SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION: QUESTIONS FOR THE RECORD

HEARING ON FAA REAUTHORIZATION: ADMINISTRATION PERSPECTIVES JUNE 7, 2017

Written Questions Submitted to Hon. Elaine Chao, Secretary, U.S. Department of Transportation

Submitted by Senator Moran

QUESTION 1. Secretary Chao, Senator Udall recently worked together to expand the Spectrum Relocation Fund to include a $500 million pool for research and development, representing a significant bipartisan legislative accomplishment.

I am pleased that the FAA recently announced that it is taking advantage of those funds to investigate whether it can relinquish some of the 1300-1350 MHz band of spectrum. This is encouraging news as more spectrum will be needed to deploy the next-generation of wireless networks, 5G.

Can you elaborate on how FAA will move this process forward in a timely fashion so that this spectrum is made available for auction?

RESPONSE:

FAA is collaborating with Department of Defense (DOD), Department of Homeland Security (DHS) and the Department of Commerce, National Oceanic and Atmospheric Administration (NOAA) on a program called Spectrum Efficient National Surveillance Radar (SENSR). The SENSR Program will help determine if it is feasible to make available the band 1300 – 1350 MHz for reallocation of current Federal radar use to shared Federal and non-Federal use through updated radar technology. This would permit the freed-up spectrum to be auctioned by 2024.

In January 2017, the Office of Management and Budget (OMB) and an interagency Technical Panel approved the jointly developed Spectrum Pipeline Plan. Congress had an opportunity to review it and allowed OMB to release funding to the partner agencies to begin substantive work on the SENSR Program. Since then, FAA, DOD, DHS and NOAA signed a memorandum of agreement (MOA), which allowed a joint program office (JPO) to formally be established in May. Currently the SENSR Program is on track to evaluate and, if feasible, support auctioning spectrum in the 1300 – 1350 MHz band by 2024.

QUESTION 2: Secretary Chao, several administration officials have made the argument that the U.S. air traffic system is antiquated because it relies on ground-based surveillance systems, specifically radar, and not GPS.

However, in regards to moving beyond radar toward satellite-based GPS, my understanding is the FAA has, in concert with aircraft operators and private sector technology, deployed a nationwide GPS-enabled navigation and surveillance infrastructure.

In fact, a business in my home state of Kansas, Garmin, Ltd., has over 150,000 navigation avionics systems utilizing GPS to safely and more efficiently navigate into 1,847 airports which have deployed GPS approaches.

Can you please clarify the administration's position or beliefs regarding the use of GPS technology being utilized today to navigate within the air traffic control system?

RESPONSE:

As you noted, GPS-based navigation and surveillance is already widely in use in the National Airspace System.

Automatic Dependent Surveillance–Broadcast (ADS-B), one of the foundations of NextGen, uses GPS satellites to determine aircraft location, ground speed, and other data. This information is relayed to a series of ground stations and then integrated into air traffic control automation systems. Aircraft flying in certain airspace must be equipped for ADS-B by Jan. 1, 2020. It is important to note that some ground based radar capabilities will be retained for safety and security reasons.

Performance Based Navigation (PBN) is an advanced, GPS-enabled form of air navigation that creates precise 3-D flight paths that can lower fuel consumption and emissions as well as save time in flight. To date, the FAA has published more than 9,000 PBN procedures and routes.

PBN procedures require various avionics capabilities depending on the level of navigation precision involved. Almost all air transport aircraft today are equipped to take advantage of some form of GPS-based procedures. More than 85,000 general aviation aircraft, including about 7,000 business jets and turbo props, are equipped with GPS avionics from manufactures like Garmin to fly WAAS-enabled LPV or LP procedures. Thousands of other aircraft are equipped with basic GPS navigation capabilities that assist aviators with flying direct routes and improve safety by providing precise location information.

Because of mixed equipage, not all aircraft can fly the most-demanding types of PBN procedures. New aircraft usually have the latest avionics while older aircraft have a mix of avionics of various ages and capabilities. Replacing aging equipment can prove too expensive for some aircraft operators and may lead to an aircraft being retired. In other cases, an aircraft's existing equipment may be adequate for the types of flight operations planned.

While the U.S. remains the gold standard in aviation, the Department of Transportation understands that continued innovation and modernization—including expanded use of the GPS technologies mentioned, are important to safety and global leadership. Shifting air traffic control out of the government, improving accountability to aviation users and operational adaptability are key steps to achieving these goals. While NextGen modernization has been implemented at certain airports and facilities under current constraints, these efforts are often hampered by piecemeal government appropriations and a slow Federal procurement process. A private, nonprofit ATC co-op would be able to leverage private sector financial tools with agility

and ingenuity, and accelerate advances in aviation technology. Combined with a steady, predictable revenue stream from user fees and borrowing from capital markets when necessary, the new ATC would be able to make the best modernization investment decisions to keep ATC technology up-to-date and competitive with that of our global peers.

Submitted by Senator Sullivan

Air Traffic Control Privatization:

- A road system connecting communities throughout Alaska does not exist. Federal land ownership has carved up the State of Alaska such that it is nearly impossible to build terrestrial roads, thus the need to travel by air. 82 percent of Alaska communities are not on the road system and rely on aviation as the primary means of transportation.

- I have deep reservations about any proposal to transfer the FAA's air traffic facilities to a quasi-private corporation and allow it, rather than Congress, to make decisions on where funding should be spent and how much tax general aviators should pay. This threatens to leave rural communities largely ignored. The 582 airports out of 600 in Alaska that do not have air traffic control would receive little if any funding for upgrades and new technology, and it is unclear what would happen to the 400 navigation aids that Alaskans depend on. The largest hubs would receive the lion's share of the funding leaving states like Alaska with no recourse.

QUESTION: Do you agree that congress, as representatives of the larger public interests, is in the best position to allocate resources between the few dozen airports serving larger cities and the thousands of general aviation airports and facilities serving rural America?

- Similarly, I have concerns over a non-public entity making decisions regarding the allocation of airspace. In Anchorage for example, airspace is shared among Ted Stevens International, Merrill Field, one of the largest general aviation airports in the country, Lake Hood, the world's largest floatplane airport, and major military airfields which conduct air training activities. With more licensed pilots per capita than any state in the union we have (7,933 active pilots), we have an extremely active General Aviation (GA) community in Alaska. Allocating air space among these diverse users should be determined by a government entity, not a private organization.

- Question: Do you agree that airspace should be available to all users, including those serving small towns and villages as well as individuals as it is currently?

RESPONSE: We believe rural communities will have more reliable services under ATC reform because funding for the management of the system will not be consistently jeopardized by the unpredictable funding process for aviation programs. Ultimately, a self-funded air traffic control organization not tied to the Congressional budget process will allow the financing and

implementation of high-tech and state of the art technologies for managing airspace, making air travel safer, and lead to greater access for all users.

Ensuring continuity for GA and rural and small community air service are part of the Administration's guiding principles for modernizing the U.S. air traffic control system(ATC). Any changes to procedures would need to be in accordance with the law and approved by the safety regulator—the FAA—before they could be implemented. The Administration has consistently stated that all users, including general aviation, must continue to have open access to our Nation's airspace. Under a modernized ATC system, GA operators would continue to be guided through the national airspace by controllers operating under the same rules that apply today – with safety as their first priority.

Delivering a more efficient ATC system is the most reliable way to ensure continued GA access and to reduce the risk that increased congestion could crowd out GA in certain areas. Reform will also mean streamlining regulatory matters currently impacting small airports and could lower costs for them. Additionally, increased efficiency and capacity in the airspace could mean more frequent flights to rural communities, driving economic growth.

Essential Air Service:

During Secretary Chao's nomination hearing, Chairman Thune posed the following question: "*If confirmed what will you do to improve aviation connectivity to rural communities?"*

Then-nominee Chao replied: *"Rural communities are an essential part of our country and their access to affordable and easy air service is an issue and something that we have talked about in many many ways over the years, so I look forward to working with congress on continuing the EAS program, and finding ways in which we can improve it, as well."*

As part of the overall spending reduction effort, the Administration's FY2018 budget proposes eliminating the discretionary funding for the EAS program. (This does not eliminate the ~$110 million derived from mandatory overflight fees). The proposal would save $175 million and notes that the EAS program was supposed to be temporary when it was established over 40 years ago.

QUESTION:

- In my state of Alaska, Essential Air Service is not only key to small communities maintaining air service but also is critical to linking them to the rest of the state, the nation and the world. Many of the approximately 60 communities in Alaska covered by EAS have no other linkage to our nation's transportation system and without the program, air service would not be economically viable to maintain even minimal service.
- You stated your interest in working with congress on the continuation of EAS. How much input did you have in the development of the Administration's proposed fiscal year 2018 budget?
- In regards to the final FY18 Budget, did you anticipate it to respect the commitments made by the nominees?
- When congress develops appropriations legislation that restores EAS, do you expect the Administration to raise EAS in any Statement of Administration Policy?

RESPONSE:
Development of any Executive agency's budget is a complex and collaborative process. The Administration's budget proposal for the Essential Air Service Program is intended to improve the program to ensure the continued funding of air service for the neediest and most remote communities.

By any objective standard, many Alaskan communities are precisely the type of communities that the program is designed to serve. The Department will continue to carry out its commitment to improve the EAS program to ensure air service for the communities that need it most.

The Department does not prepare or release Statements of Administration Policy (SAPs) and I would be reluctant to predict the content of any particular SAP. Nevertheless, as I noted at my nomination hearing, I look forward to working with Congress on continuing the EAS program, and finding ways in which we can improve it.

Aviation Weather:

- As I previously discussed with Jeffery Rosen, confirmed recently to be the Deputy Secretary of Transportation, and Derek Kan, who is next up for nomination to be Undersecretary for Policy at U.S. Department of Transportation –

- We are experiencing an aviation weather related dilemma in Alaska, as recent changes in FAA policy are placing an unworkable national requirement for weather forecasting and weather reporting for air service to operate in Alaska.

- Alaska does not have adequate aviation weather monitoring and reporting capabilities due to the lack of infrastructure at a large number of our airports. FAA has not funded new weather infrastructure in Alaska since the 1990's.

- This lack of data had previously justified the local FAA allow carriers to use a combination of inputs to satisfy the requirement, which allowed communities to be served.

- The FAA abandoned the long established interpretation of the weather reporting requirements for Part 121 (scheduled air carrier) operations, which have been in place the past 50 years.

- In doing so, there has been a tremendous burden, both operationally and economically, place on the Part 121 carriers who operate to locations other than major airports.

- I raised this issue during the nomination process for Jeffrey Rosen to serve as DOT Deputy Secretary, asking him to work with me and my staff to address this problem.

- To DOT's credit, FAA has met with the carriers and my staff and attempted to extend an olive branch to the Part 121 operators by asking them to, over 60 days (by July 1), develop recommendations as to how they will comply with the 2014 interpretation.

- I ask that this dialogue continue. However, I am concerned that this is not a move forward in the resolution of this issue. This may result in merely placating the Part 121 operators to a point they will acquiesce to the regulatory agenda of Flight Standards.

- I ask that FAA analyze the current and historical operations of the carriers, and review the 2014 interpretation for consistency with all previous documents created on this subject, keeping in mind the flexibility given by congress in the law for the Administrator to make appropriate regulatory distinctions for Alaska.

- Should, as I anticipate, this interpretation be determined as inadequate, it should be removed from all files as a source of record and deemed no longer relevant.

- This has occurred previously such as on September 22, 2008 when previous FAA Chief Council recognized an interpretation associated with "Known Icing Conditions", written November 21, 2006, was poorly written lacking research and intellectual rigor, just as the mentioned 2014 interpretation, and did not represent the established law.

- Until this is resolved, I ask that weather requirements for in my state be as they have been the past five decades.

RESPONSE: We are aware of the unique operational challenges in Alaska and its limited infrastructure and are committed to working with the affected air carriers in Alaska to find creative solutions that allow them to meet the standards, given the unique nature and significance of aviation to the State. This includes working with all of the Part 121 operators in Alaska to increase the availability of weather information in more of Alaska. FAA does not intend to issue penalties to operators while this matter is evaluated and we encourage Part 121 operators to continue engagement with FAA to develop alternative weather measures.

We anticipate and have promoted the use of creative solutions, beyond strictly the use of well-known products such as Terminal Aerodrome Forecast (TAF) and Meteorological Terminal Air Report (METAR). The alternatives are many and do include a regulatory exemption, which would require that a carrier show that granting the exemption would not adversely affect safety or provide a level of safety equal to that provided by the rule from which exemption is sought. We believe we can resolve this issue without going through the exemption process.

FAA Flight Standards representatives are focused on assisting the affected operators to meet the standards for appropriate forecasts and local weather. We are working with all five Part 121 operators in Alaska which have submitted to the FAA initial processes for operating safely and within the standards. Based on the initial submissions received, FAA is working with carriers to develop more detailed plans over the next couple months. We anticipate this issue will be fully addressed by the end of September, before the start of Alaska's winter weather season. We are committed to maintaining to a cooperative dialogue until the issue is resolved.

FAA's immediate focus and commitment is to work collaboratively with the affected operators, and in the development of appropriate forecasts and local weather reporting, to ensure continued air services. We will approve or seek clarity on submitted processes in a timely manner and will keep you informed of our progress.

Remote Access Roads:

- In previous appearances before this committee and the Committee on Environment & Public Works (EPW), you have mentioned your interest in lowering the regulatory burdens where they are too cumbersome.

- As you may know, FAA prohibits "non-aviation use" of FAA funded airport access roads.

- In remote areas of Alaska, where we have little infrastructure to speak of, an airport access road is typically the major piece of village infrastructure.

- A strict interpretation of this prohibition of "non-aviation uses" prevents property owners from using airport roads to access their adjacent lands, including adjacent Alaska Native land allotments.

- Further, instead of connecting two communities (Nanwalek and Port Graham) and only building one airport, due to this restriction the FAA would prefer to spend the extra money on two airports because there would likely be traffic between the communities on the "airport access road", and that isn't allowed.

- This may be a reasonable policy for the rest of the states, but the rigidity of the funding is not appropriate in remote areas of Alaska.

- Are you willing to lend your support for language to be included in the FAA legislation to provide a higher degree of local use for airport access roads located off the contiguous road system in Alaska?

RESPONSE: I am very sensitive to needs of remote communities like Nanwalek and Port Graham and am also aware of the current statutory restrictions that require airport access roads that receive airport improvement program (AIP) funds to be used exclusively for airport traffic. I would be happy to work with you on this issue and would note from the outset that the Nanwalek/Port Graham community situation may be an appropriate opportunity for the community, the FAA and the Federal Highway Administration (FHWA) to work collaboratively toward an acceptable solution. The FHWA's Tribal Transportation Program (TTP) is available to Alaskan native villages to fund construction of access and development roads and may be a helpful funding source for these communities. I would be pleased to put your staff in touch with the appropriate DOT staff to explore possible solutions. Information on the TTP program can also be found at: https://flh.fhwa.dot.gov/programs/ttp/.

Alaska Railroad –

- The public transportation needs of Alaska, like everywhere else, far exceed resources. Federal Transit Administration urbanized area formula funds for Anchorage for this year and last year are held up, creating strains that increase by the day. I have joined both with Senator Murkowski and Congressman Young in requesting that the Department make an Administrative determination with respect to resolving the blockage of some $30 million in FTA section 5307 funds from flowing to my State of Alaska - to the Alaska Railroad and the Municipality of Anchorage.

- It is my understanding that the Alaska Railroad met with the Geoff Burr and other senior Department Officials and members of the Secretary's staff on May 2nd and I'm told there was agreement that the current Administration would take a fresh look at the Railroad's, and the Alaska Delegation's, request for an Administrative determination.

- Can you tell me where this stands?

RESPONSE:

The Alaska Railroad requested that FTA provide a default means for splitting Section 5307 Urbanized Area Formula Program funds because the recipients designated by the Governor in the Anchorage area – the Municipality of Anchorage and the Alaska Railroad -- cannot reach agreement on a sub-allocation of the funds. My office has reviewed this issue and determined that the Department of Transportation does not have the legal authority to allocate Section 5307 funds between these two designated recipients. Pursuant to 49 U.S.C. § 5302(4)(A), recipients designated through the planning process by the Governor have the authority to "receive and apportion" amounts received under 49 U.S.C. § 5336 to urbanized areas of 200,000 or more in population like the Anchorage urbanized area. Consistent with this statutory provision and FTA guidance, these designated recipients are responsible for deciding the sub-allocation of apportioned Federal funds. Pursuant to FTA Circular 9030.1E, "designated recipients and the Metropolitan Planning Organization (MPO) should determine the subarea allocation fairly and rationally through a process based on local needs and agreeable to the designated recipients."

Due to the fundamentally local nature of sub-allocation determinations, the Department of Transportation cannot impose a sub-allocation decision on duly designated recipients. This decision must be made by the designated recipients, or the Governor of Alaska can resolve the issue by changing the designation of recipients. It is critical that the parties arrive at a timely resolution so service remains available to the people who use public transportation in Anchorage and the Alaska Railroad.

FTA facilitated a meeting in Anchorage on February 9, 2017 between Anchorage and the Alaska Railroad, at which a number of potential options were discussed, but my understanding is that the dispute continues. Until the two parties reach an agreement on the sub-allocation of Section 5307 Urbanized Area Formula Program funds, or the Governor of Alaska resolves the issue by taking a redesignation action, FTA cannot award the Section 5307 grants to either entity.

Submitted by Senator Heller

Last year, one of the central issues debated in this Committee on drone issues was "federal pre-emption."

In some cases, states have implemented laws that exert jurisdiction over national airspace, an inherent federal responsibility.

In other cases, like in Nevada, our legislature has adopted forward looking measures that protect our constituents' privacy and empower local law enforcement to actually enforce restrictions that the FAA simply does not have the resources or infrastructure to conduct.

QUESTION 1: Is there any action Congress can take so that states like Nevada can take action, while still providing regulatory certainty that encourages innovation?

RESPONSE: The FAA is charged by statute with providing access to airspace and ensuring its safe and efficient use. It is also important to have a consistent method of informing drone operators of any restrictions – an issue being considered by the Drone Advisory Committee.

We recognize that there are unique concerns raised by UAS that are different from manned aircraft operations, and State, tribal, and local governments have expressed a desire for increased control over operations. This is one of the key questions that the Drone Advisory Committee (DAC) (which consists of representatives from industry, government, labor, and academia) has been tasked with. The DAC will allow us to look at drone use from every angle, while considering the different viewpoints and needs of the diverse UAS community. The first DAC meeting was held in September 2016 and its members have already started to work on assisting us on identifying the roles and responsibilities of drone operators, manufacturers, and Federal, state, and local officials related to drone use in populated areas. One of the questions debated is what the appropriate altitude in which State, tribal, and local governments may have an increased role to play in regulating UAS. FAA believes it would be appropriate to obtain the benefits of the DAC's deliberations before establishing definitive parameters for State, tribal, and local governments' roles and responsibilities.

QUESTION 2: I am particularly interested in the enforcement problem. In Las Vegas, McCarran International Airport has faced issues with recreational drone use near the Strip that can interfere with aviation traffic. How can airports and the FAA work together with drone users to protect safety while allowing recreational use of drones?

RESPONSE: In accordance with the decision of the D.C. Circuit Court of Appeals in *Taylor v Huerta*, model aircraft owners operating exclusively under the Special Rule for Model Aircraft (section 336 of Public Law 112-95) are no longer are required to register. The lack of a registration requirement for this subset of recreational users significantly hinders owner education, owner accountability and FAA's enforcement ability. For example, as part of the UAS registration process, UAS registrants receive and acknowledge safety information, including the requirement that model aircraft operators must notify any airport and air traffic facility within five miles of their intent to operate. Owners of UAS operating exclusively under the Special Rule

for Model Aircraft may no longer receive this information because they are no longer required to register. This is one of many reasons FAA sees the registration of all UAS as essential to maintaining the safety of the NAS. Registration also helps law enforcement associate aircraft with owners in the event of an incident. This however is only possible if registration is required for that UAS.

To enhance safety around airports, FAA has stepped up public education campaigns, and has assembled an interagency group with DHS focused on evaluating UAS detection systems around airports.

Congress has already recognized the challenges FAA faces in maintaining safety, and included several mandates in the recent FAA Extension, Safety, and Security Act of 2016 that FAA is implementing. This includes providing safety statements to go in UAS packaging (Section 2203) and standards for remotely identifying UAS and their operators (Section 2202).

QUESTION 3: My understanding is that the FAA was supposed to conduct a test project about airport-drone mitigation. Can you provide an update on those efforts?

RESPONSE: Last November we sent a team to evaluate three different detection systems at the Denver International Airport. We worked in collaboration with DHS and the Nevada and North Dakota test sites on this testing. More tests will take place at Dallas-Fort Worth. We will continue to evaluate a number of drone-detection technologies, including limited evaluations of radio frequency (RF) based capabilities, to the extent currently permitted by law. We are also coordinating with our interagency partners who have broader authorities to evaluate mitigation/counter technologies.