is possible.

**9. Are there alternatives to the technology of flight path dispersal being used by procedures developers to replicate some kind of dispersion?**

Yes. Current PBN technology allows developers to build in some intentional dispersal. For example, an Open Standard Instrument Departure (Open SID) is an RNAV departure that allows for an embedded section where the plane is radar vectored between two satellite-based procedures creating natural dispersion.

This type of departure starts as a satellite-based route that then has an "open" segment during which air traffic control vectors an aircraft before connecting it with another satellite-based segment that takes the aircraft up to higher altitudes. This "open departure" provides the precision and predictability benefits of satellite-based routes, but also gives controllers the flexibility to direct aircraft as necessary in highly congested portions of the airspace. The vector leg of this procedure has the effect of dispersing ground tracks. This is due to pilots manually flying the aircraft during this segment, variations in when pilots take specific actions, and when controllers issue specific instructions.

**For example:**

- i. Airports alternating two or more departure or arrival procedures that essentially fulfill the same general route but vary the path slightly.**
  - a. Do these alternative procedure versions alternate on even/odd days of the month or time of day (like Heathrow)?**

The FAA has worked with O'Hare Airport to rotate runway usage to have a similar effect. This was possible at O'Hare because of their specific runway configuration and traffic. It is not generally something that can be replicated, but it is an example of how the FAA have successfully worked with a specific airport and their sponsored community organization.

In 2018, the Chicago Department of Aviation submitted an Interim Fly Quiet Runway Rotation proposal to the FAA. This proposal was subsequently approved and a temporary program began in November 2019. This program will continue until Runway 9C-27C commissioning is completed in late 2020. The Runway Rotation program was developed in collaboration with the O'Hare Noise Compatibility Commission and will occur during the overnight hours when demand requires one arrival and one departure runway. This rotation includes an 8-week schedule that rotates the primary arrival and departure runways to balance the overnight noise. It is expected that significant runway construction, maintenance, and/or pavement rehabilitation on Runways 4L-22R and 4R-22L will affect the rotation program during the 2019 and 2020 construction seasons.

- ii. **Are there any plans to incorporate HEADINGS instead of TRACKs for a portion of the procedure? Or alternating use of transitions to/from the arrival or departure procedure?**
- b. **If so, can you point to any examples at U.S. airports or foreign airports?**

Yes, currently departures in Burbank California, depart the airport on a degree heading and join one of two PBN procedures SLAPP and OROZO, 7 and 12 miles from Burbank Airport. The FAA has proposed an example of PBN dispersal with an Open SID. The procedure begins with 2 RNAV segments to turn the aircraft sooner to the north, then the procedure is open and the pilot is given a heading or vectored before joining the SLAPP and OROZO RNAV procedures.

Additionally flights departing southbound from Charlotte Douglas Airport depart using a degree heading and join a PBN procedure several miles southeast and southwest of the airport.

- 10. Have there been any recent modifications to the Opposite Direction Operations (ODO) standards and regulations in the past few years? No.**

- a. **And are there any airports which may have received waivers for ODO using different than standard regulations? We have no waivers approving non-standard ODO operations.**

- 11. Are there any RNAV flight paths which incorporate a HEADING (not TRACK) as part of the procedure? Please provide the name of the procedures and the airport in use?**

Same answer as #9(ii) above.

- 12. Have any waivers from standards been issued to allow a RNAV arrival (STAR) to connect to an RNP approach? Yes**

**If so, which STAR/Arrival at which airports?**

- TRUPS STAR to DCA Ry 19
- FRDMM STAR to DCA Ry 19
- HYPER STAR to IAD Rys 19L/C/R
- CAPPS STAR to DCA Ry 1
- LEGGO STAR to IAD Rys 19L/C/R
- MAPEL STAR to IAD Rys 19L/C/R
- KRKEE STAR to ABQ Ry 8
- TSDEL STAR to OKC Ry 35L/R
- MURAH STAR at OKC to Ry 17L/R

**13. Please provide the current status and timeline for all safety and noise related items from the 2018 reauthorization bill.**

Please see the enclosure titled, "Status of Subtitle D – Airport Noise and Environmental Streamlining." Regarding safety related items, we would need more specificity about what sections of the bill you are referring to.

**14. How does the FAA plan to address existing noise problems experienced at completed metroplex projects – such as the D.C. Metroplex?**

We are addressing communities that have expressed noise concerns via engagement with community roundtables sponsored by the relevant airport. That includes the roundtables sponsored by Ronald Reagan National Airport and BWI Airport. In both cases the FAA has invested significant human resources to support those roundtables and has presented options to those roundtables to address formal recommendations. In several instances the FAA proposed procedures were not addressed for more than a year without any action by the roundtable to accept, reject or amend FAA proposals. Currently, both roundtables have entered into contracts with third parties to draft possible new procedures they feel best reflect their recommendations. If the roundtables do recommend procedures, FAA remains committed to reviewing them to determine safety and feasibility.

**15. Does the FAA see resolving noise issues arising from the Metroplex/NextGen project as part of its core mission? Or is it the position of the FAA that Congress should authorize another agency to have oversight capabilities on airplane and helicopter noise pollution?**

The statutory mission of the FAA is to manage the NAS safely and efficiently. We are further directed to allow for a public right of transit through navigable airspace while protecting people and property on the ground. Managing noise issues arising from airport and airspace projects, including Metroplex/NextGen projects, is important in furthering our statutory missions.

NEPA requires FAA to consider the impacts of each project it undertakes, including Metroplex/NextGen projects, before making a decision to proceed. NEPA defines the level

of environmental review applicable to a given project whether it is a Metroplex or a single site PBN procedure. NEPA establishes a process which FAA follows when making airspace changes.

The current state of technology does not permit FAA to “resolve noise issues” to every community’s satisfaction using air traffic procedures. Community noise concerns are an aviation industry issue. Beyond the FAA other relevant issues include fleet and scheduling decisions by operators, airport practices and zoning/land use decisions made at a local level. FAA recognizes Congress’ continued interest in an enhanced level of community engagement for airspace projects, and we believe our approach to engagement reflects that.

FAA is participating in numerous roundtables across the country, providing senior leaders and technical expertise in order to facilitate transparency and information about what is and is not possible within the system. We are creating cross-functional teams across every region led by the Regional Administrators meant specifically to monitor and engage when we either know an issue could affect a community near an airport or we hear that such a community has a concern.

**16. Please explain why, according to the August 2019 report from the Inspector General of DOT, some Metroplex sites, “did not achieve expected fuel saving benefits for various reasons, including designs that increased time and distance flown for some procedures and factors that were initially considered, such as changes to wind speeds.”**

Metroplex Study and Design Team reports fuel and emissions reductions were based on modeling by The MITRE Corporation and, at early Metroplex sites, flight simulations by airline carriers. For the predictive analysis, modeled flight routes were based on pre-implementation flight tracks and compared to the Study and Design Team proposals. For post-implementation analysis, actual flight data was used, both before and after implementation to estimate the impact of Metroplex changes. In the process of completing the post-implementation benefits analyses, it became evident that not all of the benefits predicted in the Study Team and Design Team analyses could be measured in a post implementation analysis. As a result in 2015 MITRE recalibrated the predictive benefits analysis to enable an accurate comparison between predictive and post-implementation analysis. The recalibration effort included removing flight simulation benefits that were consistently significantly higher than other analysis results, removing cost-to-carry benefits, using a consistent fuel cost, and filtering operations that are filtered in post-implementation analysis.

After the calibration there are still numerous reasons why the predicted benefits did not match the post-implementation benefits, including: changes made to the Metroplex designs after predictive benefits were calculated, changes to the operating environment that could not be controlled for, and changes in airline practices.

It is vital to remember that flight efficiency metrics were not the only goal of each Metroplex implementation. Improving safety of flight within the constrained airspace inherent at a

Metroplex site is critical to the FAA and FAA believes modernizing the procedures at these sites has produced safety benefits.

**Please list what sites have not met expected fuel savings and why.**

Using the recalibrated results, only two sites had substantially lower benefits than predicted:

- Northern California: Analysis for the post implementation revealed several things that would contribute to not obtaining the predicted fuel benefits. Winds during the post implementation analysis were stronger from the west which increase time flown for arrivals from the east (majority of the traffic for these airports) which would impact fuel burn results. Additionally, all departure air carriers had shallower climb profiles which lead to higher fuel burn estimates. Potential causes may have been payload changes, wind differences, or reduction in fuel cost allowing the Flight Management System to use higher cost index. None of these factors can be related to Metroplex.
- Atlanta: The Metroplex designs were modified to remove the optimized profile descents which were the primary driver of the predicted benefits. Atlanta Terminal Radar Control requested the Northeast and Northwest arrivals retain level-offs entering their airspace to enable air traffic the ability to sequence aircraft and assign speeds during busy arrival flows. This decision removed the optimization of the vertical profile resulting in less savings than predicted.

**How is FAA planning to improve community outreach and communication near Metroplex sites and provide a timeline for the implementation of these plans.**

We have continually reviewed and improved outreach and communication with communities as we have implemented successive Metroplex sites and single site projects for that matter. The timeline for these activities is immediate and we are doing them now. Using Cleveland, Denver, Las Vegas, and South/Central Florida as examples we have applied Enhanced Community Engagement and taken a more proactive approach to working with Airport Noise Offices and affected communities in order to not only build future flight paths in a more transparent manner, but to also better understand some of the historical concerns communities have had with aircraft noise and determine if solving some of those legacy noise issues is achievable in the context of broader Metroplex airspace design.

In each of our most recent Metroplex locations we have increased the number of meetings held with stakeholders in the community including airports which are actively involved in providing priorities for improving the flow of traffic into and out of their airport. The current level of outreach and communication we undertake far exceeds requirements under NEPA and is meant to provide transparency and multiple opportunities for people to get to talk with FAA subject matter experts directly.

- 17. What plans does the FAA have, if any, to utilize the findings of your in-progress study on the health determinants of noise impacts on communities?**
- a. Are there plans to make changes in approved flight paths or restricted flight zones in front-line communities that have been disproportionately impacted by such flights?**

Consistent with Section 189 of the 2018 reauthorization FAA entered into an agreement with Boston University and MIT to complete the study directed in Section 189. Any future policy considerations will be informed by the results of the multi-year study, so it is not possible to forecast how FAA will address possible findings. But FAA does recognize the importance of this study.

- 18. Is the FAA considering, or has it ever considered, phasing out Stage 3 aircraft from service in U.S. airspace through regulatory action or any other manner?**

In Section 186 of the FAA Reauthorization Act of 2018, the Government Accountability Office (GAO) was tasked with analyzing the potential phase out of Stage 3 aircraft. The analysis is a review of the potential benefits, costs, and other impacts that would result from a phase-out of covered Stage 3 aircraft. FAA is supporting GAO on this analysis. In addition, the FAA has completed analyses in the past to understand the percentage of the fleet that meet Stage 3 but have not completed a cost-benefits analysis of a phase out.

- 19. When are regional FAA community liaison officers going to begin their duties? As soon as one is in place for the New York City Metroplex, please share their contact information with the office of Congresswoman Ocasio-Cortez.**

All of the regional community engagement officers have begun, including in the Eastern Region. The local contact for any Member of Congress is the Regional Administrator. In this case that is Jennifer Solomon, the Eastern Region Administrator. Ms. Solomon's recently met with Congresswoman Ocasio-Cortez. Since coming on board, the Eastern Region Community Engagement Officer, who reports to Ms. Solomon, has been attending the regular NYCAR meetings, along with other representatives from the FAA.

- 20. When is the work plan for the NY/NJ/PHL airspace project going to be published in the Federal Register for public comment? It's under review and we're targeting publication in early 2020.**

- 21. What role, if any has FAA played in the planning, design or development of the LaGuardia AirTrain project?**

The FAA is not a proponent of this project and has not been involved in the planning, design, or development of the project. Rather, the FAA's role is to make a determination on the use of PFC funding as requested by the Port Authority. The decision on the use of these funds constitutes a major Federal action subject to review under the National Environmental Policy Act. As such, FAA is the lead agency for the preparation of the Environmental Impact Statement (EIS) for this project and is independently evaluating the Port Authority's



Proposed Action. The EIS analyses will be used to assess the environmental effects of this project prior to making a decision about the PFC usage.

The EIS process also provides opportunities for public review and comment on the Draft EIS. As part of the EIS process, the FAA has already held interagency and public scoping meetings and there will be additional opportunities for the public in 2020. For more information about the LGA EIS, please visit the dedicated project website: <https://www.lgaaccessseis.com/>

**22. What regulatory action is your agency pursuing, if any, to combat climate change's impact on airports like LaGuardia and communities near airports?**

The United States published an information paper on United States efforts to address aviation's climate impact at the 40th Triennial International Civil Aviation Organization ) Assembly in September 2019. The paper is available at [https://www.icao.int/Meetings/a40/Documents/WP/wp\\_531\\_en.pdf](https://www.icao.int/Meetings/a40/Documents/WP/wp_531_en.pdf).

The aviation sector's record in addressing climate change is one of increasing efficiency and action to reduce fuel burn. Since 1991, the U.S. civil aviation sector's efficiency has increased by 71 percent. The FAA has also supported international efforts, including the Carbon Offsetting and Reduction Scheme for International Aviation. While there continues to be a need for further progress, the information paper highlights historical improvements in efficiency by the United States aviation sector, recent efforts and successes, and concludes with an assessment of future trends. This progress reflects a collective and serious effort across aviation stakeholders, including governments, manufacturers, airlines, and airports, among others.

**23. Congressman Neguse sent a letter to then-Acting Administrator Elwell on May 21, 2019, regarding NextGen noise concerns, and his staff sent an additional copy via email to the Office of Government and Industry Affairs at the FAA. Aside from acknowledging receipt of the email, they have yet to hear anything else from your agency. He requests that you review the requests in the letter (copy attached), and please provide a response to that initial inquiry as soon as possible.**

FAA provided Representative Neguse's staff a copy of our November 4, 2019, response letter.

**24. Can you please provide concrete steps you will take as Administrator to improve communication with constituents?**

We have worked hard to make sure we have robust communication channels which we want to ensure are clear. The general public can contact the FAA through the Regional Administrator and/or the Noise Ombudsman email or phone line. I am including an enclosure that provides the email and phone number for each region. A community that is interested in understanding operations can ask questions through their airport or the airport roundtable.

Below are some concrete actions that will occur:

- Continuing dialogue including briefings and meetings with the Quiet Skies Caucus at the staff and Member level;
  - Releasing the Noise Annoyance Survey referenced in Section 187 in a timely manner;
  - Implementating the FAA Noise Complaint and Inquiry Database and Tracking System (FAA Noise Portal);
  - Continuing the commitment to maintain community engagement positions within each region;
  - Standardizing the operation of cross-program office teams in each region led by the respective Regional Administrator to ensure visibility of community concerns when they arise and to engage and respond in an integrated manner;
  - Executing the research and development priorities that Congress articulated in the 2018 FAA Reauthorization Act;
  - Continuing proactive outreach to staff in Members' D.C. offices to ensure they have the same information that state-based staffers receive from their respective Regional Administrators; and
  - Reinforcing the importance of continued meaningful participation in community roundtables to determine when it is possible to make changes consistent with consensus community requests and to explain clearly why we cannot execute a request when those instances arise.
- 25. A study has been authorized by Congress for the FAA to research alternatives to the day-night average sound level (“DNL”) testing, including the use of actual noise sampling data. In South Boulder County, Colorado there has not been any actual noise sampling done to test the noise levels. Why has noise sampling not been done in the areas where constituents are highly impacted – such as in Nederland and the Indian Peaks Wilderness – where the NextGen flight path now routinely routes aircraft directly over?**
- a. Further, when designing flight paths, how can you take into account:**
- **The needs of each distinct community, such as geological features which amplify sound waves from aircraft; and**
  - **The human impact on sensitive wilderness areas to both wildlife and humans?**

As a requirement of the 1979 Aviation Safety and Noise Abatement Act, FAA’s threshold for assessing aircraft noise is required to take into account noise intensity, duration, and time of occurrence in order to produce a single highly reliable and reproducible method for predicting aircraft noise exposure. The Day Night Level (DNL) metric has currently been identified as the most appropriate metric to meet these requirements and has been re-validated for this purpose in 1992 by the Federal Interagency Committee on Noise and in 2018 by its successor the Federal Interagency Committee on Aviation Noise. As outlined in Section 173 and Section 188 in the 2018 FAA reauthorization, FAA undertook a study regarding alternative metrics. The Section 188 report is currently in executive review.

To produce reliable outcomes which take into account the myriad factors influencing aircraft noise, high accuracy noise modeling is the accepted practice to achieve the best outcomes for informing environmental decision making. While community noise measurements may help provide supplemental information in some contexts, noise measurements collected in dynamic “real world” situations can include various sources of error including: noise from non-aircraft noise sources, technical challenges in calibrating and maintaining long term noise monitoring, limitations on the number of noise monitors, and inability to determine noise from proposed future conditions.

Modern aircraft noise modeling conducted with the FAA’s Aviation Environmental Design Tool (AEDT) is also capable of including terrain data as part of the calculations. Use of terrain data allows the model to account for variations in elevation and produce accurate outcomes for aircraft noise exposure in high or variable elevation communities. While DNL is the primary noise metric FAA uses to inform environmental decision making, noise models including AEDT can also produce various supplemental noise metrics. Calculation of supplemental noise metrics are considered on a case-by-case basis in order to provide additional information to communities or other stakeholders. Where appropriate, these metrics can be used to provide further information to communicate potential changes to noise in noise sensitive areas.

**26. Many constituents worry about the health and environmental impacts of leaded gasoline used by smaller, low flying aircraft (such as those used for pilot training) near their homes, and it is a great concern. Can you provide an update on the development of alternatives to leaded gasoline for small aircraft through your Piston Aviation Fuels Initiative?**

Owners and operators of more than 167,000 piston-engine aircraft operating in the United States rely on aviation gasoline (avgas) to power their aircraft. Avgas is the only remaining lead-containing transportation fuel, and lead in avgas prevents damaging engine knock, or detonation, that can result in a sudden engine failure. In 2014, the FAA initiated research of alternate fuels at our William J. Hughes Technical Center in Atlantic City, and one of the purposes of the Piston Aviation Fuels Initiative program is to facilitate the research and development of unleaded fuels for general aviation.

The initial testing began with four fuels that were selected through a public solicitation. After Phase 2 concluded, the testing revealed that the two fuels selected needed further development before further testing could be continued. The program is continuing to work with one of the initial fuel developers to address issues with their fuel revealed in the testing. The program is also currently evaluating fuels from developers that were not included in the original solicitation and has begun testing these fuels to assess their viability as high-octane unleaded replacement fuels for the general aviation fleet.

**27. The public comment period for the Denver Metroplex Environmental Assessment ended on June 6, 2019. Participants were advised the FAA would review and respond to their comments. Have constituents who participated in the comment period received a response from the FAA?**

**a. Do you plan on responding to individuals who participate in public comment periods?**

Comments and concerns raised during the comment period were addressed in an appendix to the Final EA for the Denver Metroplex. The FAA announced to the public on November 18, 2019, that the Final EA was complete and available for review by placing a notice on the project website ([www.metroplexenvironmental.com/Denver\\_introduction.html](http://www.metroplexenvironmental.com/Denver_introduction.html)), the FAA's Community Involvement website ([www.faa.gov/air\\_traffic/community\\_involvement](http://www.faa.gov/air_traffic/community_involvement)), and in local newspapers. Additionally this message was provided on social media platforms. The public will be notified of the FAA's final written decision on the Denver Metroplex in the same manner.

**28. Many constituents are deeply and rightfully concerned about the increased flight traffic they have experienced as a result of the concentrated flight path of NextGen. Have you considered modifying NextGen to allow for a more dispersed flight pattern? If no, why not?**

As Congresswoman Norton noted during the meeting on October 16, 2019, dispersion is complicated because some communities may support introducing dispersion – primarily those annoyed by current plane noise – but other communities may not support introducing dispersion because it will introduce new noise near their homes. When considering this issue it is important to keep in mind that alternatives to the current airspace design do not eliminate noise, they just move it.

As noted in the response to question #8, the FAA is continuing to conduct research to examine operational mechanisms to introduce systematic dispersion as well as methods for analyzing and communicating the noise impacts of dispersed flight tracks. The implementation of dispersion will require coordination across communities as some communities would likely get increased noise exposure to enable others to get a reduction. As such, current efforts focus on metrics and methods for presenting noise exposure data to communities to ensure they are better informed of the trade-offs involved with the deployment of systematic dispersion. Lessons learned from this research are being examined to aid the FAA in responding to Section 175 of the FAA Reauthorization Act of 2018. It should be noted that the implementation of dispersion procedure design concepts may introduce operational challenges that the FAA will need to assess on a case-by-case basis to ensure the safety and efficiency of operations.

**29. Can you please give updates on FAA's implementation of a central repository for constituent complaints?**

FAA is developing a standardized approach for receiving and responding to noise complaints, which we call the FAA Noise Complaint and Inquiry Database and Tracking System (FAA Noise Portal). The objective is to ensure that we are reviewing and responding to complaints in a consistent, coordinated, and timely manner. There are two important

components to the system that we are implementing. One, there will be a front-end public-facing web portal with educational information about aircraft noise and a form for submitting a comment or complaint. This system will be implemented regionally with a portal for each region in order to address region-specific circumstance. Two, there is an internal system for receiving and responding to comments and complaints. This internal system is up and running.

The FAA has been using the FAA Noise Portal internally agency-wide since August 2018 to track and respond to public aircraft noise complaints or inquiries. The public will be able to enter their information into the required Noise Portal fields directly via a regional aircraft noise website once FAA publically releases it in the first FAA region starting in early 2020. Public releases in the other FAA regions will follow throughout the year.

**30. Given the FAA's history of unresponsiveness, how will the FAA differ under your guidance?**

It is important to differentiate between "unresponsiveness" and "disagreement." Based on what I've seen in my first few months as Administrator I have not seen evidence of "unresponsiveness." Responsiveness means engaging with officials, communities, and airports at community roundtables to provide information and engage in a dialogue. However, for several reasons FAA may not be able to do what a roundtable recommends. In those cases I would not define that as "unresponsive." Engaging with Members and communities at the appropriate venues will be something the FAA will continue to do.

I have asked the agency to do some things that I hope will improve communication with Congress. I have asked that we establish regular meetings with the Quiet Skies Caucus staff and Members. Specifically, I would like FAA staff to brief your staff in the spring and fall and I will personally join a meeting with the Members prior to the August recess so that we have a chance to talk in person before you are back in your districts for an extended period. The Office of Government and Industry Affairs will seek to establish mutually agreeable dates for these meetings. Additionally, the Office of Government and Industry Affairs will work with our Regional Administrators to provide timely updates to your DC staff when the Regional Administrators provide updates to your district staff.

With respect to responsiveness to communities, we are committed to the creation of teams led by the Regional Administrators that will be comprised of representatives across the agency to meet regularly for the purpose of identifying community concerns at an early stage and determining the plan to communicate and address concerns in an efficient and integrated way. Along with the efforts of these teams I hope the deployment of the noise portal and continued engagement with communities across the country will result in a dynamic of trust and respect.

I will continue to look for ways to improve FAA's relationship with the Quiet Skies Caucus and in turn your constituents. If I can be of further assistance, please contact me or Philip Newman, Assistant Administrator for Government and Industry Affairs, at (202) 267-3277.

Sincerely,

A handwritten signature in black ink that reads "Steve Dickson". The signature is written in a cursive, flowing style.

Steve Dickson  
Administrator

Enclosures