SCSC Roundtable All Correspondence

May 22, 2020 – July 17, 2020

May 25, 2020

From

Tami Mulcahy

To

SCSC Roundtable

Message

New submission from Contact us

Dear SCSC Roundtable members,

A silver lining in this pandemic is that Santa Clara and Santa Cruz County communities are savoring quieter skies. The time to fix the roof is when the sun is shining.

The Select Committee recommendations were a framework to alleviate noise conditions across the SCSC counties. The plan included fixing the parameters of SERFR to allow a responsible return to the BSR path. However, interdependent recommendations were deemed infeasible. With everything in our sky inter-related, how do we bridge the disconnects and expedite a regional plan?

To start, no piece of the puzzle should be looked at in a vacuum. For the past 3 ½ years, the FAA, conferring with the airline industry, has worked in piecemeal fashion behind closed doors. The public is left to wonder what criteria and whose best interest is driving decisions. And, have we lost sight of the big picture? In contrast, Heathrow turned their problems around in three years. The design principle of no concentrated corridors guided a preplanning design team model in which the public was engaged proactively. We already have the SC framework. Now we need a seat at the pre-design table to expedite the process.
• Assemble a team (ATC, airports, noise specialists, air space designers, one SCSC member from each county and/or our consultant). Put fresh eyes to the regional plan, iron out the details based on criteria, pick priorities and proceed methodically. This would go a long way to give the public hope.

Solutions are constrained by the congressional mandate to not move noise. The irony is the FAA has used this mandate to not consider changes and yet, has used the unacceptable standard of 65 DNL FONSI to justify moving planes anywhere. Moving noise is a separate issue from moving planes. It is the parameters that create noise that must not be replicated over another community.

From SFO to the coast, we are non-airport communities living in a geographic Disneyland. The fallout of our popularity and economic engine is understood. However, currently the FAA designs for safety in the face of efficiency. What is the design for safety in the face of noise abatement? How far apart are the two? And what solution set would appear if the FAA had to meet stringent noise criteria?

The FAA Report to Congress on Alternative Metrics is welcome news. Still, there is work to be done and public trust is eroded. It is in the public's best interest to establish our own version of blue ribbon Best Practices as a comparative model to the FAA.
• Assemble a noise team now to proactively define best practices. Criteria should respect ambient noise levels, look at frequency, concentration, altitudes and consider balance – higher altitudes/increase numbers, lower altitude/decrease numbers.
• Absent of noise and frequency data, regional design can proceed directionally to meet Best Practices.

Regarding SERFR change to a new BSR: To get this done, the FAA must address the negative parameters of SERFR. Best Practices must inform design.
• Capacity limits - the lower the altitude, the lower the frequency.
• Frequency: Restrict all south-east arrivals (Houston, Austin, Palm Springs, Miami, Phoenix, etc).
• Frequency: Establish and maximize a full length of the Bay approach for southern arrivals, especially for night and weekend flights, allowing for high altitude descent.

Much depends on the extent to which traffic can move from SERFR/BSR to a full length of the Bay approach. Roughly 50% of flights are currently vectored off SERFR/BSR. Removing these noisy vectors would benefit the entire Peninsula region. However, even with these vectors removed, those living under the new BSR will still have concentrated high frequency traffic.
• Meet or exceed Best Practices or find a second path for remaining 50% of traffic on BSR.

The latest BSR design is slightly different from the original path. It includes a segment from EDDY over Shoup Park in Los Altos to SIDBY, just south of MENLO waypoint. The pros and cons need to be vetted and viewed as part of the big picture.

Other:
• The Woodside VOR at 8000' is not a solution if it means diverting flights south to already impacted communities. Oceanics should vector over the ocean and proceed to the airport no further south of Stanford.
• Vet how all of the above affects BDEGA east west flights.

Short of writing a novel, this is a start. The more time to get things done means more changeover of elected leaders and more time spent getting people up to speed.

Thank you for reading and representing us in this challenging journey.

Tami Mulcahy
Los Altos

May 26, 2020

From

Vicki Miller

To

SCSC Roundtable

Message

FAA Update Requested

Good Day,

SOS Santa Cruz hopes this email finds you safe and healthy. It is appreciated that you are meeting remotely and making participation available for the public for your important work.

We are asking that the RoundTable follow up on the long promised FAA update, which is now many months late. Please address this as soon as is possible. It is time for action and excuses should not be accepted.

Thank you for your consideration,

Sincerely,

Vicki Miller
Co-Chair SOSSC

May 26, 2020

From

Vicki Miller

To

SCSC Roundtable

Message

New submission from Contact us

I am requesting that the SC/SC RoundTable follow up with the FAA regarding the promised up-dated FAA response surrounding the SERFR transition to the BSR Overlay. Save Our Skies Santa Cruz County is still here and still very interested in this update. We understand that the FAA has proceeded with most of the background work. We would like to understand where we are in this process. It has been too long.
Thank you - stay well.

May 26, 2020

From

Steve Alverson

To

Tamara Swann

Message

Virtual SCSC Roundtable Meeting on May 27, 2020 from 1 to 4 pm

Tamara,

I did not receive a response from you to the question in my May 14, 2020 email (see below) regarding the request from Santa Cruz Supervisor Leopold for an update from FAA at the May 27th SCSC Roundtable meeting on its effort to return the SFO Southern Arrivals to the Big Sur ground track. I am just checking to see if the FAA would like some time during the "Member Discussion" agenda item to provide a brief update on FAA's work to date. In addition to Supervisor Leopold, we have received several similar requests from the public for an FAA update.

Would you please let us know as soon as possible of FAA's plans to provide an update on this matter (or not) at tomorrow's SCSC Roundtable meeting? We want to be sure to leave you adequate time during the meeting to do so. Thank you.

Regards,

Steve

Steven R. Alverson
Senior Vice President
ESA | Environmental Science Associates

May 26, 2020

From

Darlene Yaplee

To

SCSC Roundtable

Message

Agenda Item 4 - Comments on Supersonic Letter

SCSC Roundtable,

Thank you for the excellent draft letter and the valuable discussion at the Legislative meeting on the Supersonic Landing and Take Off standards.

I would like to propose two items to strengthen the letter to the FAA on Supersonic Rulemaking.

The current letter states, "This has been the FAA's stated policy for several decades, and given past and future technology innovations, there is no need to change this policy at this time." In addition to the FAA' s stated policy, please add the sentence from the Feb 21, 2018 memo that defines the "goal" of the FAA, "The FAA's goal is not to certificate, or permit to operate in the United States, any future design SST that does not meet the standards then applicable to subsonic airplanes…43 FR 28406 (June 29, 1978)." The FAA is not meeting their stated goal with its rulemaking.

The FAA is measuring the noise levels only at the airport (or very close to the airport) and then allows the use of these certified levels anywhere under the flight path. We cannot allow noise levels on the ground very close to the airport to become the standard for the noise levels on the ground for the entire flight path. The text as currently drafted does not appear to protect us from this possibility given the new technology is a new threat and must be addressed properly.

Darlene Yaplee

May 26, 2020

From

Robert Holbrook

To

SCSC Roundtable

Message

Input on Supersonic for tomorrow's meeting

Please see the attached letter regarding the supersonic agenda item for tomorrow's meeting.
Robert Holbrook

Attachment Name

20200526_R_Holbrook_Input on Supersonic for tomorrow's meeting

Members of the Roundtable,

I would like to thank the Roundtable and the Legislative Committee in particular for their work on the Draft submission regarding the Supersonic Landing and Take Off standards for which the FAA is currently seeking comment.

I have two suggestions to strengthen the letter:

1) I suggest citing more evidence to support the claim that FAA policy for decades has been to require supersonic airplanes to meet the landing/takeoff noise standards of newly manufactured subsonic airplanes. The FAA glossed over this point in the NPRM under consideration, but the FAA might regard this long-standing precedent as compelling.

   May I suggest that the Roundtable's letter to the FAA add the following footnotes to the important sentence, "*This has been the FAA's stated policy for several decades, and given past and future technology innovations, there is no need to change this policy at this time*."

   1. "With the issuance of these rules, the FAA takes the first step toward ensuring that future SST's are subject to the same noise levels as subsonic aircraft…." (source "Civil Supersonic Airplanes, Noise and Sonic Boom Requirements", 43 CFR 28406-28407, 1978, https://tile.loc.gov/storage-services/service/ll/fedreg/fr043/fr043126/fr043126.pdf.)

      This provides important context to the statement referring to 1978 rules in the 2018 FAA memo (attached), "When the regulation was adopted, the FAA stated in the final rule preamble that it was intended to apply then-current supersonic airplane designs and not to define requirements for future designs". While it might be the case that the specific regulations themselves did not apply to future designs, the statement of direction cited in this footnote is admirably clear about the FAA's intent.

   2. "The FAA's goal is not to certificate, or permit to operate in the United States, any future design SST that does not meet the standards then applicable to subsonic airplanes…" 43 FR 28406 (June 29, 1978) as cited in https://www.faa.gov/about/office_org/headquarters_offices/agc/practice_areas/regulations/interpretations/data/interps/2018/executive%20director-aee-1%20-%20(2018)%20legal%20interpretation.pdf

   3. The 1978 policy was reaffirmed by the FAA thirty years later in 2008 with the statement, "The latest noise limit in Part 36 is Stage 4, which applies to the development of future supersonic airplanes operating a subsonic speeds." See the 2018 memo, attached.

2) While I'm grateful for the effort to highlight the important issue regarding VNRS and/or PLR noise reduction systems, I'm afraid that the specific request being made will not serve our purposes. As discussed during the Legislative Committee meeting, an important new principle

could be at stake: that whatever level of takeoff noise a residence under a flight path at the reference measurement point 2 to 3 miles from the airport is exposed to defines an acceptable level of noise for residences at any distance from the airport. To be clear, we are talking about sound energy not at the plane's altitude, but noise received on the ground (and assuming level terrain).

This concern arises because of new technologies that the FAA is proposing to certify for the first time. The VNRS and PLR systems appear to reduce noise by throttling jet engines at the noise measurement points near the airport so that the noise does not exceed the standards being proposed for supersonic planes. That's good, but the noise issue we are concerned with now arises when the throttle is removed, which could create a lot of noise. The FAA is proposing that after the aircraft have passed the noise measurement point, they can back off on the throttle until the noise on the ground is as loud as it was at the noise measurement point. Planes could expose residents to that amount of Landing/Takeoff noise whether they are at 3000', 6000' or higher. (The noise exposure levels assume level terrain.)

The issue I see with the paragraph as it is written is that the VNRS and PLR systems will be computerized and even if the systems are always on, they could be programmed to automatically remove the throttle over residents while the plane is still at low altitudes. In other words, simply requiring the system to be on doesn't protect residents from being slammed by noise. It all depends on the programming.

I would suggest we replace the paragraph referring to VNRS with this paragraph:

> *Second, we request that if a Variable Noise Reduction System (VNRS) and/or a Programmed Lapse Rate (PLR) system is used during the noise certification process, the aircraft with the relevant system(s) enabled shall be shown to produce noise levels on level terrain under the aircraft that decrease with the aircraft's altitude at the same or greater rate than would occur if the relevant system(s) were not enabled, until the aircraft has reached a height of 15,000'. Further, if a Variable Noise Reduction System (VNRS) or a Programmed Lapse Rate (PLR) system is used during the noise certification process, the relevant systems shall be required to remain activated at altitudes below 15,000' unless required for safety by rare and exceptional conditions.*

Regards,

Robert Holbrook

May 27, 2020

From

Tamara Swann

To

Steve Alverson

Message

FAA Response to Follow-up Questions on PIRAT - Virtual SCSC Roundtable Meeting on May 27, 2020 from 1 to 4 pm

Good afternoon Steve,

I'm sorry for not answering completely – we are not prepared to provide an update on this subject at tomorrow's meeting.

I will let you know as soon as possible once we have an update.

Looking forward to seeing everyone tomorrow!

May 28, 2020

From

Lesley Tierra

To

SCSC Roundtable

Message

Today's meeting agenda

Dear all,

I just discovered that you are still holding today's meeting, which is why these notes are late. PLEASE INCLUDE THEM!

Thank you,
Lesley Tierra

Attachment Name

20200528_L_Tierra_Todays meeting agenda

FLIGHT PATHWAY POSSIBLY OVER BSR
Submitted by Lesley Tierra
Living in Ben Lomond (San Lorenzo Valley) under the BSR route

Regarding the SERFR ("Surfer") pathway to BSR (BIG SUR:

The concept of moving SERFR to the "old" BSR pathway is invalid. The "old" BSR pathway did NOT have this volume of planes flying in such a narrow corridor and so low. The noise levels are substantially greater today because of the NexGen policy.

I*'ve* ***lived in my home over 36 years*** under the "old" BSR pathway. During last year's Jan-Feb 2019 mistaken move, **we never had that kind of flight noise and frequency**. I spent an afternoon in the SERFR area (Happy Valley) and didn't hear a single plane. In an afternoon within the BSR area (Ben Lomond in the San Lorenzo Valley), I heard 8 planes, some so loud they rattled the windows. That's a loud plane every 7 1/2 minutes. Aircraft also flew in the middle of the night at 1:30, 2:00 and 4:00 AM, waking me up, even when wearing earplugs.

ARGUMENTS:
1. Moving SERFR to BSR isn't the answer. There will be far more complaints in time than there have been because **BSR is a more highly populated area**. *The FAA has a policy of not moving its flight pathways over more populated areas. BSR is more populated then SERFR*. **If the FAA moves the current SERFR overlay path to BSR, it is violating its own policy.**

2. If the FAA is going to violate its own policy, than it certainly can **change its policy about flying planes so low and in such a smaller congested vector. Planes should fly higher and in a broader area.**

3. The **Ecological Impact to wildlife** will be greater if the flight path is moved to BSR because there are over **14 State Parks and beaches in the BSR area** along with many local parks whereas **SERFR has one State Park**. Has any ecological impact been determined yet? (BSR has: Nisene Marks, Wilder Ranch, New Brighten, Manresa Uplands, Henry Cowell State Park, Highlands, Big Basin State Park, Lock Lomond, Castle Rock State Park, all state parks)

4. **The topography of SLV increases noise levels.** Part of BSR, the San Lorenzo Valley (SLV), has steep "mountain" walls and a shallow valley, causing aircraft reverberation, which increases the noise level substantially.

5. The **NextGen** policy was put in place for safety and efficiency, and to save money.
- **How can it be safer to fly more plans in a smaller area?**
- **How can it be safer** for the population to have large quantities of planes (180+/day in the BSR vector) **fly so low when the resulting high noise levels**

cause health hazards such as hypertension and high blood pressure, plus **PTSD** because of the sudden noise at irregular intervals AND middle of the night noise **disrupts sleep**?

- The **money savings are not as projected** (see attached letter at end).
- It puts **undue burden on a select population**.

6. Moving SERFR to BSR isn't the answer.

- Tourism in Santa Cruz could well be negatively impacted. Do you want to go to the beach or park and hear a loud plane every seven or eight minutes?
- House, business and property values could be negatively impacted and people bought their homes with the old and current flight pathways.

THE ANSWER:
Moving SERFR to BSR isn't the answer. THE ANSWER IS TO:

- **RESOLUTION 1: Fly planes higher** again. People bought their homes according to the old flight pathways. People under SERFR need resolution to their noise levels. There are two possible resolutions:
- **RESOLUTION 2: Spread the flight pathway out over several areas.**

May 29, 2020

From

SCSC Roundtable - RESPONSE

To

Lesley Tierra

Message

Today's meeting agenda

Dear Ms. Tierra,

Thank you for providing your input the SCSC Roundtable meeting regarding BSR. Unfortunately, the meeting you are referencing occurred yesterday (Wednesday, May 27, 2020) from 1:00 pm PDT to 4:00 pm PDT. While we are unable to include this letter in this agenda packet and at the meeting for Roundtable members, we will make sure to include this letter in the correspondence section of the next agenda packet for the meeting currently scheduled to be held virtually on Wednesday July 22, 2020 from 1:00 pm PDT to 4:00 pm PDT. If you would like to provide direct comment to Roundtable members prior to that meeting, please reach out directly to your Roundtable member community representative, for the Santa Cruz County area, Those contacts have been provided below for your convenience. In addition, the video recording of the meeting can be found on our website here.

Member: Carlos Palacios, County Administrative Officer

Alternate: Elissa Benson, Assistant County Administrative Officer

https://www.co.santa-cruz.ca.us/Departments/CountyAdministrativeOffice.aspx

June 1, 2020

From

SCSC Roundtable

To

FAA

Message

SCSC Roundtable - Letter to FAA re supersonic airplane noise

Dear Executive Director Walsh,

At the direction of the Santa Clara/Santa Cruz Counties Airport/Community Roundtable, we are attaching a letter that provides the Roundtable's comments on the FAA's Notice of Proposed Rulemaking 20-06, Docket Number FAA-2020-0316, Noise Certification of Supersonic Airplanes, 14 CFR Parts 21 and 36. We request that these comments be carefully considered by the FAA in its rulemaking process before proposing a final rule on this matter. Please direct any questions you may have regarding this comment letter to scscroundtable@gmail.com.

Regards,
SCSC Roundtable Staff
www.scscroundtable.org

Attachment Name

20200601_FAA_SCSC Roundtable - Letter to FAA re supersonic airplane noise

Subject: Your Comment Submitted on Regulations.gov (ID: FAA-2020-031

no-reply@regulations.gov <no-reply@regulations.gov>
to scscroundtable

regulations.gov
Your Voice in Federal Decision-Making

Please do not reply to this message. This email is from a notification only address that cannot accept incoming em

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Comment Tracking Number: 1k4-9h0n-v2om

Your comment may be viewable on Regulations.gov once the agency has reviewed it. This process is dep submission policies/procedures and processing times. Use your tracking number to find out the status of

Agency: Federal Aviation Administration (FAA)
Document Type: Rulemaking
Title: Noise Certification of Supersonic Airplanes
Document ID: FAA-2020-0316-0001

Comment:
Dear Executive Director Walsh,

At the direction of the Santa Clara/Santa Cruz Counties Airport/Community Roundtable, we are attaching a letter t comments on the FAA's Notice of Proposed Rulemaking 20-06, Docket Number FAA-2020-0316, Noise Certificati Parts 21 and 36. We request that these comments be carefully considered by the FAA in its rulemaking process b matter. Please direct any questions you may have regarding this comment letter to scscroundtable@gmail.com.

Regards,

SCSC Roundtable Staff
[URL REMOVED]

Uploaded File(s):

- SCSC_Leg_Comm_Final_Letter_Re_SST_NPRM_20200529_v1.pdf

This information will appear on Regulations.gov:

First Name: [redacted]
Last Name: [redacted]
City: [redacted]
Country: United States
State or Province: CA
ZIP/Postal Code: 94024

June 2, 2020

From

SCSC Roundtable

To

Karen Chapman

Message

SCSC Roundtable - Letter to FAA re supersonic airplane noise

Dear Congresswoman Eshoo,

At the direction of the Santa Clara/Santa Cruz Counties Airport/Community Roundtable (SCSC Roundtable), we are attaching a letter that provides the Roundtable's comments on the FAA's Notice of Proposed Rulemaking 20-06, Docket Number FAA-2020-0316, Noise Certification of Supersonic Airplanes, 14 CFR Parts 21 and 36.

For your reference, this notification confirms that the letter to the FAA has successfully been submitted electronically through the Federal eRulemaking Portal. The SCSC Roundtable has requested that these comments be carefully considered by the FAA in its rulemaking process before proposing a final rule on the noise certification standards for supersonic airplanes. The Roundtable is requesting that the supersonic noise certification standards FAA promulgates ensure that supersonic airplanes are required to meet the current subsonic airplane noise standards, so that their airplane noise exposure levels your constituents experience do not increase. Please direct any questions you may have regarding this comment letter to scscroundtable@gmail.com.

Regards,
SCSC Roundtable Staff
www.scscroundtable.org

Attachment Name

20200602_K_Chapman_SCSC_Leg_Comm_Final_Letter_Re_SST_NPRM_20200529_v1

June 2, 2020

From

SCSC Roundtable

To

Tom Pyke

Message

SCSC Roundtable - Letter to FAA re supersonic airplane noise

Dear Congressman Khanna,

At the direction of the Santa Clara/Santa Cruz Counties Airport/Community Roundtable (SCSC Roundtable), we are attaching a letter that provides the Roundtable's comments on the FAA's Notice of Proposed Rulemaking 20-06, Docket Number FAA-2020-0316, Noise Certification of Supersonic Airplanes, 14 CFR Parts 21 and 36.

For your reference, this notification confirms that the letter to the FAA has successfully been submitted electronically through the Federal eRulemaking Portal. The SCSC Roundtable has requested that these comments be carefully considered by the FAA in its rulemaking process before proposing a final rule on the noise certification standards for supersonic airplanes. The Roundtable is requesting that the supersonic noise certification standards FAA promulgates ensure that supersonic airplanes are required to meet the current subsonic airplane noise standards, so that their airplane noise exposure levels your constituents experience do not increase. Please direct any questions you may have regarding this comment letter to scscroundtable@gmail.com.

Regards,
SCSC Roundtable Staff
www.scscroundtable.org

Attachment Name

20200602_T_Pyke_SCSC_Leg_Comm_Final_Letter_Re_SST_NPRM_20200529_v1

June 2, 2020

From

SCSC Roundtable

To

Emmanuel Garcia

Message

SCSC Roundtable - Letter to FAA re supersonic airplane noise

Dear Congressman Panetta,

At the direction of the Santa Clara/Santa Cruz Counties Airport/Community Roundtable (SCSC Roundtable), we are attaching a letter that provides the Roundtable's comments on the FAA's Notice of Proposed Rulemaking 20-06, Docket Number FAA-2020-0316, Noise Certification of Supersonic Airplanes, 14 CFR Parts 21 and 36.

For your reference, this notification confirms that the letter to the FAA has successfully been submitted electronically through the Federal eRulemaking Portal. The SCSC Roundtable has requested that these comments be carefully considered by the FAA in its rulemaking process before proposing a final rule on the noise certification standards for supersonic airplanes. The Roundtable is requesting that the supersonic noise certification standards FAA promulgates ensure that supersonic airplanes are required to meet the current subsonic airplane noise standards, so that their airplane noise exposure levels your constituents experience do not increase. Please direct any questions you may have regarding this comment letter to scscroundtable@gmail.com.

Regards,
SCSC Roundtable Staff
www.scscroundtable.org

Attachment Name

20200602_E_Garcia_SCSC_Leg_Comm_Final_Letter_Re_SST_NPRM_20200529_v1

SANTA CLARA/SANTA CRUZ COUNTIES
AIRPORT/COMMUNITY ROUNDTABLE
PO Box 3144
Los Altos, CA 94024

May 29, 2020

Docket Operations, M-30
U.S. Department of Transportation
1200 New Jersey Avenue SE
Room W12-140
West Building Ground Floor
Washington, DC 20590-0001

Re: Notice of Proposed Rulemaking 20-06, Docket Number FAA-2020-0316, Noise Certification of Supersonic Airplanes, 14 CFR Parts 21 and 36

To Whom It May Concern:

The Santa Clara/Santa Cruz Counties Airport/Community Roundtable (SCSC Roundtable), which is comprised of 11 cities and 2 counties within the Northern California Metroplex, represents 2.2 million residents on matters related to aircraft noise. The SCSC Roundtable respectfully requests that the Federal Aviation Administration's (FAA) final noise certification rule for supersonic airplanes include the following.

First, we request that supersonic airplanes be required to meet the same noise certification criteria as current newly manufactured subsonic airplanes when operating at subsonic speeds. This has been the FAA's stated goal for several decades[1] and was recently acknowledged [2]. Given past and future technology innovations, there is no need to change this goal. Requiring supersonic airplanes to meet the existing Stage 5 noise standards would be the first step to having supersonic airplanes be required to keep in step with the noise reductions achieved within the subsonic airplane fleet. In light of the magnitude of public outcry over airplane noise nationally and from the implementation of the Northern California Metroplex, the SCSC Roundtable believes it is prudent to set expectations for the certified

[1] Federal Register, vol. 43, No. 126, "Civil Supersonic Airplanes, Noise and Sonic Boom Requirements", " 43 CFR 28406-28407, June 29, 1978, https://tile.loc.gov/storage-services/service/ll/fedreg/fr043/fr043126/fr043126.pdf

[2] Memorandum from the FAA Assistant Chief Counsel for Regulations (AGC-200) to the Executive Director of FAA's Office of Environment and Energy (AEE-1), "Applicability of part 36 to new supersonic aircraft," February 21, 2018. (Attached)

noise levels of supersonic airplanes at the beginning of supersonic airplane development process. We believe that the impacted public has the right to expect that newly manufactured aircraft, regardless of type, will meet the most stringent existing Stage 5 noise levels and there will be no backsliding in the FAA's aircraft noise certification standards.

Second, we request that if a Variable Noise Reduction System (VNRS) and/or a Programmed Lapse Rate (PLR) system is used during the noise certification process, then the airplane with the relevant system(s) enabled shall be shown to produce noise levels on level terrain under the airplane that decrease with the airplane's altitude at the same or greater rate than would occur if the relevant system(s) were not enabled, until the airplane has reached the floor of the Class A airspace (i.e., 18,000' MSL). Further, if a VNRS or a PLR system is used during the noise certification process, the relevant systems shall be required to remain activated at altitudes below 18,000' MSL unless required for safety by rare and exceptional conditions.

The FAA has a statutory mandate to protect the public health and welfare from aircraft noise and sonic booms. To that end, it is imperative that the FAA continues to set progressively more stringent noise certification levels that continue to reduce airplane noise over time. The FAA's current proposed supersonic airplane noise certification levels are a regression in noise stringency and represent a step backwards in aircraft noise exposure that would be unwelcome by the 2.2 million constituents we represent. The SCSC Roundtable further believes that technological advancements will continue to enable breakthroughs in airplane lifting surfaces and airplane engine design that will make further noise reductions for both subsonic and supersonic airplanes possible.

Therefore, the SCSC Roundtable respectfully requests that the final noise certification standards require, at a minimum, that supersonic airplanes be subject to Stage 5 noise certification requirements when operating at subsonic speeds, and in the future be subject to the more stringent noise certification requirements when they are defined by the FAA.

On behalf of the SCSC Roundtable, thank you for your attention to these requests.

Sincerely,

Mary-Lynne Bernald
Chairperson, SCSC Roundtable

cc: Congresswoman Eshoo
Congressman Khanna
Congressman Panetta

Attachment: Memorandum from the FAA Assistant Chief Counsel for Regulations (AGC-200) to the Executive Director of FAA's Office of Environment and Energy (AEE-1), "Applicability of part 36 to new supersonic aircraft," February 21, 2018.

Federal Aviation Administration

Memorandum

Date: February 21, 2018

To: Executive Director, Office of Environment and Energy, AEE-1

From: Assistant Chief Counsel for Regulations, AGC-200

Prepared by: Karen Petronis, Senior Attorney for Regulations, AGC-210

Subject: Applicability of part 36 to new supersonic aircraft

My staff was recently asked whether 14 CFR part 36, Noise Standards: Aircraft Type and Airworthiness Certification, would apply to an application for type certification of a new supersonic aircraft. Our interpretation is that it does not apply. A different means of noise certification of a supersonic aircraft would be required.

The applicability of part 36, as listed in §36.1(a)(1) is limited to "*subsonic* transport category large airplanes, and for *subsonic* jet airplanes regardless of type" (emphasis added). Section 36.1(a)(3) adds "Concorde airplanes." No supersonic airplane other than the Concorde is included in the applicability for the part.

Regulatory history related to noise from supersonics

Historically, the FAA has never had the data to support promulgation of actual noise levels for supersonic aircraft, and thus never took an opportunity to broaden the applicability section to supersonic aircraft other than the Concorde.

In the 1970s, the FAA chose to call out the Concorde specifically for regulation as that airplane was beginning worldwide operations. The Concorde is specifically addressed in part 36 subpart D (including the Noise Control Act standard of §36.301(b)) concerning the lowest noise levels that were practicable and appropriate for the Concorde type design. The FAA would have to promulgate a change to part 36 applicability and new regulations on noise levels in Subpart D to account for any other supersonic aircraft design.

As early as 1986, the FAA expressed its interest in amending its regulations to account for the development of supersonic aircraft other than the Concorde. In an Advance Notice of Proposed Rulemaking (ANPRM), the FAA published notice of its intent to amend parts 36 and 91 to account for noise type certification and civil operation of supersonic aircraft (other than the Concorde, which was already covered).[1] The disposition of comments to that ANPRM[2] notes that commenters stated that there could be no focus on noise reduction technology until an aircraft manufacturer selects a propulsion system and the characteristics are known. Similarly, commenters said that the method of noise type certification could not be determined without knowledge of the aircraft design.

As noted in our subsequent proposed rule (NPRM) in 1990, commenters to the ANPRM also stated that Stage 3 (the certification standard then) should be a minimum requirement, and that anything less would be regressive. The 1990 NPRM proposed to remove the subsonic designation from §36.1, and to require future supersonic aircraft to meet (the then-current) Stage 3 noise levels. It also proposed an amendment to part 91 to require that any supersonic aircraft operating to or from a U.S. airport comply with Stage 3 noise levels, so as to preclude the operation of any future Stage 2 supersonic aircraft produced outside the United States. This proposal for mandatory operation at Stage 3 predated the Airport Noise and Capacity Act (1990), which required Stage 3 as an operational minimum for subsonic aircraft as of January 1, 2000.

In 1994, the FAA withdrew the 1990 NPRM.[3] The withdrawal document stated only that further investigation and research was necessary before developing a final rule. On the same day the proposal was withdrawn, however, the FAA published a policy statement indicating that despite withdrawing the proposed rule, "the FAA has not changed its policy on noise issues involving the development of future-generation civil supersonic airplanes." The published policy included a statement that any future supersonic aircraft would be expected to "produce no greater noise impact on a community than a subsonic airplane certified to Stage 3 noise limits." (59 FR 39679, August 4, 1994). The FAA reiterated this expectation in a similar 2008 policy statement when the subsonic noise certification standard was Stage 4: "The latest noise limit in Part 36 is Stage 4, which applies to the development of future supersonic airplanes operating at subsonic speeds" (73 FR 62871, October 22, 2008). The same historic lack of data to establish full supersonic noise standards continues today.

New supersonic type certification today

If a person applies for a type certificate for a supersonic aircraft today, we are of the opinion that part 36 does not apply based on the language of §36.1. However, that lack

[1] ANPRM: 51 FR 39663 (October 30, 1986)
[2] Comment disposition in the NPRM preamble, 55 FR 22020 (May 30, 1990)
[3] Withdrawal: 59 FR 39711 (August 4, 1994)

of regulation in part 36 does not mean that the applicant is free of noise requirements at certification.

The FAA has a statutory mandate to "protect the public health and welfare from aircraft noise and sonic boom" in 49 USC 44715. That language came from 49 USC App 1431 (the former codification of the Federal Aviation Act) and the Noise Control Act of 1972.

§44715(a) states that the Administrator "shall prescribe" –

> i) standards to measure aircraft noise and sonic boom, and
> ii) regulations to control and abate aircraft noise and sonic boom.

This duty continues to apply even in the absence of current regulations that would cover a particular type of aircraft. Accordingly, if a manufacturer applies for a type certificate for a supersonic aircraft before the FAA adopts noise standards for the aircraft type, that application would trigger the need for the FAA to do rulemaking to describe the noise standards that would apply to the aircraft. This is reinforced by the statute in §44715(a)(3) that states:

> (3) An original type certificate may be issued under section 44704(a) of this title for an aircraft for which substantial noise abatement can be achieved only after the Administrator of the [FAA] prescribes standards and regulations under this section that apply to that aircraft.

Section 44715 also specifies that when prescribing such standards and regulations, the FAA "shall consider relevant information related to aircraft noise and sonic boom" (§44715(b)(1)), consult with other government authorities (§44715(b)(2)), and consider safety (§44715(b)(3)). Section 44715(b)(4) states that the Administrator must "consider whether the standard or regulation is economically reasonable, technologically practicable, and appropriate for the applicable aircraft." This latter language comes from the Noise Control Act[4] (1970), under which the FAA must make a determination at the time of each new type certification. The FAA had specifically incorporated the core of the Noise Control Act language in §36.301(b) that applied to the Concorde, requiring that:

> …the noise levels of the airplane are reduced to the lowest levels that are economically reasonable, technologically practicable, and appropriate for the Concorde type design.

The FAA has a statutory duty to conduct rulemaking for any requirement that the Administrator finds appropriate for carrying out the purpose of §44715, and we would be

[4] Most of the recodification of FAA authority in 1991 broke up pieces of older authorizing legislation, including the Noise Control Act standards, into new sections.

required to publish any proposed standards for public comment, even if the standards eventually apply only to one aircraft. The Administrative Procedure Act states that a --

> "rule" means the whole or part of an agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy.... 5 USC 551 (4).

A new type certification application for a supersonic aircraft might well require adoption of standards that end up applying solely to that applicant for that aircraft (though it could form the basis for general rules that apply to future applicants). Legally, it would function as a rule of particular applicability rather than a rule of general applicability.

In forming an initial matrix of what noise requirements would apply to a supersonic aircraft design, we may first want to determine what current regulations may be appropriate rather than start from scratch. For example, the noise measurement standards of part 36 Appendix B were found to be appropriate for the Concorde, and could serve as the starting point for noise certification of a supersonic aircraft unless demonstrated by an applicant that the standards are not appropriate. Further, our policy history states that a new supersonic aircraft, when operating subsonically, would be expected to comply with the noise limits for subsonic aircraft unless the applicant can show that subsonic operation of its aircraft will differ so significantly from operation of subsonic aircraft of similar size and weight that different standards should apply. It would be up to the applicant both to suggest such a requirement and justify why it is appropriate for the FAA to consider. The special condition process defined in 14 CFR §§21.16, 11.19, and 11.38, including the development of issue papers to define the appropriate standards, may serve as a useful model for adopting other specific parts of a new set of noise standards. All of these processes are data driven.

The question of how a supersonic aircraft might be tested or its noise limits determined when operating at supersonic speed are still to be solved as a matter of certification. The operating rules of part 91 applicable to supersonic aircraft are discussed below. Operating rules neither drive nor limit certification standards under our regulatory scheme, since by definition operating rules apply to aircraft that were previously certificated and already in service.

Current supersonic operating rules

While this memo was intended to address the state of our certification rules, we are briefly addressing the operating rules in part 91 subpart I that have been the subject of recent questions.

The operating rule in §91.817(a) prohibits supersonic flight over land in the United States; it has no effect on the development of appropriate noise requirements under part 36. In fact, development of such requirements would be necessary before §91.817

could be changed to allow such flights if the FAA is to comply with its statutory duty to protect the public health and welfare.[5] Similarly, §91.817(b) places limits on operations that might cause a sonic boom created outside U.S. airspace to reach the U.S. coastline. In order to determine how far out the supersonic signature (sonic boom) of an aircraft can be detected, there must be some kind of testing of the aircraft under those conditions to know what flight limitations would be appropriate; the FAA did this with the Concorde on approach to the east coast in the 1970s as its basis for this regulation. Other noise parameters that can only be created at supersonic speed may well be suggested and described by other entities of the U.S. government such as NASA, with whom the FAA has a significant historical working relationship regarding aircraft noise, and with whom the FAA is required to consult under §44715(b)(2).

Section 91.819 states that it applies to "supersonic airplanes that have not been shown to comply with the stage 2 noise limits of part 36 in effect" in 1977.

Read with historical context, this section placed limits on aircraft that met only Stage 1 noise limits.[6] Since a reference to part 36 noise levels is made, there has been question whether part 36 actually applies to supersonic aircraft (other than the Concorde). We do not infer that an operating rule can, by historical reference, act to change the stated applicability of part 36. Further, any reference to the Stage 2 noise levels of part 36 suggests that the application is only to the subsonic operation of supersonic aircraft since no other noise levels exist in part 36.

Finally, concern has been raised about the effect of §91.821, an operating rule, which states that no one may operate a civil supersonic airplane unless it complies with the Stage 2 noise levels of part 36. Similar to the applicability of §91.819, the presence of this regulation raises the question whether new supersonic aircraft would have to be any quieter than Stage 2 to operate (the current *operational* minimum for subsonic airplanes is Stage 3).

The regulation was promulgated in 1978 (as an operating rule applicable to then-certificated, operational aircraft) and it remains in effect until the FAA changes it. When the regulation was adopted, the FAA stated in the final rule preamble that it was intended to apply to then-current supersonic airplane designs, and not to define requirements for future designs -

> The rules do not establish certification noise limits for future design SST's, since the technological feasibility of such standards is at present unknown. The FAA's

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[5] The development of supersonic aircraft was foreseen and a method of authorizing developmental flights was adopted as Appendix B to part 91 at the same time the operational limits were put in place. The procedure remains available to all operators flying supersonic aircraft for development.

[6] The FAA amended part 36 to include the Stage 3 noise limit in 1977 for new subsonic type certification. When the term "does not meet" is used, it means an aircraft does not meet the minimum, not that an airplane that "does not meet Stage 2" might actually refer to Stage 3. All aircraft that meet stage 3 are presumed to meet Stage 2 since the levels are progressively quieter.

> goal is not to certificate, or permit to operate in the United States, any future design SST that does not meet standards then applicable to subsonic airplanes....
>
> Accordingly, consistent with technological developments, the noise limits in this rule are expected to be made more stringent before a future design SST is either type certificated or permitted to operate in the U.S.
>
> 43 FR 28406 (June 29, 1978)

As an operating rule, §91.821 addressed the airplanes existing at the time of its adoption that would be operated in the United States, and was aimed at distinguishing the first Concordes produced from those produced later, and from other supersonic aircraft that were in development. Noise operating rules historically and necessarily lag significantly behind the certification standards because they apply to aircraft certificated to earlier standards. Although the FAA took the next step toward more stringent supersonic airplane operating requirements in 1990 when it proposed to increase the Stage 2 limit to Stage 3, that proposed rule was withdrawn.

For reference, we also note our legal interpretation provided to your office on February 29, 2016, that addresses §91.817 in greater detail.

June 2, 2020

From
Eric Henshall
To
SCSC Roundtable
Message

SCSC Roundtable - Letter to FAA re supersonic airplane noise

Thank you, we will share the Roundtable's letter with Congresswoman Eshoo.

Thanks,

Eric

Eric Henshall
Senior Legislative Assistant | Congresswoman Anna G. Eshoo (CA-18)

June 3, 2020

From
Tom Pyke
To
SCSC Roundtable
Message

SCSC Roundtable - Letter to FAA re supersonic airplane noise

Got it! Will convey to Rep. Khanna and DC legislative analyst, and see what we can do from our end.

Sorry for the delay, but yesterday was consumed with breaking events.

Best, Tom

Tom Pyke
District Director
Congressman Ro Khanna (CA-17)

June 4, 2020

From
Jennifer Landesmann
To
SFO Roundtable; SCSC Roundtable CC'd
Message

Follow up on FAA offer to address MidPeninsula Night Time Arrivals

Dear Chair Ortiz,

Thank you for your leadership and yesterday's SFO Roundtable meeting.

During public comment I shared some thoughts and suggestions about the importance of metrics, using objective data, criteria to help channel regional resources to the various collaborative areas and that I would follow up with more info about night flights over MidPen.

Below please find the references about the FAA's offer to the Select Committee on night time noise. I urge you and all SFO Roundtable members to see that this this topic makes a) the Agenda of the SFO Roundtable Arrivals Sub Committee, and b) as part of the SFO Roundtable's collaborative discussions with FAA other roundtables.

The following is the video replay of the FAA's encouragement to work on a Voluntary program to address night time flights.

FAA Offer to Select Committee: Offer was made after hundreds of MidPeninsula resident's testimony.

- FAA encouraged a “voluntary program” to address night flights
- FAA mentioned the effort for a voluntary program as “far less” than the design of a new STAR
- ***A new STAR is also mentioned as an option*** but just that it would take longer because it’s referred to as an infrastructure change.
- A Voluntary Agreement is described as an agreement with airlines and airports.
- The comment is stated as FAA's recommended path

Unfortunately - not all Bay Area regional night time efforts are being treated equal. FAA Administrator reported in a letter to Congress on January 24, 2020 "recent examples of engagement with communities resulting in meaningful collaboration to address noise related concerns." As seen on page 10 here - one of the highlights is that "in the San Francisco Bay Area - SFO and Oakland Airport and their respective airport roundtables, elected officials, and airlines 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...."

FAA Administrator Dickson's highlight does not mention which City or cities benefit; which procedure or flights are being changed - or how the procedures will affect other communities. For example the SUNNE procedure would block use of the Bay for MidPen communities. Yesterday, we heard further about the FAA team working on night NIITE (a procedure for San Francisco residents)- not to be confused by night time hours.

My intent is not to undermine the work to address issues for specific communities but rather that some of the most affected communities like all MidPen cities - where the bulk of complaints are happening - and who have been trying to engage for five years are totally

ignored. Also, it's not OK to mislead Congress with an appearance of success on noise mitigation and with zero objective data.

Night noise is one of the most important issues for communities in the seriously affected MidPeninsula and **since FAA has already assembled the teams - airports, airlines, FAA, and roundtables, to address noise for San Francisco and Oakland residents, I urge leadership to - at the same time - please join to address night time noise for MidPeninsula.**

Thank you,

Jennifer

Attachment Name
20200604_J_Landesmann_Follow up on FAA offer to address MidPeninsula Night Time Arrivals

U.S. Department
of Transportation

**Federal Aviation
Administration**

Office of the Administrator

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

January 24, 2020

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 4th 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[1] 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

[1] 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 disproportionally 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.lgaaccesseis.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.

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:

- Contining 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), the FAA's Community Involvement website (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,

Steve Dickson
Administrator

Enclosures

June 4, 2020

From

Mary-Lynne Bernald

To

SCSC Roundtable

Message

Calling a SCSC RT Legislative Subcommittee Meeting June 10th

Given the COVID-19 related economic situation which has direct budget consequences on the SCSC Roundtable's next fiscal year, I, as Chair, am authorizing, by exception, the Legislative Subcommittee to meet one time in June to review, discuss, and prioritize potential Legislation without taking any action on those items. The intent is to create a Work Plan for review and approval by the entire Roundtable Body for the upcoming year.

Regards!

Mary-Lynne Bernald

June 6, 2020

From

Jennifer Landesmann

To

SCSC Roundtable

Message

For your consideration for upcoming SCSC Legislative Committee meeting

Dear Chair Matichak, SCSC Legislative Committee,
Members of the SCSC Roundtable

As you review a "draft plan for future Legislative Committee Agenda items", per your meeting notice for June 10, 2020 10 AM I would like to offer some suggestions:

1. **If you plan to propose federal or state legislation**

Please prioritize the items expressed on two important lists. Those identified by the Select Committee on South Bay Arrivals which can be found in their Final Report on pages 23 - 27 Longer term and Process issues. Also, provisions in the 2018 FAA Reauthorization. The FAA for example has been erroneously interpreting the law for Sections 173 (noise standard) and 180 (Ombudsman) and this needs attention or possible re-legislation. What is the point of new laws when the existing laws are ignored?

ACTION suggestion: Set an Agenda item to see what needs follow up from the two links above. I suggest inviting some of the speakers from a recent Legislative panel at the recent

Aviation Noise and Emissions (their info is at the bottom of this email) to further inform your deliberations going forward.

An example of something that both the Select Committee and the 2018 Reauthorization stressed are noise measurements and metrics which are critical for a variety of essential steps in noise management. Per FAA Administrator Dickson “noise is a shared responsibility” between FAA and industry - yet many Nextgen affected areas are lacking monitors. Stable funding for noise monitors could be an area for federal or state legislation to mandate measuring impacts at the main air traffic arteries or where certain levels of traffic have been reached. Furthermore, as the Select Committee recommended (page 24 SC report), noise measurements should “*yield measurement of **all** noise instead of only a small fraction of it.*” With the current A weightings, the low frequency noise that affects SCSC cities from Arrivals is not considered and needs attention.

2. If you plan to “monitor” legislation

I suggest monitoring can be assisted by the professional lobbyists or aviation attorneys that some of the SCSC cities already employ. Some of these professionals already produce regular reports as well.

ACTION suggestion: Ask your member cities to help identify lobbyists qualified for aviation or DOT issues - see if the lobbyists would be interested in doing a quarterly update, and at what fees or costs.

3. If you plan on developing new ideas for legislation

First please ensure that you are well versed on which FAA policies and practices are presenting the toughest challenges to citizens. Having an understanding of the FAA's approach to noise management is key for that.

ACTION suggestion: Set an Agenda item to review the FAA Briefing to SFO Roundtable October 2019 - Video replay - FAA briefing SFO RT October 2019 (25 minute briefing) and use this as a starting point to hear directly from FAA's Chief Scientist on Environmental issues about the various matters.

My feedback to FAA on their briefing in October 2019 was that their environmental vision/goal on Slide 4 “remove environmental constraints on aviation growth” (as opposed to eliminating noise and emissions pollution) needs review so that their focus is not simply on eliminating public input or voice (which in fact is happening in their NEPA practices). Also, the way the FAA reports success is misleading or grossly overstated (see slide 8 about aircraft noise evolution) and some statistics fudge real impacts (see slide 19 aircraft emissions in perspective) suggesting teeny weenie emissions impacts from aviation which is just not so when some unlucky community is getting all or most of the teeny weenie impacts. I also expressed the need for objective criteria and analysis to manage noise (a practice that involves you as well btw).

Given FAA's position on environmental issues, below are some suggestions to take up with Congress and FAA.

- How FAA reports success to Communities and Congress: FAA narrowly defines success as the reduction in the number of people exposed to the 65 DNL, ignoring the noise that is outside this realm (all SCSC cities).
- How FAA pre-judges mitigation as primarily insulation, and uses that to hide noise in FAA's NEPA practices. Legislation or Congressional action to *decouple* the 65 DNL standard from its relation to insulation would help, and require the FAA to develop new and improved FAA NEPA practices- better disclosure to communities and defining new mitigation practices beyond insulation.
- How Arrivals noise is very different from Departures and needs specific research and mitigation options.
- How FAA allocates funding and attention to operator noise management (*"what* and *when"* see slide 16) and FAA/ATC noise management (*where* and *how*). Equipment advances are not expected to yield quantum or marginal improvements anytime soon; we need more resources to when, where and how.
- How the FAA manages nighttime noise, and the lack of airline involvement in developing noise mitigation plans and monitoring.
- How noise and emissions standards around the world are set - what are best practices?

There are many potential areas where the FAA could make significant improvements. Last but not least, I urge you to work with ideas that will resonate with others around the country and to coordinate with diverse communities.

Thank you,

Jennifer

https://anesymposium.aqrc.ucdavis.edu/2020-program

Noise and Emissions Legislation: The 2018 FAA Reauthorization Act and What Congress and FAA have been up to since

Chaired By: Veronica Bradley, *Airlines for America* & Jennifer Landesmann, *Sky Posse Palo Alto*

The 2018 FAA Reauthorization Act contains over 20 provisions related to aviation noise and emissions. This Congress has also introduced more than 10 aviation noise bills. This conversation-style session will provide a discussion on how communities advocate for legislative answers to their noise concerns, how industry perspectives impact legislative outcomes, and how FAA implements the final law, all using examples from the FAA Reauthorization Act of 2018, current pending legislation in Congress, and long-standing FAA research programs.

Presentation 1

By: Janet McEneaney, Queens Quiet Skies

Presentation 2

By: Melinda Pagliarello, ACI-NA

Presentation 3

By: Donald Scata, Federal Aviation Administration

Presentation 4

By: Craig Wilsey, Program Manager, Boeing Research & Technology

Presentation 5

By: Jose Alonso, Acoustic Specialist, Collins Aerospace

Attachment Name
20200606_J_Landesmann_For your consideration for upcoming SCSC Leg

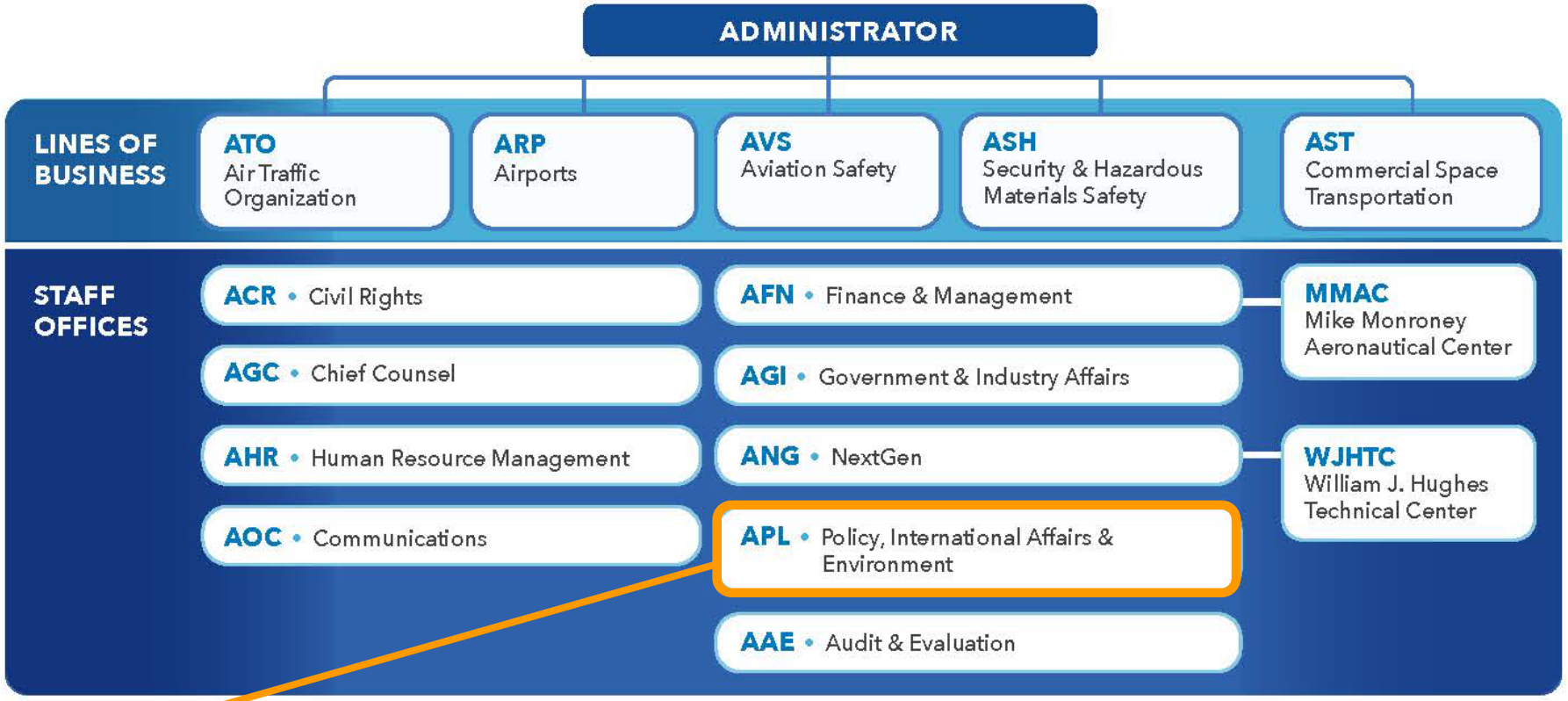
FAA Efforts to Understand and Address Aviation Noise and Emissions Challenges

Presented to: SFO Round Table Meeting

By: Jim Hileman
Office of Environment and Energy
Federal Aviation Administration

Date: October 2, 2019

FAA Organizational Structure



Office of Environment and Energy (AEE)

Economic Benefits of Aviation

5.1% of U.S. GDP

10.6 Million
U.S. jobs

$1.6 Trillion
in U.S. economic activity annually

$59.9 Billion
of U.S. Trade Balance (exports-imports)

SOURCE: FAA Air Traffic Organization

Aviation equipment (aircraft, spacecraft, and related equipment) is largest export sector in U.S. economy accounting for over 8% of total exports.

SOURCE: U.S. International Trade Commission

AEE Mission and Vision

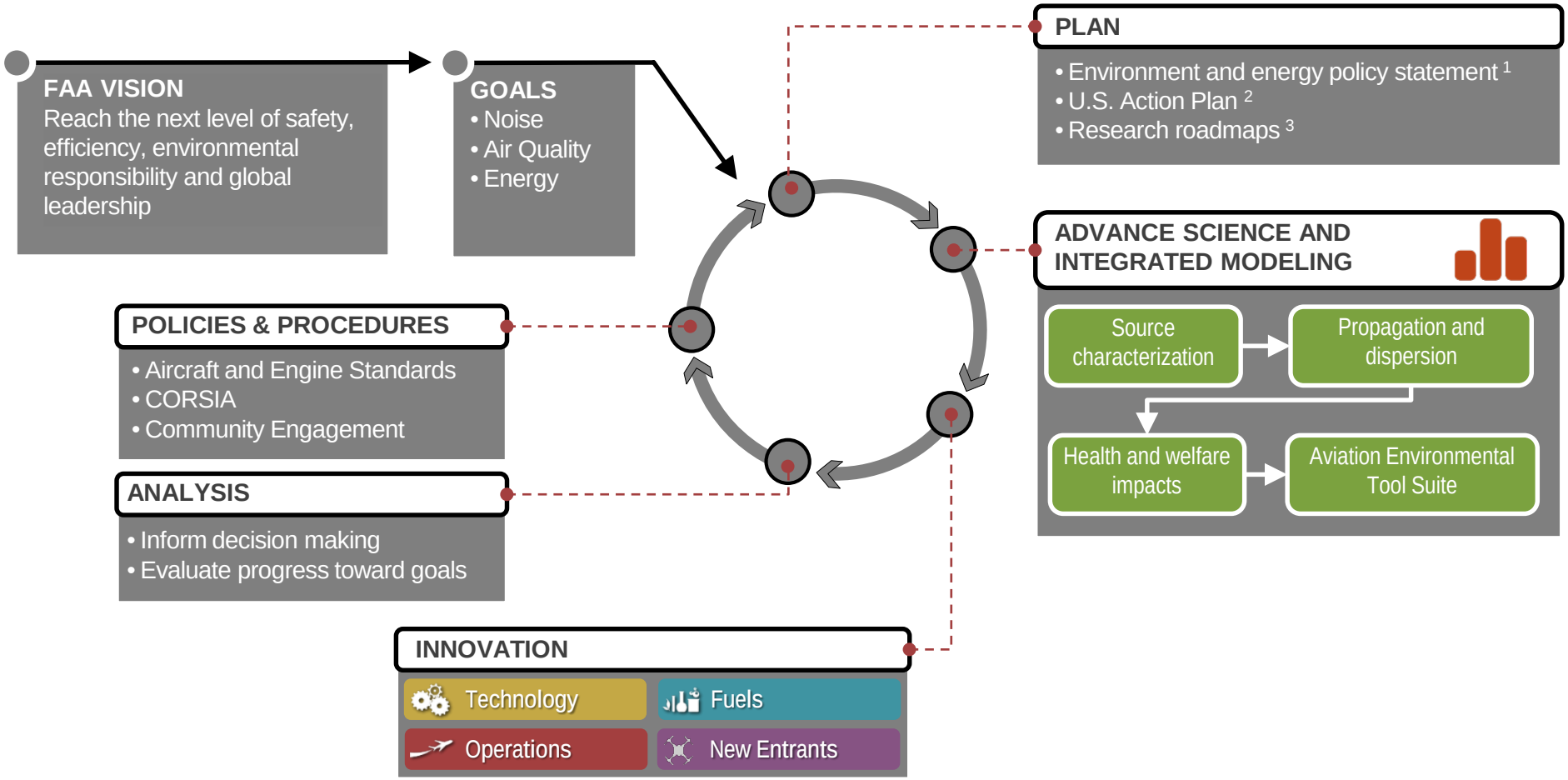
Mission:

To understand, manage, and reduce the environmental impacts of global aviation through research, technological innovation, policy, and outreach to benefit the public

Vision:

Remove environmental constraints on aviation growth by achieving quiet, clean, and efficient air transportation

Environmental & Energy Strategy



Notes:

1. Aviation E&E Policy Statement (Federal Register 77-141, 2012): http://www.faa.gov/about/office_org/headquarters_offices/apl/environ_policy_guidance/policy/media/FAA_EE_Policy_Statement.pdf
2. U.S. Aviation GHG Emissions Reduction Plan: http://www.icao.int/environmental-protection/Pages/ClimateChange_ActionPlan.aspx
3. Environment and Energy Website: http://www.faa.gov/go/environment

Environment and Energy (E&E) Research Programs

Continuous Lower Energy, Emissions and Noise (CLEEN)

- Reduce aircraft fuel burn, emissions and noise through technology & advance alternative jet fuels
- Cost share partnership with industry

ASCENT Center of Excellence (COE)

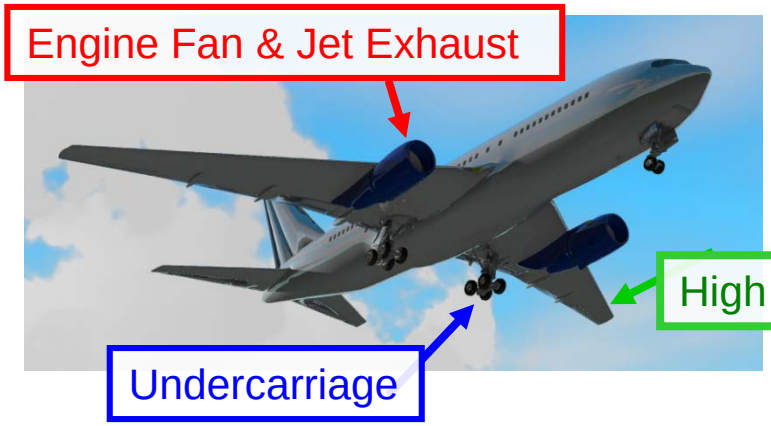
- COE for Alternative Jet Fuel and Environment
- Cost share research with universities

Additional Efforts

- Commercial Aviation Alternative Fuels Initiative (CAAFI)
- Volpe Transportation Center
- Contractors

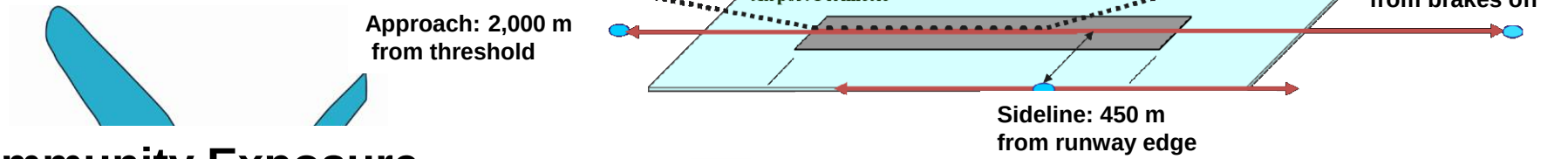
Community Noise from Aircraft

Aircraft Noise

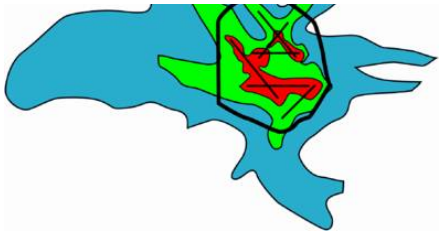


All noise sources contribute to acoustic signature – both at takeoff and during landing

Landing Takeoff Cycle

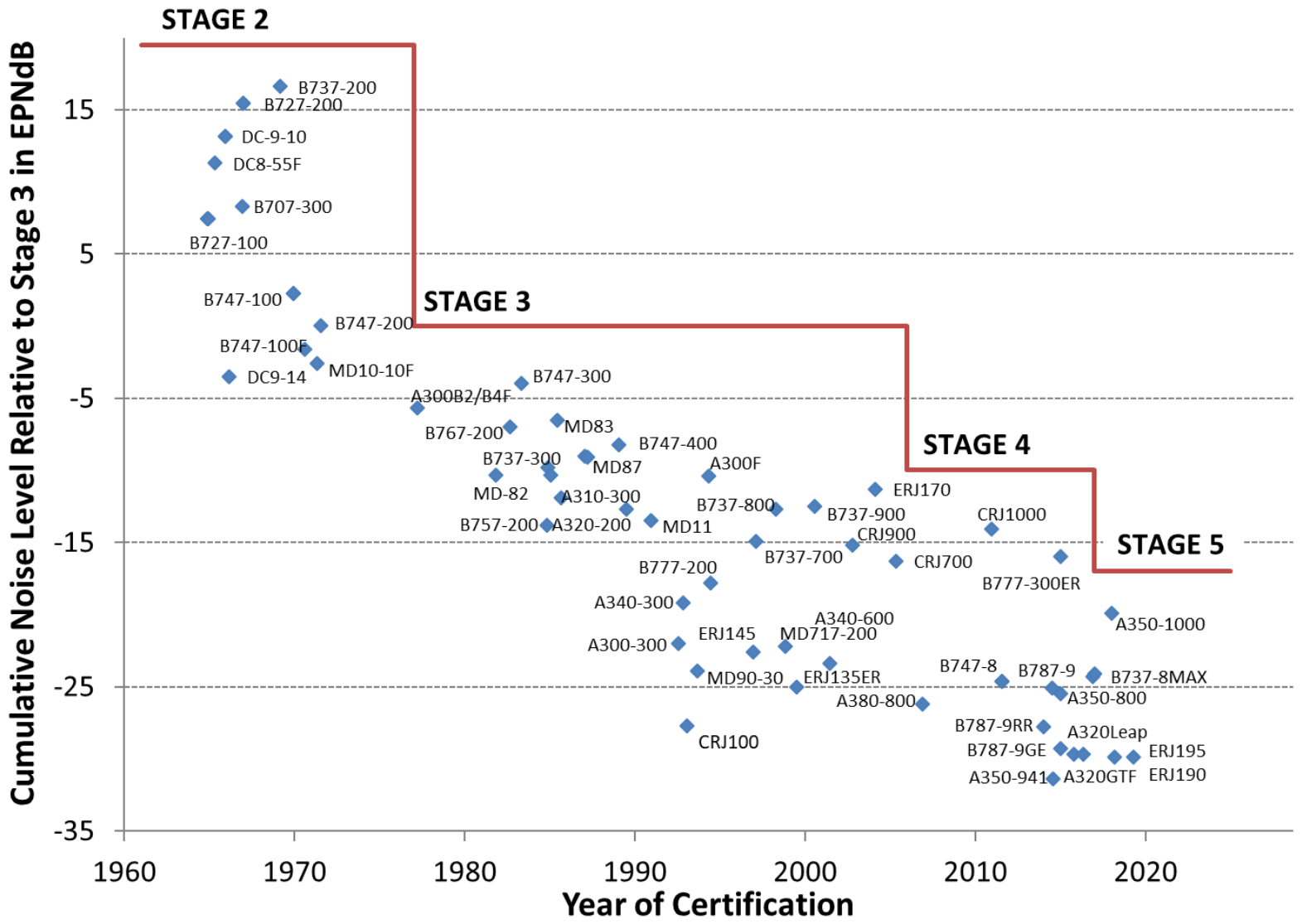


Community Exposure



Community exposure set by aircraft types and operational tempo over day and night

Commercial Aircraft Noise Evolution



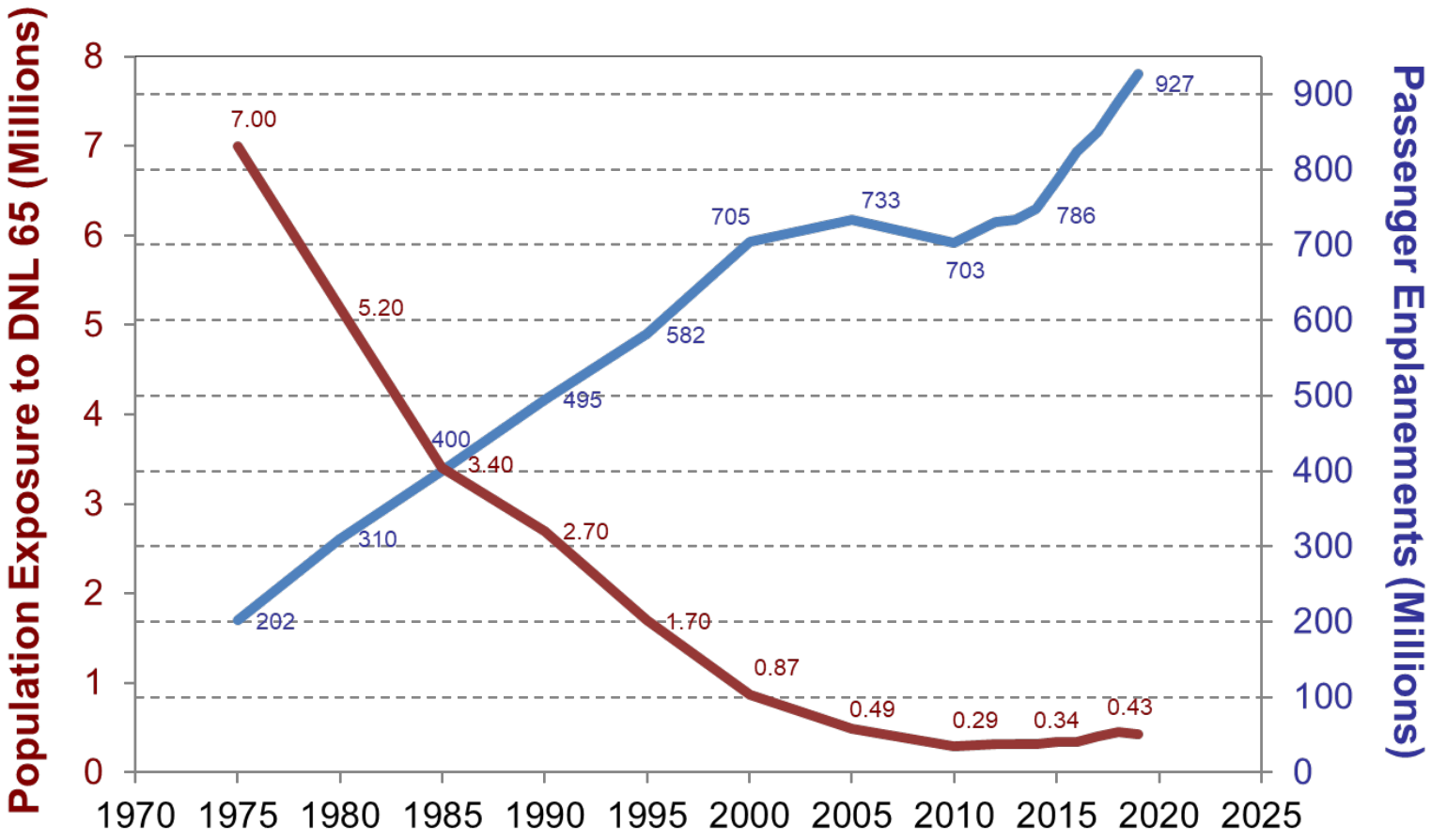
Noise Reduction through Technology

- Noise improvements have come with fuel efficiency gains
- Increased engine bypass ratio

- Simplified high lift systems

Images from airliners.net

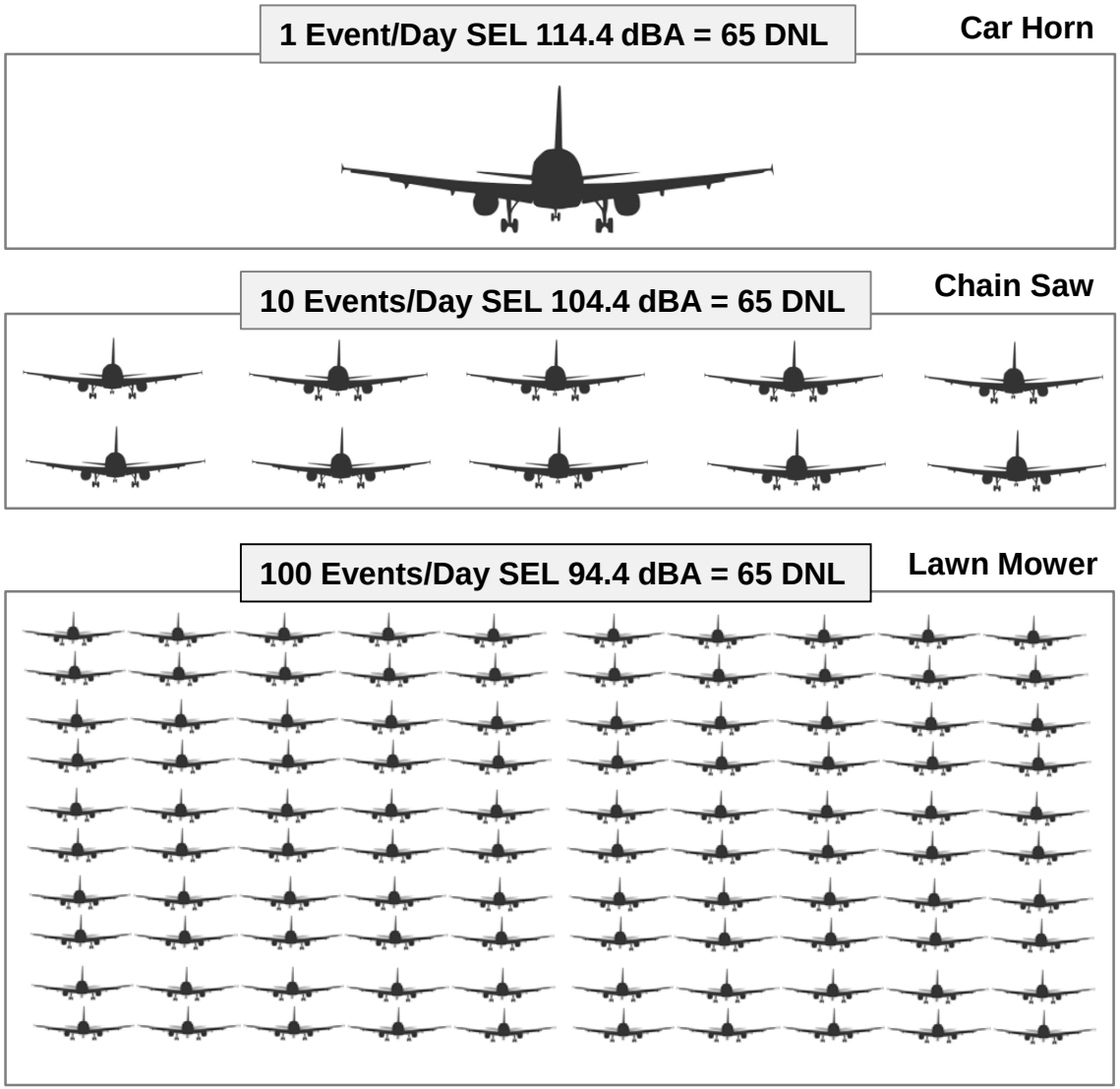
Historical Trends in Noise Exposure and Enplanements



A 93 percent decrease in community noise exposure while increasing enplanements by over a factor of four – the noise experience is very different today then decades past and we expect it to continue to evolve

Today's Situation

- Aircraft noise from 1970s is different than aircraft noise today. Aircraft from 1970s produced the same acoustic energy as 10 to 30 aircraft operations today.
- A few, but relatively loud, events in 1970s would result in DNL 65 dB. Many, relatively quiet events today would also result in DNL 65 dB. However, noise experience would be very different.
- Precision navigation is being implemented to increase the safety and efficiency of the NAS.



Efforts Relating to Aircraft Noise

Understanding Noise

- Improving modeling capabilities
- Examining relationship between noise and annoyance, sleep, cardiovascular health and children's learning
- Evaluating current aircraft, helicopters, commercial supersonic aircraft, unmanned aerial systems, and commercial space vehicles

Outreach

- Enhanced community involvement
- Increase public understanding

Reducing Noise at the Source

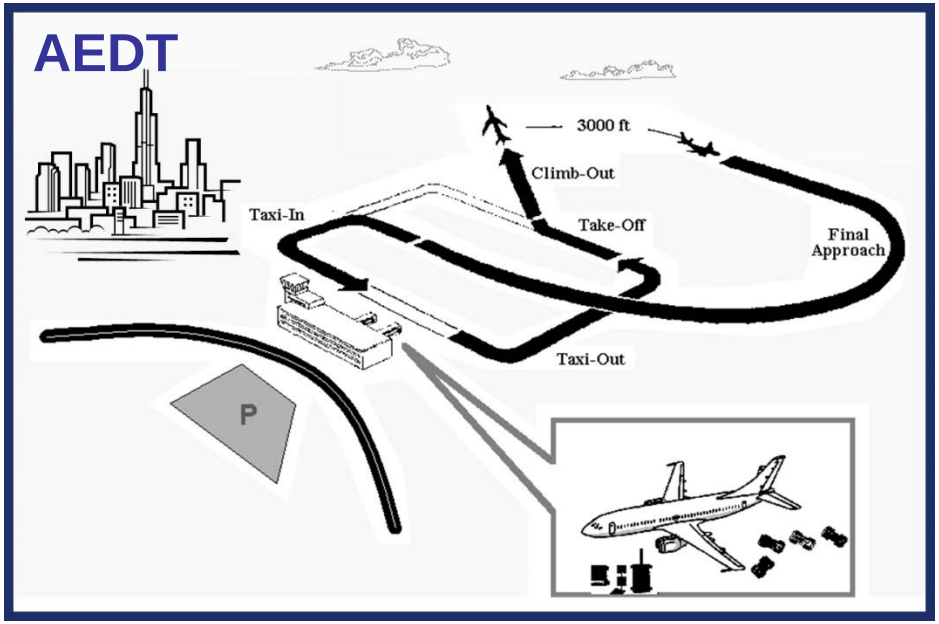
- Aircraft technologies and architecture
- Noise standards

Mitigation

- Vehicle operations
- Sound insulation program

Aviation Environmental Design Tool (AEDT)

- Computes noise, fuel burn and emissions simultaneously
- Can analyze airport, regional, national, and global scales
- Required for all regulatory actions
- In use by 428 international users from 36 countries



AEDT Development Plan

- Current version of tool, AEDT3b, released on September 24, 2019
- Improvements in AEDT 3 series, relative to AEDT2d
  - Improved aircraft performance module
  - Improved takeoff weight and thrust modeling
  - Improved capabilities at lower noise levels
- Laying ground work to incorporate airframe noise more explicitly in AEDT4 with a planned 2022 release

Research Areas on Noise Impacts

- **FAA is sponsoring a robust research program to understand the potential impacts of aviation noise on public health and welfare**

- **Annoyance**
  - In 2014, FAA initiated a national survey to measure public annoyance to aircraft noise, as part of FAA's broader research portfolio related to aircraft noise
  - Responses from over 10,000 people living near 20 U.S. airports were collected
  - The survey results and a draft report are being reviewed by the FAA in coordination with the Department of Transportation and other federal agencies

- **Sleep Disturbance**
  - Conducted field studies to test different equipment viability
  - Have begun preparations for a national study
  - Determine what, if any, impact aviation noise has on sleep

- **Cardiovascular Health**
  - Associating historic, modeled noise levels with existing epidemiological studies
  - Determine what, if any, correlation exists between cardiovascular disease and aviation noise

For more information:
- PARTNER Project 44: http://partner.mit.edu/projects/aviation-related-noise-effects-elderly
- ASCNET Project 003: https://ascent.aero/project/noise-impact-health-research/
- ASCENT Project 017: https://ascent.aero/project/noise-exposure-response-sleep-disturbance/

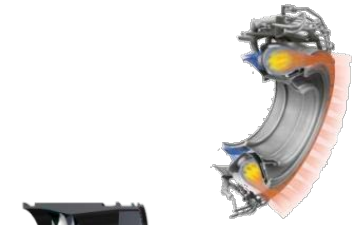
Efforts Relating to Aircraft Technology

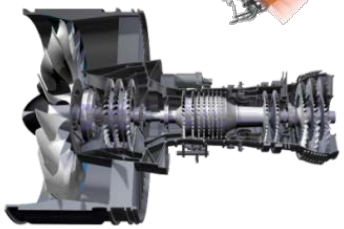
Continuous Lower Energy, Emissions & Noise (CLEEN)

- FAA led public-private partnership with 100% cost share from industry
- Reducing fuel burn, emissions and noise via aircraft and engine technologies and alternative jet fuels
- Conducting demonstrations to accelerate maturation of certifiable aircraft and engine technologies

	Phase I	Phase II	Phase III*
Time Frame	2010-2015	2016-2020	2021-2025
FAA Budget	~$125M	~$100M	TBD
Noise Reduction Goal	25 dB cumulative noise reduction cumulative to Stage 5 ***and/or reduces community noise exposure (new goal for Phase III)***		
Fuel Burn Goal	33% reduction	40% reduction	-20% re: CAEP/10 Std.
NO_X Emissions Reduction Goal	60% landing/take-off NO_X emissions	75% landing/take-off NO_X emissions (-70% re: CAEP/8)	
Particulate Matter Reduction Goal			Reduction relative to CAEP/11 Std
Entry into Service	2018	2026	2031

***The information for the third phase of the CLEEN Program is notional as the FAA is in the process of developing the final solicitation.**





For more information on CLEEN program: http://www.faa.gov/go/cleen

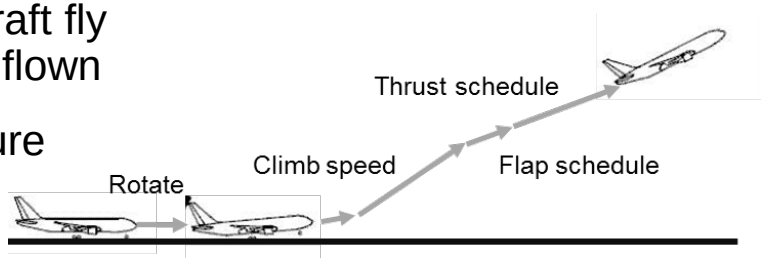
CLEEN III Industry Day: https://faaco.faa.gov/index.cfm/announcement/view/32134

CLEEN III Solicitation: https://faaco.faa.gov/index.cfm/announcement/view/31885

Efforts Relating to Aircraft Operations

Opportunities for noise reduction:

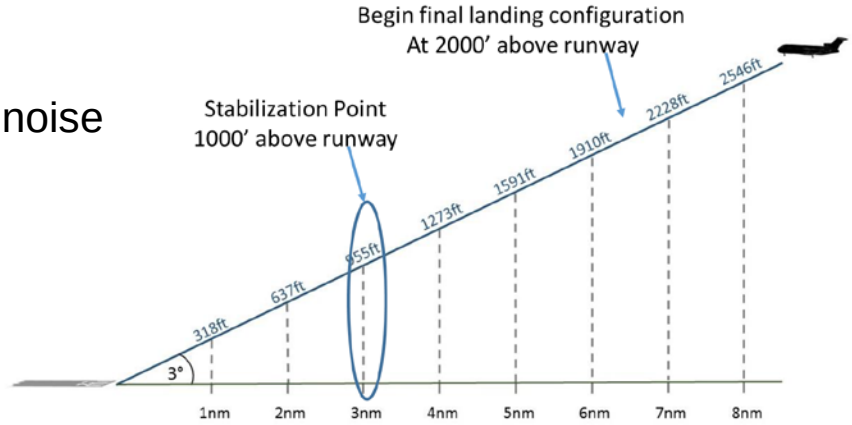
- Airlines determine *what* aircraft fly and *when*
- There might be opportunities to change *where* aircraft fly (through precision navigation) and *how* aircraft are flown
- Must consider the entirety of the airspace and ensure the continued safety of operations



Takeoff Profile

Concepts being evaluated:

- **Route changes**
- **Thrust / speed management**
  - Noise abatement procedures
  - Manage thrust and configuration to lower noise on takeoff and approach
- **Vertical profile**
  - Continuous climb operations
  - Continuous descent arrival
  - Modified approach angles
  - Staggered or displaced landing thresholds
- **Introduction of systematic dispersion**

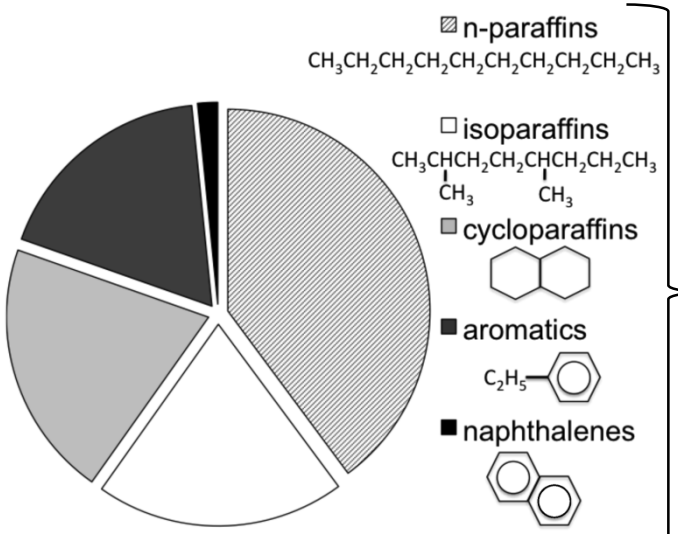


Approach Profile

For more information:

- ASCENT Project 023: https://ascent.aero/project/analytical-approach-for-quantifying-noise-from-advanced-operational-procedures/
- ASCENT Project 044:https://ascent.aero/project/aircraft-noise-abatement-procedure-modeling-and-validation/

Aircraft Emissions and Air Quality

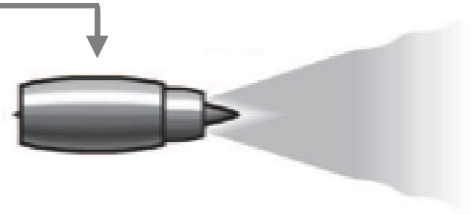


Weighted Mean Fuel Sulfur Content (PPM)		
	2006	2007
US East	446	321
US Gulf	858	800
US West	240	395
Nationwide	709	677

Fuel composition and engine design determine emissions

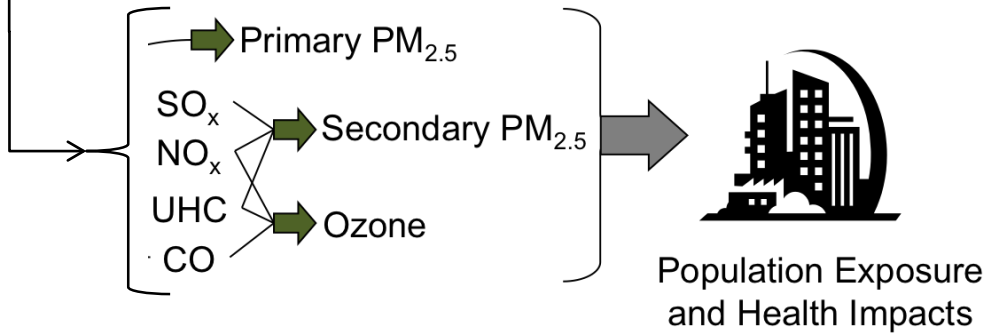
Fuel: $C_nH_m + S$

Air: $N_2 + O_2$



Tank-to-Wake Actual Combustion Emissions

$CO_2 + H_2O + NO_X + SO_X + soot + CO + HC + N_2 + O_2$



Atmospheric transformation, dispersion and removal determine pollutant concentration

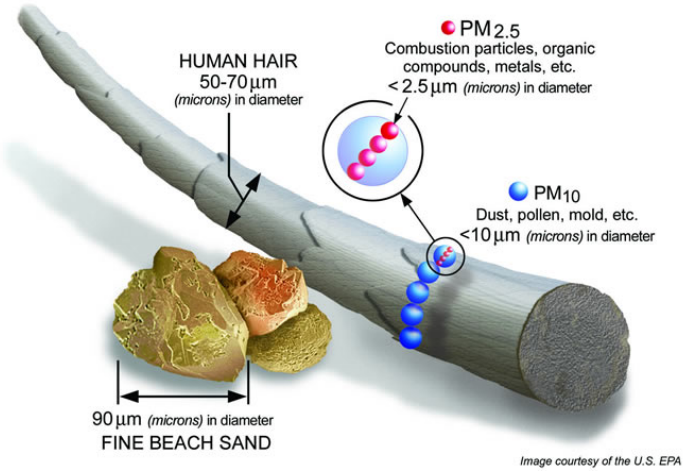
Particulate Matter

- Epidemiological studies link long-term exposure to fine Particulate Matter ($PM_{2.5}$) to increased risk of premature mortality

  Dockery et al. (1993); Pope et al. (2002); WHO (2008); Pope et al. (2009); USA EPA (2011)

- Particulate Matter consists of particles and liquid droplets
  - Particulate Matter = PM_{10} = diameter ≤ 10 μm (could enter lungs)
  - Fine Particulate Matter = $PM_{2.5}$ = diameter ≤ 2.5 μm (could enter blood)
  - Ultrafine Particulate Matter = $PM_{0.1}$ = diameter ≤ 0.1 μm (could enter systems)

- Particulate Matter from aircraft engines:
  - Soot (a.k.a., non-volatile PM, black carbon)
  - Volatile organic compounds from engine sulfate and nitrates & atmospheric ammonia
  - Aircraft engine PM is sufficiently small to qualify as ultrafine particulate matter



http://www3.epa.gov/airquality/particlepollution/basic.html

Aircraft Emissions in Perspective

- Based on analysis of top 66 airports in the U.S., aircraft operations contribute less than 1% of all ambient $PM_{2.5}$ in metropolitan areas.
  - UNC research - Boone, S. S. Penn, J. Levy and S. Arunachalam (2015). Calculation of sensitivity coefficients for individual airport emissions in the continental United States using CMAQ-DDM3D/PM, In Proceedings of the 34th International Technical Meeting on Air Pollution, Montpellier, France, May 2015.

- Aircraft activities contributes to 0.3% of the health impacts of combustion emissions in the U.S.
  - MIT research - Dedoussi and Barrett, “Air pollution and early deaths in the United States. Part II: Attribution of PM2.5 exposure to emissions species, time, location and sector,” Atmospheric Environment 99 (2014). http://dx.doi.org/10.1016/j.atmosenv.2014.10.033
  - MIT research - Yim et al., “Global, regional and local health impacts of civil aviation emissions,” Environ. Res. Lett. 10 (2015). doi:10.1088/1748-9326/10/3/034001

- Based on measurements in Seattle area, road traffic produces more PM, relative to aviation, at all sizes down to 20 nm. Aircraft produce more PM, relative to emissions, at sizes from 10 to 20 nm.
  - $PM_{0.1}$ is 100 nm and road traffic PM
  - U. Washington research - Preliminary findings presented by Prof. E. Austin of U.W. to 2019 Aviation Emissions Characterization Roadmap meeting available for download at https://deohs.washington.edu/mov-mobile-observations-ultrafine-particles-study

Efforts Relating to Jet Fuel and Emissions

Testing and Modeling

- Measure emissions from engines using conventional and alternative jet fuels
- Improve atmospheric impact modeling capabilities
- Support and improve Certification/Qualification testing to ensure alternative jet fuels are safe for use
- Analysis to understand environmental and economic sustainability of alt fuels

Reducing Emissions

- ICAO Carbon Offsetting and Reduction Scheme (CORSIA)
- Engine standard (NO_X, PM, and CO_2 standards)
- Modifications to fuel composition
- Aircraft technologies
- Vehicle operations

Coordinate Activities

- Public-private partnerships
- State, regional, interagency, and international

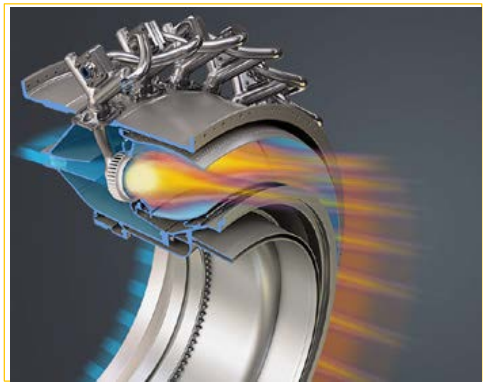
Technology & Emissions Reduction

- Visible smoke emissions have been eliminated

DC-8, 1958

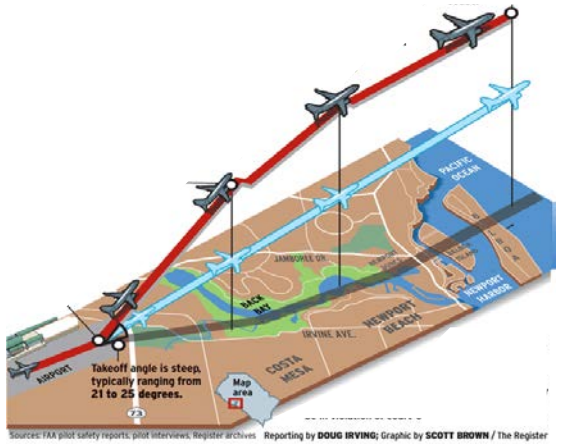
Boeing 787, 2012

- 50% reduction in CAEP Nitrogen Oxides (NOx) emissions standard since 1995
- CAEP/11 agreement on a particulate matter standard for aircraft engines – limits on both particle number and mass
- CLEEN Program - Low Emissions Combustors
  - GE TAPS II Combustor,
    LTO Nox: 55% below most recent CAEP std
    PM: 90% below CAEP visibility smoke limit
  - CLEEN combustor development ongoing with GE, Honeywell, Rolls Royce



Our Direction

- Utilizing a comprehensive approach to address environmental challenges
- Working with a broad range of stakeholders to understand issues and develop solutions
- Placing more focus on innovation to overcome noise and emissions challenges
- Continue to seek partnerships for our R&D efforts
- Continue to be responsive to priorities outlined in the FAA Reauthorization Act of 2018



June 7, 2020

From

Darlene Yaplee

To

SCSC Roundtable

Message

Questions to the FAA - 45 days before the July SCSC RT meeting

SCSC RT,

Please consider sending a request for the FAA to present on the job descriptions of the new Ombudsman and the Community Engagement Officer. The Ombudsman was part of the 2018 Reauthorization bill and mentioned in FAA Administrator Dickson's response to the Quiet Skies Caucus. As well, it was shared at the March ANE conference by Don Scata of the FAA with several SCSC RT members attending. The Community Engagement Officer was introduced at an early SCSC RT meeting with comments that the job description was under development. It would be valuable to understand these roles for collaborating and engaging with the FAA.

The FAA can present every two months at the SCSC RT meetings. Let's not miss a slot with the FAA given there are only 6/year. Of course if they can present on SERFR, that would be a higher priority. It would be good to send back up topics to the FAA in cases when they are not ready to present on other topics. If there are additional topics for the FAA to present on, that is fine also. We want to ensure that we use the 6/year FAA slots.

Collaborating with the FAA is in the Strategic Plan and Work Plan so asking about the job descriptions should be consistent with what was approved by the SCSC RT. If a formal vote is required to ask about the job descriptions, I hope that the SCSC RT can discuss removing the requirement and empowering our Chair.

Thank you,

Darlene Yaplee

June 9, 2020

From

Robert Holbrook

To

SCSC Roundtable

Message

Input for tomorrow's Leg Committee meeting

Please find attached two documents that might be helpful to tomorrow’s discussions.

The first is the Legislative Action Items chart that was distributed in the packet, but updated to include a new line item and also a level of detail for two of the items that we think adds clarity.

The second document distills sections from the FAA Reauthorization Act of 2018 that we feel are of special interest to the Roundtable. This document could potentially form the basis for a tracking and review document for Leg Committee and Roundtable follow-up.

It would be helpful if these documents could be shared while we speak to them during the public comment period tomorrow.

Regards,

Robert Holbrook and Darlene Yaplee

Attachment Name

20200609_R_Holbrook_Input tomorrow's Leg Committee meeting

Legislative Subcommittee		
ID	**Possible Agenda Items**	**Recommended SCSC RT Action**
1	Review 15 bills introduced to House.	
2	Review FAA Reauthorization bill, receive status updates and any reports that have been generated.	
3	Follow-up on airline bailout legislation and language.	
4	Receive a summary of airport expansion plans.	
5	Develop a calendar of Legislative Committee meeting dates as well as a timeline of possible items to address.	
6	Consider actions to proactively address legislation. • Metrics: Replace DNL metric, Lower the 65 DNL Threshold for Assessing Noise Impacts, Place an Emphasis on the Frequency of Single Noise Events • Limit Nighttime Flights • FAA's Procedure Development and Environmental Review Process	
7	Understand and make recommend changes to FAA's procedure development and environmental review process. • Revise FAA's NEPA Guidance to Require Full Disclosure of Noise Analyses in CatExes • Include Public Involvement in the CatEx Process • Increase the Importance of Noise Impacts When Evaluating Flight Procedures • FAA Must Evaluate the Actual Impacts of Procedure Changes and Make Adjustments to Match the Environmental Analysis	
8	~~7~~ Determine actions to work with Congressional staff regarding new legislation or existing legislation for amendments.	
9	~~8~~ Determine ways for the Committee to be most effective.	

Common themes from the public have been inserted in chart above as bullets

Not in the chart: Link the IFP Gateway Publication Dates and FAA Roundtable Report Outs

SECTION	SECTION TITLE	DUE	FAA STATUS	TEXT	Note	Recommended SCSC RT Action		
173	**Alternative Airplane Noise Metric Evaluation Deadline**	2019.10.05	Complete	The FAA shall *complete its ongoing evaluation of alternative metrics to the current Day Night Level (DNL) 65 Standard* .	The FAA views this section as setting a deadline for its internal work, with no report to Congress required.			
175	**Addressing Community Noise Concerns**	NA		The FAA shall *consider dispersal headings or other lateral track variations if the airport operator requests it and the request would not conflict with the "safe and efficient" use of the national airspace* , when proposing or amending RNAV procedures that direct aircraft below 6,000 feet over noise sensitive areas.				
176	**Community Involvement in FAA Nextgen Projects Located in Metroplexes**	2019.04.05 (Review) 2019.06.05 (Report)	Late	The FAA shall *review its community involvement practices* and produce a report on how to improve them for future projects				
179	**Airport Noise Mitigation and Safety Study**	2020.10.05		The FAA shall *review and evaluate existing studies of the relationship between jet aircraft approach and takeoff speeds and corresponding noise impacts* on communities, including the advisability of using speeds as a noise mitigation technique, and whether any of the metropolitan areas identified in §189 would benefit from such mitigation techniques *without significantly impacting aviation safety or efficiency* .				
180	**Regional Ombudsen**	2019.10.05	Complete	Within 1 year, the FAA is directed to *designate a regional ombudsman for each FAA region* , to serve as a community liaison, make recommendations to address community concerns, and be consulted on proposed airspace changes				
181	**FAA Leadership on Civil Supersonic Aircraft**	2020.03.31 (NPRM)		The FAA is directed to *exercise leadership related to the certification and safe and efficient operation of civil supersonic aircraft* , including issuing a rulemaking on noise standards.	Comments on NPRM regulation Landing/Takeoff (LTO) noise due 2020.07.13. Future NPRM to address sonic boom over land.			
186	**Stage 3 Aircraft Study**	2020.04.05 (Report)	Late	The FAA is directed to *review the benefits, costs, and other impacts* to a variety of stakeholders, including communities surrounding airports, *from a phaseout of Stage 3 aircraft* .				
187	**Aircraft Noise Exposure Study**	2020.10.05 (Report)		The FAA shall *conclude its ongoing review of the relationship between aircraft noise exposure and its effects on communities around airports* . The report shall include preliminary recommendations for revising land use compatibility guidelines.	FAA press release 2015.05.07 will soon begin work on a multi-year survey with hopes to finish by 2016. https://www.faa.gov/news/press_releases/news_story.cfm?newsId=18774			
188	**Study Regarding Day-Night Average Sound Levels**	2019.10.05 (Report)	Complete	The FAA shall *evaluate alternative metrics to the current average daynight level (DNL) standard* , such as the use of actual noise sampling and other methods, to address community airplane noise concerns.	173 said to have been addressed by this deliverable.			
189	**Study on Potential Health and Economic Impacts of Overflight Noise**	2022.04.05 (Study Complete)		The FAA shall *enter into an agreement with an eligible institute of higher learning to study health impacts of noise from aircraft on residents exposed to a range of noise levels* from such flights. The study shall examine incremental health impacts, including sleep disturbance and elevated blood pressure, and be focused on residents in designated metropolitan areas (Washington, DC metro area is included) and under flight paths frequented by aircraft flying lower than 10,000 feet.				
178	**Terminal Sequencing and Spacing**	2018.12.04 (Briefing to Congress)		the Administrator of the Federal Aviation Administration shall provide a briefing to the appropriate committees of Congress on the *status of Terminal Sequencing and Spacing (TSAS) implementation* across all completed NextGen metroplexes	Review this briefing material to decide if it warrants a presentation to the RT			

SECTION	SECTION TITLE	DUE	FAA STATUS	TEXT	Note	Recommended SCSC RT Action		
329	**Performance Based Standards**			The Administrator shall, to the maximum extent possible and consistent with Federal law, and *based on input by the public, ensure* that regulations, guidance, and policies issued by the FAA on and after the date of enactment of this Act are issued in the form of *performance-based standards,* providing an equal or higher level of safety.	Clarify the intent of this requirement with the FAA			
342-377, 582, 721	**Drones**							
502	**Report on Air Traffic Control Modernization**	2019.04.05 (FAA) 2020.01.05 (IG)		the Administrator shall submit... a report describing the multiyear effort... to modernize the air transportation system..., including… [schedules, delays, projected and actual costs and benefits, risks and mitigations.	Review a copy of the IG report			
503	**Return on Investment Report**	2019.10.05, 2020.10.05, …		the Administrator shall submit… a report on the status of each NextGen program [including] (1) an estimate of the date the program will have a positive return on investment; (2) an explanation of any delay in delivery of expected benefits.... (c) The Administrator shall (1) develop in coordination with the NextGen Advisory Committee and considering the need for a balance between the long-term and near-term user benefits [for the Federal Government and users of the national airspace system], *a prioritization of the NextGen programs; (2) annually update the priority list*	Review a copy of this report annually			
534	**NextGen Delivery Study**	2020.04.05		the inspector general of the Department of Transportation shall initiate a study of the potential impacts of a significantly delayed, significantly diminished, or completely failed delivery of the Next Generation Air Transportation System modernization initiative by the Federal Aviation Administration, including impacts to the air traffic control system and the national airspace system as a whole. *[The report shall include (8) an analysis of the potential impacts on aircraft noise and flight paths; (9) the potential changes in separation standards, fuel consumption, flight paths, block times, and landing procedures or lack thereof; ..."]*	Review a copy of this report			
547	**Enhanced Air Traffic Services**			Establishes a pilot program for preferential access to three airports providing higher priority in sequencing for airplanes equipped with "certain NextGen avionics".	Ask what FAA program this section furthers. Time Based Flow Management? Terminal Sequencing and Spacing?			

SECTION	SECTION TITLE	DUE	FAA STATUS	TEXT	Note	Recommended SCSC RT Action		
572	**Special Review**	2020.10.05		[The FAA Management Advisory Council shall review...] the practices and procedures of the FAA for developing proposals with respect to changes in regulations, policies, or guidance of the Federal Aviation Administration relating to airspace that affect airport operations, airport capacity, the environment, or *communities in the vicinity of airports, including an assessment of the extent to which there is consultation* , or a lack of consultation, with respect to such proposals— (A) between and among the affected elements of the Federal Aviation Administration...; and (B) between the Federal Aviation Administration and affected entities, including airports, aircraft operators, *communities* , and State and local governments. [This determination is to made after consulting with air carriers, GA, airports, exclusive bargaining representatives of air traffic controllers and state aviation officials. Community representatives were not specified.] [The report shall include] a description of the comments, recommendations, and dissenting views received from the Council and a description of how the Administrator plans to implement the recommendations of the Council."	Prep the State aviation officials with any potential concerns.			
712	**Research Advisory Committee**			The national aviation research plan required under section 44501(c) shall include a summary of all research advisory committee recommendations and a description of the status of their implementation.''	Clarify function of the Research Advisory Committee and review their recommendations			
741	**Research Plan for the Certification of New Technologies into the National Airspace System**	2019.10.05		[the Administrator shall transmit] a comprehensive research plan for the certification of new technologies into the national airspace system to the Committee on Science, Space, and Technology of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate. *This plan shall identify research necessary to support the certification and implementation of NextGen*	Request a copy of this research plan and review it.			
742	**Technology Review**	2019.10.05		The Administrator of the FAA, in coordination with the Administrator of NASA, shall conduct a review of current and planned research on the use of advanced aircraft technologies, innovative materials, alternative fuels, additive manufacturing, and novel aircraft designs, to increase aircraft fuel efficiency. [Among other things the review shall include summaries of projects and missions to examine "such technologies, materials, fuels, and aircraft designs to enhance fuel efficiency and aerodynamic performance, and reduce drag, weight, *noise* , and fuel consumption;"	Request a copy of this report and review it.			
743	**CLEEN Aircraft and Engine Technology Partnership**			The Administrator of the Federal Aviation Administration shall enter into a cost-sharing cooperative agreement... with institutions, entities, or consortiums to carry out a program for the development, maturation, and testing of certifiable CLEEN [continuous lower energy, *emissions, and noise*] aircraft, engine technologies, and jet fuels for civil subsonic airplanes.... (c) The Administrator shall establish the performance objectives for the program in terms of the specific objectives to reduce fuel burn, *emissions and noise* .	Request a copy of the report detailing the performance objectives and review it.			

SECTION	SECTION TITLE	DUE	FAA STATUS	TEXT	Note	Recommended SCSC RT Action		
761	**NextGen Research**	2019.10.05		the Administrator shall submit… a report specifying the top 5 priority research areas for the implementation and advancement of NextGen, including— (1) an assessment of why the research areas are a priority for the implementation and advancement of NextGen; (2) an identification of the other Federal agencies and private organizations assisting the Administration with the research; and (3) an estimate of when the research will be completed.	Request a copy of this report and review it.			

June 10, 2020

From

Rosmarie Herschbach

To

SCSC Roundtable

Message

Jet Noise Problem

Dear Roundtable:

I have written to you before and to Representatives etc. Jimmy Panetta and others. I also send complaints to the airports and the FAA.

My name is Rosmarie Herschbach and I live at 742 San Miguel Canyon Road, Royal Oaks, CA.95076 I have been terribly impacted by the jet noise, ever since the Next Generation Law was passed by Congress on March 13, 2015. Since then more laws have been passed to benefit Airlines and big Corporations. The FAA changed the nice jet routes that we had, like Big Sur and the nice route over Granite Rock etc. in San Benito County. Now the FAA implemented new routes like SERFER and BRIXX. These new routes, from six airports, fly over my house, property and surrounding areas, day and night, and make my life miserable. I cannot sleep at night, lost my peace and quiet, I am stressed out from the lack of sleep.

I am 81 years old, have lived on this property since the year 1979. It is up the hill in a rural area. I do not want to move to another place that has less jet noise, since I could not afford it. Before the law was changed in 2015, I enjoyed peace and quiet, and was able to sleep without interruptions. Now it is sometimes so noisy that I cannot sleep at all, and that is very harmful to my health and peace.

I do not know what to do anymore, since nobody is listening to my concerns; therefore, please be so kind and help me with this awful jet noise problem I have. I am very sensitive to the jet noise, while some people are not and that is where the jet noise should go.

Sincerely,

Rosmarie Herschbach

June 11, 2020

From

SCSC Roundtable - RESPONSE

To

Rosmarie Herschbach

Message

Jet Noise Problem

Dear Ms. Herschbach,

Thank you for your comments, we appreciate your input. The SCSC Roundtable is listening, and welcomes additional feedback. Your comment letter has been noted and will be included with the agenda packet for the next full Roundtable meeting. If you are able to participate, the next full SCSC Roundtable meeting will be held virtually via a Zoom Webinar on July 22, 2020 from 1:00pm to 4:00pm. A Technical Working Group Meeting will be held prior to that, (also virtually) on Wednesday June 17th from 2:00 pm to 4:30 pm. Details for these

meetings will be posted to the website here once the agenda is finalized. Additional meeting recaps can also be found on the website for your reference.

Thank you,

SCSC Roundtable Staff

June 11, 2020

From

Mary-Lynne Bernald

To

SCSC Roundtable

Message

Authorizing the Meeting of SCSC RT Technical Working Group Subcommittee

Given the COVID-19 related economic situation which has direct budget consequences on the SCSC Roundtable's next fiscal year, I, as Chair, am authorizing, by exception, the Technical Working Group Subcommittee meeting once in June on June 17th from 2-4:30 p.m. to review, discuss, and prioritize their Work Plan based on items found in that document and in the IFP Gateway. In addition, they are authorized to receive a briefing on potential collaborative work with SFO Roundtable and possibly OAK Noise Forum regarding Night Operations. No action may be taken without the approval of the entire Roundtable body per the Work Plan Item 3.4.1.

Regards,

Mary-Lynne Bernald

Chair, SCSC Roundtable

June 12, 2020

From

Evan Wasserman

To

SCSC Roundtable

Message

SCSC Roundtable - Technical Working Group - Agenda Posted

Dear SCSC Roundtable and Interested Parties,

As notification, the SCSC Roundtable Technical Working Group will be holding a virtual meeting on June 17th, 2020 from 2:00pm PDT until 4:30pm PDT. The meeting agenda is now posted to the SCSC Roundtable Website for your convenience.

Have a great weekend!

Regards,

SCSC Roundtable Staff

June 12, 2020

From

SCSC Roundtable

To

Tom Pyke, Karen Chapman, Emmanuel Garcia

Message

SCSC Roundtable - Letter Regarding Upcoming Quiet Skies Caucus Meeting

Dear Congressman Khanna, Congresswoman Eshoo, Congressman Panetta,

At the direction of the Santa Clara/Santa Cruz Counties Airport/Community Roundtable (SCSC Roundtable), we are attaching a letter that provides the Roundtable's input regarding the upcoming Quiet Skies Caucus meeting with FAA Administrator Dickson.

For our reference, please confirm receipt of the letter, and direct any questions you may have to scscroundtable@gmail.com. Thank you.

Regards,

SCSC Roundtable Staff

www.scscroundtable.org

Attachment Name

20200612_Congressionals_SCSC Leg Comm Letter re Quiet Skies Caucus June 12 2020

June 12, 2020

From

Tom Pyke

To

SCSC Roundtable

Message

SCSC Roundtable - Letter Regarding Upcoming Quiet Skies Caucus Meeting

Got it and just sent to the DC legislative staff working on this.

June 12, 2020

From

SCSC Roundtable

To

Tamara Swann

Message

SCSC Roundtable - Letter Regarding Upcoming Quiet Skies Caucus Meeting

Good morning FAA Representatives,

At the direction of the Santa Clara/Santa Cruz Counties Airport/Community Roundtable (SCSC Roundtable), we are attaching a letter that provides the Roundtable's input to Congressional Representatives regarding the upcoming Quiet Skies Caucus meeting with FAA Administrator Dickson.

For our reference, please confirm receipt of the letter, and direct any questions you may have to scscroundtable@gmail.com. Thank you.

Regards,

SCSC Roundtable Staff
www.scscroundtable.org

Attachment Name

20200612_T_Swann_SCSC Roundtable - Letter Regarding Upcoming Quiet Skies Caucus Meeting

SANTA CLARA/SANTA CRUZ COUNTIES
AIRPORT/COMMUNITY ROUNDTABLE
PO Box 3144
Los Altos, CA 94024

June 12, 2020

The Honorable Anna Eshoo
698 Emerson Street
Palo Alto, California 94301

The Honorable Ro Khanna
3150 De La Cruz Blvd
Suite 240
Santa Clara, CA 95054

The Honorable Jimmy Panetta
100 W. Alisal Street
Salinas, CA 93901

Re: Upcoming Quiet Skies Caucus Meeting with FAA Administrator Dickson

Dear Congresswoman Eshoo, Congressman Khanna and Congressman Panetta,

The Santa Clara/Santa Cruz Counties Airport/Community Roundtable (Roundtable) is pleased to hear that the Quiet Skies Caucus is meeting with the FAA Administrator Dickson in the very near future. We hope it is a productive meeting. To that end, we have three topics that we request you convey to Administrator Dickson during the meeting.

First, the Roundtable would like to see the FAA use different noise metrics to measure noise from air traffic that residents experience. The FAA was required to evaluate alternative noise metrics in Section 188 of the FAA Reauthorization Act of 2018, and concluded that their current metric (DNL) is the appropriate one to use for assessing aircraft noise impacts. The Roundtable has concerns about this conclusion, as DNL is a 24-hour measurement that artificially diminishes the noise impact that each individual flight has on our shared constituents. The Roundtable has plans to propose policies to drive new noise metrics. In the meantime, we would appreciate the Quiet Skies Caucus raising our concerns about the FAA's use of the DNL metric to assess noise impacts at the meeting with the FAA Administrator.

Second, the Roundtable would like the FAA to hold newly manufactured supersonic airplanes to the same noise certification requirements as subsonic airplanes. We recently submitted comments to the

FAA stating our position in response to the Notice of Proposed Rulemaking 20-06. A copy of our comments are attached. We would appreciate the Quiet Skies Caucus supporting this position and bringing it up during the meeting with Administrator Dickson.

Third, our shared constituents continue to have serious concerns about the negative impacts of the implementation of NextGen in the Northern California Metroplex. Until COVID-19 affected the aviation industry, the noise from flights that were shifted and concentrated over residents was unbearable, and there has been little movement by the FAA on the recommendations of the Select Committee and the Ad-Hoc Committee. We have heard that at least one airport (Boston Logan) is working with MIT to develop methods to disperse concentrated NextGen flight tracks. Since flight paths were dispersed prior to the implementation of NextGen, we support adding dispersion back into flight paths to eliminate the concentration of noise over the same set of residents. We would appreciate the Quiet Skies Caucus getting to the root of the FAA's resistance to dispersion and support adding dispersion of flights back into the National Airspace System, and in particular, the Northern California Metroplex.

We appreciate the Quite Skies Caucus meeting with the FAA Administrator. If we can provide additional information on our requests or if you would like to talk about these topics, do not hesitate to reach out to me.

Sincerely,

Lisa Matichak

Lisa Matichak
Chair, Legislative Committee of the Santa Clara/Santa Cruz Airport/Community Roundtable

cc: FAA Western-Pacific Regional Administrator, Raquel Girvin

Attachment: May 29, 2020 letter from the Santa Clara/Santa Cruz Airport/Community Roundtable to the FAA re Notice of Proposed Rulemaking 20-06, Docket Number FAA-2020-0316, Noise Certification of Supersonic Airplanes, 14 CFR Parts 21 and 36

SANTA CLARA/SANTA CRUZ COUNTIES
AIRPORT/COMMUNITY ROUNDTABLE
PO Box 3144
Los Altos, CA 94024

May 29, 2020

Docket Operations, M-30
U.S. Department of Transportation
1200 New Jersey Avenue SE
Room W12-140
West Building Ground Floor
Washington, DC 20590-0001

Re: Notice of Proposed Rulemaking 20-06, Docket Number FAA-2020-0316, Noise Certification of Supersonic Airplanes, 14 CFR Parts 21 and 36

To Whom It May Concern:

The Santa Clara/Santa Cruz Counties Airport/Community Roundtable (SCSC Roundtable), which is comprised of 11 cities and 2 counties within the Northern California Metroplex, represents 2.2 million residents on matters related to aircraft noise. The SCSC Roundtable respectfully requests that the Federal Aviation Administration's (FAA) final noise certification rule for supersonic airplanes include the following.

First, we request that supersonic airplanes be required to meet the same noise certification criteria as current newly manufactured subsonic airplanes when operating at subsonic speeds. This has been the FAA's stated goal for several decades[1] and was recently acknowledged [2]. Given past and future technology innovations, there is no need to change this goal. Requiring supersonic airplanes to meet the existing Stage 5 noise standards would be the first step to having supersonic airplanes be required to keep in step with the noise reductions achieved within the subsonic airplane fleet. In light of the magnitude of public outcry over airplane noise nationally and from the implementation of the Northern California Metroplex, the SCSC Roundtable believes it is prudent to set expectations for the certified

[1] Federal Register, vol. 43, No. 126, "Civil Supersonic Airplanes, Noise and Sonic Boom Requirements", " 43 CFR 28406-28407, June 29, 1978, https://tile.loc.gov/storage-services/service/ll/fedreg/fr043/fr043126/fr043126.pdf

[2] Memorandum from the FAA Assistant Chief Counsel for Regulations (AGC-200) to the Executive Director of FAA's Office of Environment and Energy (AEE-1), "Applicability of part 36 to new supersonic aircraft," February 21, 2018. (Attached)

noise levels of supersonic airplanes at the beginning of supersonic airplane development process. We believe that the impacted public has the right to expect that newly manufactured aircraft, regardless of type, will meet the most stringent existing Stage 5 noise levels and there will be no backsliding in the FAA's aircraft noise certification standards.

Second, we request that if a Variable Noise Reduction System (VNRS) and/or a Programmed Lapse Rate (PLR) system is used during the noise certification process, then the airplane with the relevant system(s) enabled shall be shown to produce noise levels on level terrain under the airplane that decrease with the airplane's altitude at the same or greater rate than would occur if the relevant system(s) were not enabled, until the airplane has reached the floor of the Class A airspace (i.e., 18,000' MSL). Further, if a VNRS or a PLR system is used during the noise certification process, the relevant systems shall be required to remain activated at altitudes below 18,000' MSL unless required for safety by rare and exceptional conditions.

The FAA has a statutory mandate to protect the public health and welfare from aircraft noise and sonic booms. To that end, it is imperative that the FAA continues to set progressively more stringent noise certification levels that continue to reduce airplane noise over time. The FAA's current proposed supersonic airplane noise certification levels are a regression in noise stringency and represent a step backwards in aircraft noise exposure that would be unwelcome by the 2.2 million constituents we represent. The SCSC Roundtable further believes that technological advancements will continue to enable breakthroughs in airplane lifting surfaces and airplane engine design that will make further noise reductions for both subsonic and supersonic airplanes possible.

Therefore, the SCSC Roundtable respectfully requests that the final noise certification standards require, at a minimum, that supersonic airplanes be subject to Stage 5 noise certification requirements when operating at subsonic speeds, and in the future be subject to the more stringent noise certification requirements when they are defined by the FAA.

On behalf of the SCSC Roundtable, thank you for your attention to these requests.

Sincerely,

Mary-Lynne Bernald
Chairperson, SCSC Roundtable

cc: Congresswoman Eshoo
Congressman Khanna
Congressman Panetta

Attachment: Memorandum from the FAA Assistant Chief Counsel for Regulations (AGC-200) to the Executive Director of FAA's Office of Environment and Energy (AEE-1), "Applicability of part 36 to new supersonic aircraft," February 21, 2018.

Federal Aviation Administration

Memorandum

Date: February 21, 2018

To: Executive Director, Office of Environment and Energy, AEE-1

From: Assistant Chief Counsel for Regulations, AGC-200

Prepared by: Karen Petronis, Senior Attorney for Regulations, AGC-210

Subject: Applicability of part 36 to new supersonic aircraft

My staff was recently asked whether 14 CFR part 36, Noise Standards: Aircraft Type and Airworthiness Certification, would apply to an application for type certification of a new supersonic aircraft. Our interpretation is that it does not apply. A different means of noise certification of a supersonic aircraft would be required.

The applicability of part 36, as listed in §36.1(a)(1) is limited to "*subsonic* transport category large airplanes, and for *subsonic* jet airplanes regardless of type" (emphasis added). Section 36.1(a)(3) adds "Concorde airplanes." No supersonic airplane other than the Concorde is included in the applicability for the part.

Regulatory history related to noise from supersonics

Historically, the FAA has never had the data to support promulgation of actual noise levels for supersonic aircraft, and thus never took an opportunity to broaden the applicability section to supersonic aircraft other than the Concorde.

In the 1970s, the FAA chose to call out the Concorde specifically for regulation as that airplane was beginning worldwide operations. The Concorde is specifically addressed in part 36 subpart D (including the Noise Control Act standard of §36.301(b)) concerning the lowest noise levels that were practicable and appropriate for the Concorde type design. The FAA would have to promulgate a change to part 36 applicability and new regulations on noise levels in Subpart D to account for any other supersonic aircraft design.

As early as 1986, the FAA expressed its interest in amending its regulations to account for the development of supersonic aircraft other than the Concorde. In an Advance Notice of Proposed Rulemaking (ANPRM), the FAA published notice of its intent to amend parts 36 and 91 to account for noise type certification and civil operation of supersonic aircraft (other than the Concorde, which was already covered).[1] The disposition of comments to that ANPRM[2] notes that commenters stated that there could be no focus on noise reduction technology until an aircraft manufacturer selects a propulsion system and the characteristics are known. Similarly, commenters said that the method of noise type certification could not be determined without knowledge of the aircraft design.

As noted in our subsequent proposed rule (NPRM) in 1990, commenters to the ANPRM also stated that Stage 3 (the certification standard then) should be a minimum requirement, and that anything less would be regressive. The 1990 NPRM proposed to remove the subsonic designation from §36.1, and to require future supersonic aircraft to meet (the then-current) Stage 3 noise levels. It also proposed an amendment to part 91 to require that any supersonic aircraft operating to or from a U.S. airport comply with Stage 3 noise levels, so as to preclude the operation of any future Stage 2 supersonic aircraft produced outside the United States. This proposal for mandatory operation at Stage 3 predated the Airport Noise and Capacity Act (1990), which required Stage 3 as an operational minimum for subsonic aircraft as of January 1, 2000.

In 1994, the FAA withdrew the 1990 NPRM.[3] The withdrawal document stated only that further investigation and research was necessary before developing a final rule. On the same day the proposal was withdrawn, however, the FAA published a policy statement indicating that despite withdrawing the proposed rule, "the FAA has not changed its policy on noise issues involving the development of future-generation civil supersonic airplanes." The published policy included a statement that any future supersonic aircraft would be expected to "produce no greater noise impact on a community than a subsonic airplane certified to Stage 3 noise limits." (59 FR 39679, August 4, 1994). The FAA reiterated this expectation in a similar 2008 policy statement when the subsonic noise certification standard was Stage 4: "The latest noise limit in Part 36 is Stage 4, which applies to the development of future supersonic airplanes operating at subsonic speeds" (73 FR 62871, October 22, 2008). The same historic lack of data to establish full supersonic noise standards continues today.

New supersonic type certification today

If a person applies for a type certificate for a supersonic aircraft today, we are of the opinion that part 36 does not apply based on the language of §36.1. However, that lack

[1] ANPRM: 51 FR 39663 (October 30, 1986)
[2] Comment disposition in the NPRM preamble, 55 FR 22020 (May 30, 1990)
[3] Withdrawal: 59 FR 39711 (August 4, 1994)

of regulation in part 36 does not mean that the applicant is free of noise requirements at certification.

The FAA has a statutory mandate to "protect the public health and welfare from aircraft noise and sonic boom" in 49 USC 44715. That language came from 49 USC App 1431 (the former codification of the Federal Aviation Act) and the Noise Control Act of 1972.

§44715(a) states that the Administrator "shall prescribe" –

> i) standards to measure aircraft noise and sonic boom, and
> ii) regulations to control and abate aircraft noise and sonic boom.

This duty continues to apply even in the absence of current regulations that would cover a particular type of aircraft. Accordingly, if a manufacturer applies for a type certificate for a supersonic aircraft before the FAA adopts noise standards for the aircraft type, that application would trigger the need for the FAA to do rulemaking to describe the noise standards that would apply to the aircraft. This is reinforced by the statute in §44715(a)(3) that states:

> (3) An original type certificate may be issued under section 44704(a) of this title for an aircraft for which substantial noise abatement can be achieved only after the Administrator of the [FAA] prescribes standards and regulations under this section that apply to that aircraft.

Section 44715 also specifies that when prescribing such standards and regulations, the FAA "shall consider relevant information related to aircraft noise and sonic boom" (§44715(b)(1)), consult with other government authorities (§44715(b)(2)), and consider safety (§44715(b)(3)). Section 44715(b)(4) states that the Administrator must "consider whether the standard or regulation is economically reasonable, technologically practicable, and appropriate for the applicable aircraft." This latter language comes from the Noise Control Act[4] (1970), under which the FAA must make a determination at the time of each new type certification. The FAA had specifically incorporated the core of the Noise Control Act language in §36.301(b) that applied to the Concorde, requiring that:

> …the noise levels of the airplane are reduced to the lowest levels that are economically reasonable, technologically practicable, and appropriate for the Concorde type design.

The FAA has a statutory duty to conduct rulemaking for any requirement that the Administrator finds appropriate for carrying out the purpose of §44715, and we would be

[4] Most of the recodification of FAA authority in 1991 broke up pieces of older authorizing legislation, including the Noise Control Act standards, into new sections.

required to publish any proposed standards for public comment, even if the standards eventually apply only to one aircraft. The Administrative Procedure Act states that a --

> "rule" means the whole or part of an agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy.... 5 USC 551 (4).

A new type certification application for a supersonic aircraft might well require adoption of standards that end up applying solely to that applicant for that aircraft (though it could form the basis for general rules that apply to future applicants). Legally, it would function as a rule of particular applicability rather than a rule of general applicability.

In forming an initial matrix of what noise requirements would apply to a supersonic aircraft design, we may first want to determine what current regulations may be appropriate rather than start from scratch. For example, the noise measurement standards of part 36 Appendix B were found to be appropriate for the Concorde, and could serve as the starting point for noise certification of a supersonic aircraft unless demonstrated by an applicant that the standards are not appropriate. Further, our policy history states that a new supersonic aircraft, when operating subsonically, would be expected to comply with the noise limits for subsonic aircraft unless the applicant can show that subsonic operation of its aircraft will differ so significantly from operation of subsonic aircraft of similar size and weight that different standards should apply. It would be up to the applicant both to suggest such a requirement and justify why it is appropriate for the FAA to consider. The special condition process defined in 14 CFR §§21.16, 11.19, and 11.38, including the development of issue papers to define the appropriate standards, may serve as a useful model for adopting other specific parts of a new set of noise standards. All of these processes are data driven.

The question of how a supersonic aircraft might be tested or its noise limits determined when operating at supersonic speed are still to be solved as a matter of certification. The operating rules of part 91 applicable to supersonic aircraft are discussed below. Operating rules neither drive nor limit certification standards under our regulatory scheme, since by definition operating rules apply to aircraft that were previously certificated and already in service.

Current supersonic operating rules

While this memo was intended to address the state of our certification rules, we are briefly addressing the operating rules in part 91 subpart I that have been the subject of recent questions.

The operating rule in §91.817(a) prohibits supersonic flight over land in the United States; it has no effect on the development of appropriate noise requirements under part 36. In fact, development of such requirements would be necessary before §91.817

could be changed to allow such flights if the FAA is to comply with its statutory duty to protect the public health and welfare.[5] Similarly, §91.817(b) places limits on operations that might cause a sonic boom created outside U.S. airspace to reach the U.S. coastline. In order to determine how far out the supersonic signature (sonic boom) of an aircraft can be detected, there must be some kind of testing of the aircraft under those conditions to know what flight limitations would be appropriate; the FAA did this with the Concorde on approach to the east coast in the 1970s as its basis for this regulation. Other noise parameters that can only be created at supersonic speed may well be suggested and described by other entities of the U.S. government such as NASA, with whom the FAA has a significant historical working relationship regarding aircraft noise, and with whom the FAA is required to consult under §44715(b)(2).

Section 91.819 states that it applies to "supersonic airplanes that have not been shown to comply with the stage 2 noise limits of part 36 in effect" in 1977.

Read with historical context, this section placed limits on aircraft that met only Stage 1 noise limits.[6] Since a reference to part 36 noise levels is made, there has been question whether part 36 actually applies to supersonic aircraft (other than the Concorde). We do not infer that an operating rule can, by historical reference, act to change the stated applicability of part 36. Further, any reference to the Stage 2 noise levels of part 36 suggests that the application is only to the subsonic operation of supersonic aircraft since no other noise levels exist in part 36.

Finally, concern has been raised about the effect of §91.821, an operating rule, which states that no one may operate a civil supersonic airplane unless it complies with the Stage 2 noise levels of part 36. Similar to the applicability of §91.819, the presence of this regulation raises the question whether new supersonic aircraft would have to be any quieter than Stage 2 to operate (the current *operational* minimum for subsonic airplanes is Stage 3).

The regulation was promulgated in 1978 (as an operating rule applicable to then-certificated, operational aircraft) and it remains in effect until the FAA changes it. When the regulation was adopted, the FAA stated in the final rule preamble that it was intended to apply to then-current supersonic airplane designs, and not to define requirements for future designs -

> The rules do not establish certification noise limits for future design SST's, since the technological feasibility of such standards is at present unknown. The FAA's

---

[5] The development of supersonic aircraft was foreseen and a method of authorizing developmental flights was adopted as Appendix B to part 91 at the same time the operational limits were put in place. The procedure remains available to all operators flying supersonic aircraft for development.

[6] The FAA amended part 36 to include the Stage 3 noise limit in 1977 for new subsonic type certification. When the term "does not meet" is used, it means an aircraft does not meet the minimum, not that an airplane that "does not meet Stage 2" might actually refer to Stage 3. All aircraft that meet stage 3 are presumed to meet Stage 2 since the levels are progressively quieter.

> goal is not to certificate, or permit to operate in the United States, any future design SST that does not meet standards then applicable to subsonic airplanes....
>
> Accordingly, consistent with technological developments, the noise limits in this rule are expected to be made more stringent before a future design SST is either type certificated or permitted to operate in the U.S.
>
> 43 FR 28406 (June 29, 1978)

As an operating rule, §91.821 addressed the airplanes existing at the time of its adoption that would be operated in the United States, and was aimed at distinguishing the first Concordes produced from those produced later, and from other supersonic aircraft that were in development. Noise operating rules historically and necessarily lag significantly behind the certification standards because they apply to aircraft certificated to earlier standards. Although the FAA took the next step toward more stringent supersonic airplane operating requirements in 1990 when it proposed to increase the Stage 2 limit to Stage 3, that proposed rule was withdrawn.

For reference, we also note our legal interpretation provided to your office on February 29, 2016, that addresses §91.817 in greater detail.

June 15, 2020

From

Rosmarie Herschbach

To

SCSC Roundtable

Message

Jet Noise Problem

Dear Evan Wasserman and Members of the Round Table:

Enclosed please find copies of e mails regarding my problems with jet noise. I have been suffering with these problems for over 5 years. I am so glad that we have a Round Table that cares about our problems. I hope that finally, I will get some relief.

I have a friend, Ed Bowles, that lives in Aromas, San Benito County. He used to work for Granite Rock Company for over 30 years. Every time I tell him my problems with jet noise, he syas "send the jets and other airplanes, back to this route over Granite Rock, etc. We don't mind to have them". The jets have used this route for over 35 years and have not received complaints from the people. This old route can be modernized to use the satellites and is also safe. The FAA refuses to go back to the old and safe routes.

Thank you again for all you do for me and thousands of other people.

Rosmarie Herschbach

Attachment Name

20200615_R_Herschbach_Jet Noise Problem

Received 6/22/2020

Dear Evan Wasserman and Members of the Round Table: June 15, 2020

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Thank you again for all you do for me and thousands of other people.

Rosmarie Herschbach
Rosmarie Herschbach
742 San Miguel Canyon Road.
Royal Oaks, California 95076
Monterey County
Phone (831) 728-1097

received 6/22/2020

Copy

Gmail

Noise Complaint - FAA Response (Issue AWP-201900877)

9-AWP-Noise (FAA) <9-awp-noise@faa.gov> Thu, Feb 20, 2020 at 9:27 AM
To: "rosmariehersch@gmail.com" <rosmariehersch@gmail.com>

Dear Ms. Herschbach,

Thank you for your email raising your concerns about aircraft overflights and the Northern California Optimization of the Airspace and Procedures in the Metroplex (NorCal OAPM). We appreciate you taking the time to share your concerns with our office and apologize for the delay in response.

The Federal Aviation Administration (FAA) implemented the NorCal OAPM project in a phased approach starting in December 2013 and ending in the spring of 2016. The project encompassed most of the Northern California metropolitan area and included six airports and more than 84 aircraft procedures. It replaced conventional air traffic control procedures with new satellite-based procedures, improving the safety, efficiency, and reliability of the National Airspace System.

Specifically, the project consisted of satellite-based departure and arrival procedures at San Francisco International Airport (SFO) as well as five other airports (HWD, OAK, PAO, SJC, and SMF). The project involved improving flexibility and predictability of air traffic routes through increased use of satellite-based routes. It is a key component of the FAA's Next Generation Air Transportation System.

As part of the environmental review of the NorCal OAPM project, the FAA released a Draft Environmental Assessment (EA) for public review and comment on March 25, 2014 and conducted four public workshops. The FAA conducted additional outreach with airports, elected officials and governments. The FAA received and addressed more than 428 comments on the Draft EA. In July 2014, the FAA completed the Final EA for the NorCal OAPM project and signed its Record of Decision (ROD). On August 7, 2014, the FAA issued the notice of availability of the EA and ROD in the Federal Register. As a legal matter, FAA's decision became final on September 2, 2016, and will not be revisited.

While the FAA will not re-evaluate the NorCal OAPM ROD, please recognize the agency is looking at concerns raised by local communities, particularly with regard to aircraft overflights. Toward this end, we are collaborating with congressional representatives and airport authorities to review all potential options. However, making airspace changes is a very complex undertaking and would likely be subject to separate airspace safety and environmental review processes. Thank you for this opportunity to review and respond to your concerns. The FAA's mission is to provide the safest, most efficient aerospace system in the world. We will continually strive to improve the safety and efficiency of flights in this country.

Sincerely,

Federal Aviation Administration

Gmail

Copy

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Sincerely,

Federal Aviation Administration

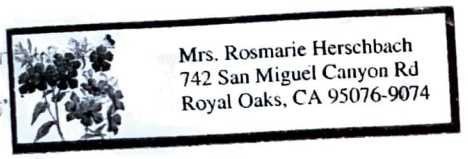
Copy

Sincerely,

Rosmarie Herschbach

472 San Miguel Canyon Rd
Royal Oaks, Ca. 95076
Monterey County

Phone (831) 728-1097"



Office of the Regional Administrator

Western-Pacific Region

Copy

Complaint:

Event Address	742 ~~742~~ San Mig[illegible] 95076
Aircraft Tail Number	*NA*
Airport Source	*WVI*
Start Date of Event	*2019-07-12 08:00 AM (UTC)*

Mrs. Rosmarie Herschbach
742 San Miguel Canyon Rd
Royal Oaks, CA 95076-9074

Description:

"Dear Daniel and Raquel @FAA.government:

My name is Rosmarie Herschbach. I have been suffering from jet airplane noise for 4 years and three months already. I have written many E mails to my representatives, gone to many meetings regarding the jet airplane noise, joined Save Our Skies from Santa Cruz and Quiet Skies from Nor Cal. I attended the last Round Table meeting that took place a the Santa Cruz Court House. I also send complaints to stop.jet noise.

After all this time and work, the jet airplane noise is worse than ever. Please I need your help.

I can see several lanes the jets follow by checking the chemical trails, that is when I did not catch the jet airplanes on time.

I get flights from San Francisco, San Jose and Oakland airports. I live at 742 San Miguel Canyon Rd. Royal Oaks, California 95076 in Monterey County. The old and safe routes of over Granite Rock in San Benito County and Santa Clara was changed and I believe is now called BRIXX. This route flies many jets to San Jose Airport. I live up the hill where the noise is much louder. I also am very sensitive to the jet airplane noise.

The FAA also has to have the jets fly back the good and safe route of Big Sur that was replaced by a new and noise route called SERFER. I would like the FAA to fly back the good and safe old routes that we had for over 35 years and did not bother many people. Get rid of the new and noisy routes of SERFER and BRIXX.

I have been sick and needed a major operation. I have been recuperating, but it is very hard with all the jet noise that keeps me stressed. I cannot sleep in peace at night. I have the jet noise every night and day. Very seldom I get a break. The noise also bothers my neighbors. Many jets use a route flying over 748 San Miguel Canyon Rd. I will need another operation on August 5, 2019 which I hope will be successful; for that I need rest and sleep and no stress. Please I need your help. I would be forever grateful to you, if I can get my peace and quiet back, that I enjoyed for many years, before the changes were made by the FAA. I was able to sleep well at night.

Received 6/22/2020

Gmail

Jet Noise Problem.

Rosmarie Herschbach <rosmariehersch@gmail.com> Fri, Jun 12, 2020 at 3:40 PM
To: scscroundtable@gmail.com

Dear Evan Wasserman and Members of the Round Table:

Thank you for your last e mail of June 11, 2020. It is nice to know that you and others are listening and are concerned with my problems and other people's problems caused by jet noise. I really appreciate it.

I have been so discouraged with the FAA. I sent a letter to the FAA complaining about the jet noise and it was forwarded to the Regional FAA. I would like to mail you a copy of this letter and copies of other complaints to airports etc. Please let me know the best address to send it to. In other words the FAA told me that all the new laws and changes to the routes, became final on September 2, 2016 and will not be revisited. That answer just made me cry, because I cannot see that I have to put up with the awful jet noise for the rest of my life (I am already 81 years old.)

I am so glad that we have kind and concerned people like you and others. I get jets flying over my property and surrounding area, from 6 airports now. It used to be only 3 airports, from San Francisco, San Jose and Oakland airports. They added 3 more airports and those are HWD, PAO and SMF. The jets fly day and night over my house and property in Monterey County. I hear them coming around 10 pm at night, just when I want to go to sleep. The jet noise, is sometimes, more than insane, constant noise through all the night and early morning; therefore, I cannot sleep at all. This insane and constant noise, happens more during weekends and holidays. I am a nervous wreck. Without the proper sleep, I am next day, like a Zombi with no energy at all.

My house is in a rural area, built up the hill in the year 1979. I had no noise then, until the Next Generation Law was passed by Congress. I have trees and greenhouses; I lease my property to Monterey Bay Nurseries. Jet airplanes fly over their property also, that is right next to mine, and make a lot of noise. I get a lot of flights to San Jose airport; I complain to them by phone.

I don't have good internet reception' therefore, I cannot participate in virtual meetings. I depend on my daughters to help me, but they are not always around. Also I don't like to drive anymore, since there is too much crazy traffic.

I hope and pray you can really help me, so I can sleep at night and have peace and quiet again.

Sincerely,
Rosmarie Herschbach
742 San Miguel Canyon Road
Royal Oaks, CA. 95076
Monterey County.

SCSC Roundtable <scscroundtable@gmail.com> Mon, Jun 15, 2020 at 11:15 AM
To: Rosmarie Herschbach <rosmariehersch@gmail.com>
Cc: Evan Wasserman <ewasserman@esassoc.com>, Steven Alverson <salverson@esassoc.com>

Hi Rosmarie,

Thank you for your follow up email. In response to your inquiry, the best address to send letters to has been provided

below for your reference. In addition, if you are able to participate in our public meetings by phone, we provide call-in information with the agenda packets online (or upon request) for individuals wishing to listen-in to the meeting. These call-in numbers are updated for each meeting. As noted, the next full meeting of the Roundtable will be on July 22, 2020 from 1:00pm PDT to 4:00pm PDT.

SCSC Roundtable
PO Box 3144,
Los Altos, CA 94024

Regards,

SCSC Roundtable Staff
[Quoted text hidden]
--
SC | SC Roundtable
https://scscroundtable.org

Gmail

Daily report summary for Rosmarie Herschbach

reporters@jetnoise.net <reporters@jetnoise.net> Mon, Jun 1, 2020 at 1:45 AM
To: rosmariehersch@gmail.com

Hello, Rosmarie Herschbach !

These Emails Will Continue :) We've found a fix.

All of these complaints have already been submitted to SFO directly. This email is just for your personal records (or to forward on to OAK or SJC.)

This is a list of 7 reports relating to jets on flight paths for SFO, SJC and OAK. Where possible, the aircraft were identified via flightradar24.com.

My details:

Caller code :	**HER052**
Name :	**Rosmarie Herschbach**
Address :	**742 San Miguel Canyon Rd, Royal Oaks, CA, United States**

The 7 reports:

6-15-2020

Just one example of hundreds of complaints I have sent.

Rosmarie Herschbach

Sun, May 31, 11:06 PM
Personal notes: Insane jet motor noise from many jets. Non stop noise. Please tell the FAA to remove the jet airplanes flying over 742 San Miguel Canyon Rd. Royal Oaks and surrounding area. Monterey County. I cannot sleep!
"Sleep" was disturbed.
Volume was "TOO LOUD". **Speedbrakes** were heard !

Sun, May 31, 11:01 PM
Personal notes: Insane jet motor noise, does not let me sleep! Please tell the FAA to remove the jet flights from 853, 748, and surrounding area, at Royal Oaks, Ca. Monterey County.
"Sleep" was disturbed.
Volume was "TOO LOUD". **Speedbrakes** were heard !

Sun, May 31, 07:23 PM
Personal notes: Insane jet motor noise, from several jet airplanes. Non stop noise for several hours already.
"Hearing" was disturbed.
Volume was "TOO LOUD". **Speedbrakes** were heard !

Sun, May 31, 03:45 PM Flight: AS3368 [SAN-SJC] (E75L; speed: 298 knots, altitude: 9137.0914531328 ft, distance: 10 KM)
Personal notes: Insane jet motor noise, from several jet airplanes flying right above my house and property. Non stop noise for several hours already.
"Hearing" was disturbed.
Volume was "TOO LOUD". **Speedbrakes** were heard !

Sun, May 31, 03:18 PM
Personal notes: Insane jet motor noise from many jet airplanes. Non stop noise for several hours already.
"Hearing" was disturbed.
Volume was "TOO LOUD". **Speedbrakes** were heard !

Sun, May 31, 12:29 PM
Personal notes: Loud jet motor noise. Non stop noise since last night.
"Hearing" was disturbed.
Volume was "very loud". **Speedbrakes** were heard !

Sun, May 31, 09:56 AM
Personal notes: Loud jet motor noise, all night, early morning and now, interrupted my sleep several times.
"Sleep" was disturbed.
Volume was "very loud". **Speedbrakes** were heard !

Thank you.

June 16, 2020

From
Subodh Iyengar
To
SCSC Roundtable
Message

New submission from Contact us

At the SCSC meeting a few months ago, we had requested a permanent noise monitor at Palo Alto from the FAA. Palo Alto is disproportionately affected by airplane noise and we haven't heard anything back yet about these noise monitors. Please urge the FFA and the SFO roundtable to deliver these noise monitors immediately.

Delaying or ignoring our request further is unacceptable behavior from the SFO roundtable and the FAA, and allowing them to do this makes it very hard the SCSC to affect change in the future. The SCSC should be more persistent and follow up about these kinds of requests.

June 18, 2020

From
Lydia Kou
To
SCSC Roundtable
Message

SFO Roundtable Meeting - June 3, 2020 summary

SCSC Roundtable,

I attended the SFO-RT videoconference meeting on June 3rd and wanted to summarize items that are relevant to the SCSC RT, including some possible next steps to consider. Here is the meeting packet, agenda, and video are available at this link.

Raquel Girvin and Faviola Garcia attended from the FAA.

Airport Director Ivar Satero Report

- GBAS Project – Moving forward with Honeywell, worked through contract.
  - He will have an answer on how the community can engage with SFO on GBAS at the next meeting.
- Permanent Monitors - Expects to hear back from the FAA if OK for permanent monitors outside the 65 DNL noise contour in the next week (2 locations to be considered).
- Given what we know today, he expects SFO back to 50% traffic by December and 2-3 years to be back to normal.
- SCSC RT Consideration: Given that GBAS approaches can start 23 nmiles from SFO, this topic is relevant to some SCSC Roundtable cities. We want to be involved in the design and review process of innovative approaches to determine if they can reduce aircraft

impacts. There needs to be follow up with the FAA on changing STARs so communities can get the full benefit from GBAS.

Presentation of SFO Noise Portal (newly designed)

- Located at noise.flysfo.com

Roundtable Input and the IFP Gateway

- Justin Cook (HMMH Consultant) mentioned that Roundtables may be able to provide comments on the IFP gateway.
  - Girvin is going to check on this and get back to the RT.
- SCSC RT Consideration: wait to hear the FAA answer.

Supersonic Letter

- Janet Borgens, Legislative Committee Chair, reviewed the proposed letter to the FAA. They are making a few additions and were approved to send the letter when completed.

Portable Monitor Subcommittee

- 8 portable noise monitoring terminals (NMTs), 4 more than previously.
  - 4 Permanent portables
  - 4 Short-term portable

Update on Other Bay Area Roundtables, Ann Wengert

- Desire to keep the collaboration effort between the RT's light weight because not resourced with administrative support for a separate body.
- Supersonic letter is a good example to work together when have common interests.
- Ricardo Ortiz, SFO RT Chair, mentioned desire to set up efforts for items in common.

Kind regards,--------

Lydia Kou - Council Member

June 22, 2020

From

Andi Jordan

To

SCSC Roundtable

Message

FW: notification letter

Hello Ms. Andrews,

Our City Manager Jamie Goldstein requested this letter sent to you. There is a PDF here for your reference, and a hard copy will be mailed tomorrow.

Thank you!

Warmly,
Chloé Woodmansee
Interim City Clerk
City of Capitola

Attachment Name

20200622_A_Jordan_FW notification letter

420 CAPITOLA AVENUE
CAPITOLA, CALIFORNIA 95010
TELEPHONE (831) 475-7300
FAX (831) 479-8879

Andi Jordan
Executive Director
Cities Association of Santa Clara County
PO Box 3144
Los Altos, CA 94024

Dear Andi Jordan,

I am writing to officially notify you that the City of Capitola is discontinuing its membership in the Santa Clara/ Santa Cruz Roundtable. Our City Council in joined this important aircraft noise mitigation group in 2019. However, due to the COVID-19 pandemic's negative effect on our local economy and City budget, we cannot continue our membership in the Roundtable. Our FY 2020-21 Budget was approved by City Council on June 11 and included only mandated City services and the most essential expenditures.

Thank you for your work to monitor and influence local, state, and federal legislative and regulatory actions associated with aircraft noise. This issue remains significant to Capitola City Council, who may revisit membership of the Roundtable in future years when our community's economy and City budget has rebounded.

Best wishes,

Jamie Goldstein
City Manager
City of Capitola

cc: Councilmember Ed Bottorff, Capitola Roundtable representative

June 23, 2020

From

Rosmarie Herschbach

To

SCSC Roundtable

Message

Insane jet Motor Noise

Dear Evan Wasserman and Members of the Round Table:

I should be sleeping by now, but the jet noise is more than insane. It has been this way for 4 days and 4 nights, counting tonight. The jet noise from several jet airplanes is insane and non stop. I cannot possibly sleep. If I get up really late, I can get about two hours of sleep; therefore I only had a few hours of sleep and I am exhausted now.

I do not know what to do anymore. Please help me. Many of the jets flying over my property, neighbors and surrounding area, fly to San Jose airport using this new route. Please have the FAA go back to the old route over Granite Rock etc, in San Benito County. This route was used over 35 years and people did not complain about noise. It can be modernized to todays standards using satellites. It also is a very safe route. I am a nervous wreck from the lack of sleep, peace and quiet.

I get jet flights from 6 airports and the noise is loud and constant. I have written many E mails, letters to Jimmy Panetta, Dianne Feinstain, FAA etc., asking for help. The jet noise has been going on for over 5 years now. It is really worse now, since I do not get any break from the jet noise.

Please help me.

Rosmarie Herschbach
Royal Oaks, Ca, 95076
Monterey County.

June 23, 2020

From

SCSC Roundtable

To

Rosmarie Herschbach

Message

Insane jet Motor Noise

Dear Ms. Herschbach,

Thank you for your email regarding your continued jet noise disturbance. Unfortunately, the Roundtable has no authority to change aircraft flight paths. This authority rest solely with the Federal Aviation Administration (FAA).

The Roundtable understands that the FAA's work to return the flight paths back to their previous locations is ongoing, but it is a process that often takes two to three years to complete. The Roundtable is monitoring this effort, but it has been several months since the FAA's last update. When the Roundtable receives an update from the FAA, we will post it to the Roundtable's website at scscroundtable.org.

Thank you again for contacting the SCSC Roundtable.

Regards,
SCSC Roundtable Staff

June 23, 2020

From

Rosmarie Herschbach

To

SCSC Roundtable

Message

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Please help me.

Rosmarie Herschbach
Royal Oaks, Ca, 95076
Monterey County.

June 23, 2020

From

Rosmarie Herschbach

To

SCSC Roundtable

Message

Insane jet Motor Noise

Thank you so much for always answering my e mails. You are truly a group of people that is concerned in solving the awful problems we have with jet noise. I have been really depressed, and not able to sleep at night etc. but thanks to the Santa Cruz Round Table I have hope for the future, even if it takes two to three years. I really hope the FAA will be willing to go back to the old good routes, like big Sur and the Route over Granite Rock etc. in San Benito County. Get rid of the noisy new routes. like Surfer and Brixx.

You are a wonderful group of people that really cares for the people that are impacted with jet noise. Bless you!

Rosmarie Herschbach

June 23, 2020

From
Evan Wasserman
To
SCSC Roundtable
Message

FAA Response to Follow-up Questions on PIRAT

Dear SCSC Roundtable Members and Alternates,

For your convenience, and public reference, this response letter from the FAA to the SCSC Roundtable has been posted to the SCSC Roundtable website here. As you recall this letter had previously been sent to the Roundtable and Alternates for reference by email.

Regards,

Evan Wasserman

June 24, 2020

From
Steve Alverson
To
Raquel Girvin
Message

Requesting an Update on the FAA's BSR Overlay Development Work

Dear Administrator Girvin,

On behalf of Chairperson Mary-Lynne Bernald and the Santa Clara/Santa Cruz Airport/Community Roundtable, I am transmitting to you a letter requesting an update from the FAA on its work to develop the Big Sur Overlay.

Thank you for your attention to this matter.

Regards,

Steve

Steven R. Alverson
SCSC Roundtable Facilitator

Attachment Name
20200624_R_Girvin_Requesting an Update on FAA's BSR Overlay Development Work

SANTA CLARA/SANTA CRUZ COUNTIES
AIRPORT/COMMUNITY ROUNDTABLE
PO Box 3144
Los Altos, CA 94024

June 24, 2020

Ms. Raquel Girvin
Regional Administrator, AWP-1
FAA Western-Pacific Region
777 South Aviation Boulevard, Suite 150
El Segundo, CA 90245

Subject: Request for an Update on the FAA's Development of the Big Sur Overlay

Dear Regional Administrator Girvin,

I am writing to you on behalf of the Santa Clara/Santa Cruz Airport/Community Roundtable (SCSC Roundtable) to formally request that you or your designee provide a status update on the Federal Aviation Administration's (FAA) development of the Big Sur (BSR) Overlay that will return flights that are currently on the SERFR STAR to their previous ground track. Since late 2019 and at subsequent regular Roundtable meetings, the SCSC Roundtable has been on record with the FAA asking for an update on this matter. In response, your representatives at those meetings have offered to provide an update on this matter, which to date has not occurred. Despite fewer planes in the air, calls from residents of the affected communities and Roundtable members seeking an update from the FAA on the BSR Overlay are increasing daily.

The SCSC Roundtable currently anticipates holding regular meetings (virtually) in July (specifically July 22, 2020), September, and November. May we expect a report within that period from you or your designee on the FAA's work over the past year toward developing the BSR Overlay?

As this is a high priority for the Roundtable and the affected community, please let me know when you or your designee will be able to provide an update to the Roundtable and I will ensure that you or they will have a slot on the agenda.

Thank you for your immediate attention to this matter.

Most sincerely,

Mary-Lynne Bernald

Mary-Lynne Bernald
Chairperson, Santa Cruz/Santa Clara Counties Airport/Community Roundtable

Cc: SCSC Roundtable Members and Alternates
Congressman Jimmy Panetta
Congresswoman Anna Eshoo
Congressman Ro Khanna

June 24, 2020

From
Tamara Swann
To
SCSC Roundtable
Message

SCSC Roundtable - Letter Regarding Upcoming Quiet Skies Caucus Meeting

Good afternoon Evan,

I apologize for the delay in my acknowledgement of the attached letter. We will follow-up with any questions.

Thank you.

Tamara A. Swann
Deputy Regional Administrator, AWP-2
Western-Pacific Region

June 25, 2020

From
SCSC Roundtable
To
Congressional Representative Staff, FAA Regional Administrator Raquel Girvin, SCSC Roundtable Members and Alternates, SCSC Roundtable Member Communities and Interested Parties,
Message

SCSC Roundtable - Recall of Letter Regarding Upcoming Quiet Skies Caucus Meeting

Dear Congressional Representatives, Regional Administrator Girvin, SCSC Roundtable Members and Alternates, SCSC Roundtable Member Communities and Interested Parties,

On behalf of the SCSC Roundtable Chairperson Mary-Lynne Bernald, the letter dated June 12, 2020 regarding the Upcoming Quiet Skies Caucus Meeting with FAA Administrator Dickson has been recalled. The letter is considered to be a draft that was proposed by the Legislative Committee of the SCSC Roundtable for the full Roundtable's consideration. The draft letter will be discussed and considered for action by the full Roundtable at its July 22, 2020 regular meeting. We apologize for any confusion this may have caused, and look forward to your continued support of and participation in the SCSC Roundtable.

Thank you for your understanding,

SCSC Roundtable Staff

July 1, 2020

From

Steven Leonardis

To

Andi Jordan

Message

SCSC Roundtable membership

Dear Ms. Jordan,

Monte Sereno adopted our FY 2020-2021 budget on 6/30/20. Council voted to withdraw participation in the Airport Roundtable this year. This may change in FY21-22 or a subsequent year.

Please let me know if this email is sufficient notification of 30 days-notice to withdraw, per our agreement (MOU) signed 12/20/18.

Sincerely,

Steven Leonardis
City of Monte Sereno

July 5, 2020

From

Mike McClintok

To

SCSC Roundtable

Message

OAK Forum July 15 Meeting Agenda materials

All concerned:

Attached are the agenda materials for the July 15 Forum meeting. The meeting will be a virtual meeting via Zoom. The Port Board Room will be dark, so you will need to join the meeting through the Zoom conferencing application per the instructions on the back of the meeting agenda.

Mike McClintock
Forum Facilitator

Attachment Name

20200705_M_McClintock_OAK Forum July 15 Meeting Agenda materials

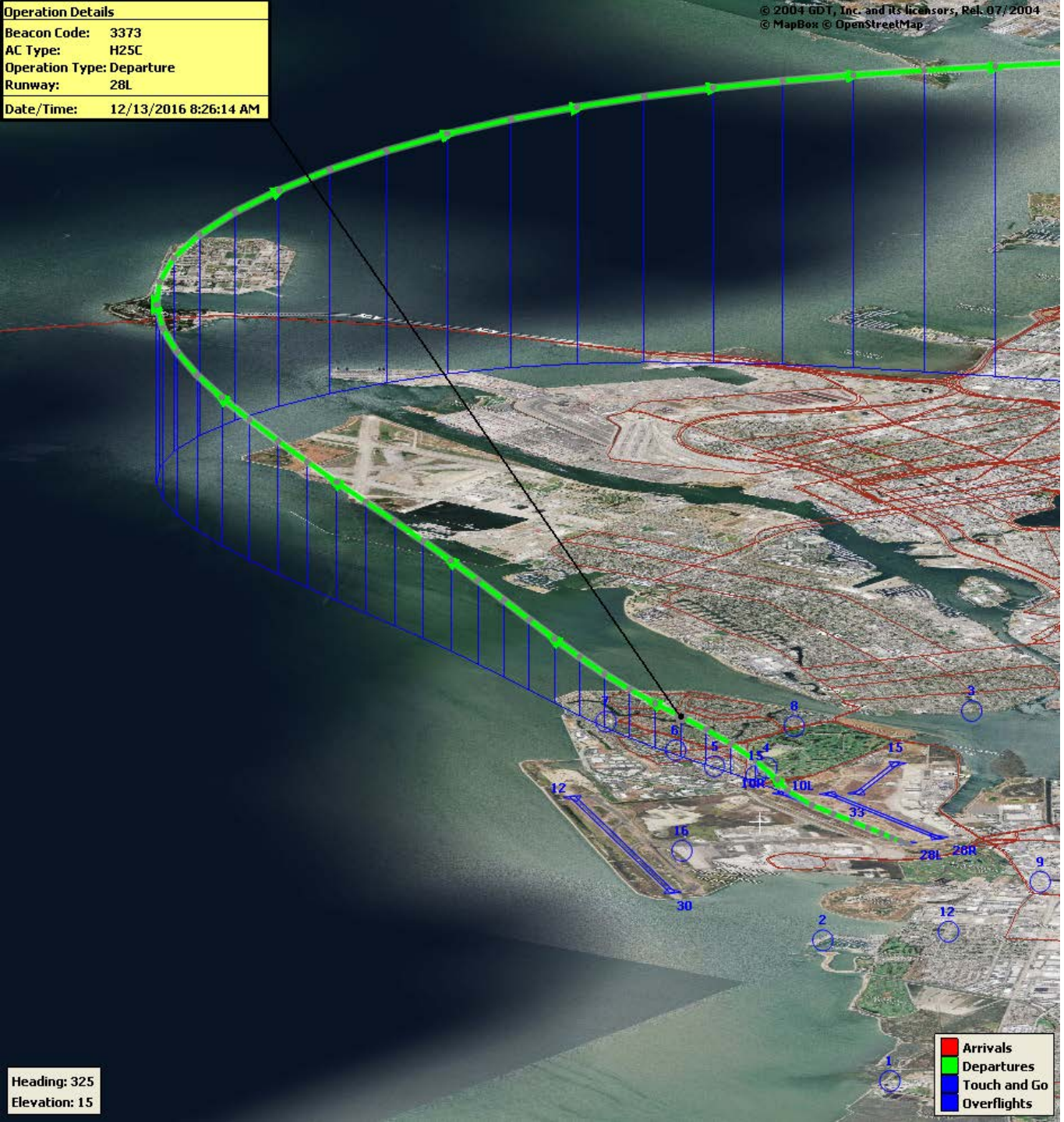
NOISE FORUM SUMMARY

North/South Field Working Groups

NOISE ABATEMENT REPORT

FOURTH QUARTER 2019

Compliance Monitoring Quarterly Summary Comparison Fourth Quarter 2019				
	2018Q4		2019Q4	
	Compl.	N/C	Compl.	N/C
Runway 28R/L Jet Departure Compliance	96%	4%	95%	5%
Total Airport-wide Corporate Jet Departures	2,868	123	2,709	147
Runway 10R/L Jet Landing Compliance	59%	41%	69%	31%
Total Southeast Plan Corporate Jet Landings	96	66	220	97
North Field VFR Departure Compliance	93%	7%	91%	9%
Total Runways 28R/L & 33 Departures	235	18	214	22
North Field Quiet Hours Compliance	70%	30%	77%	23%
Total North Field Quiet Hours Departures	138	59	174	51
Runway 30 BFI Right Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 Turbojet Departures	18,609	70	19,170	73
Night Time Departure Compliance	97%	3%	99%	1%
Total Runway 30 Night Turbojet Departures	3,078	84	3,658	52
Runway 12 Night Departure Compliance	98%	2%	99%	1%
Total Runway 12 Night Turbojet Departures	187	4	276	3
Runway 30 East Turn Departure Compliance	99%	1%	99%	1%
Total Runway 30 East Turn Departures	5,710	52	5,220	59
100 Degree Radial Turbojet Landing Compliance	99%	1%	99%	1%
Total 100 Degree Radial Turbojet Landings	1,408	11	1,245	11
Engine Runup Program Compliance	100%	0%	100%	0%
Total Evening and Nighttime Engine Runups	9	0	8	0
Note: N/C means non-compliant. Percentage values are rounded out.				

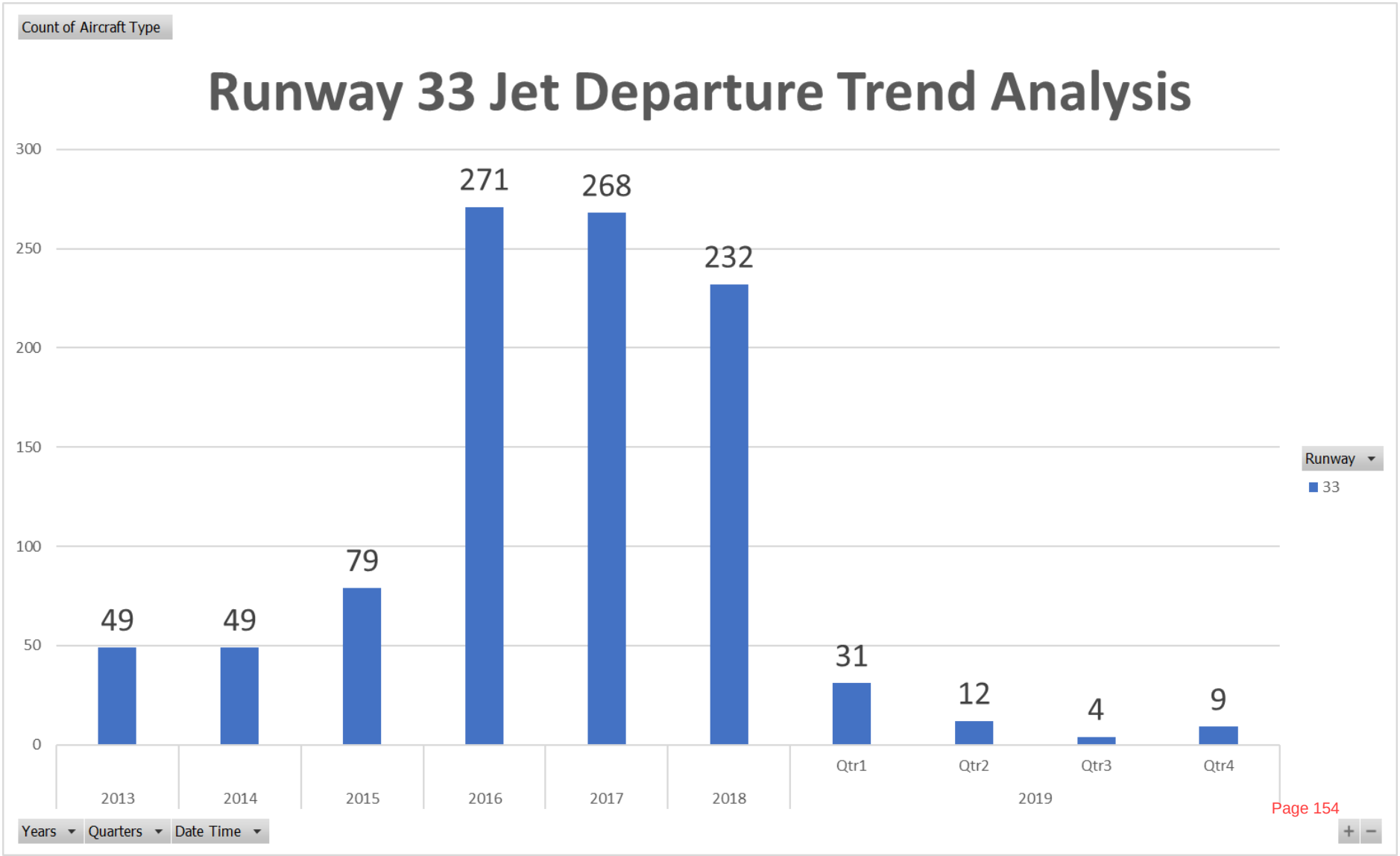


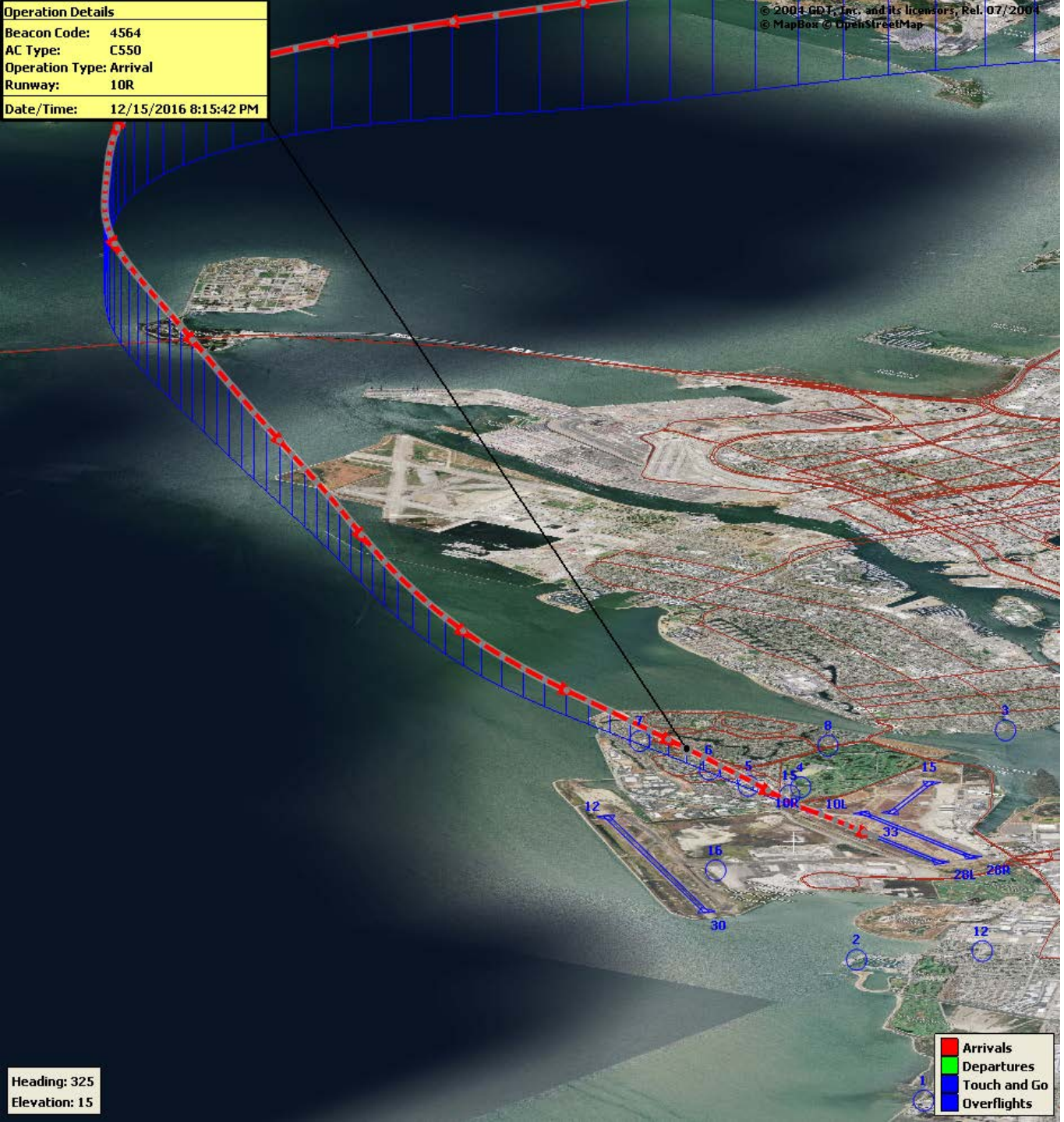
Runway 28R/L
Jet Departure NAP

2019Q4
95% Compliance
(2,856 total departures)
(147 non-compliant)

2018Q4
96% Compliance
(2,991 total departures)
(123 non-compliant)

RUNWAY 33 JET DEPARTURES
Fourth Quarter 2019

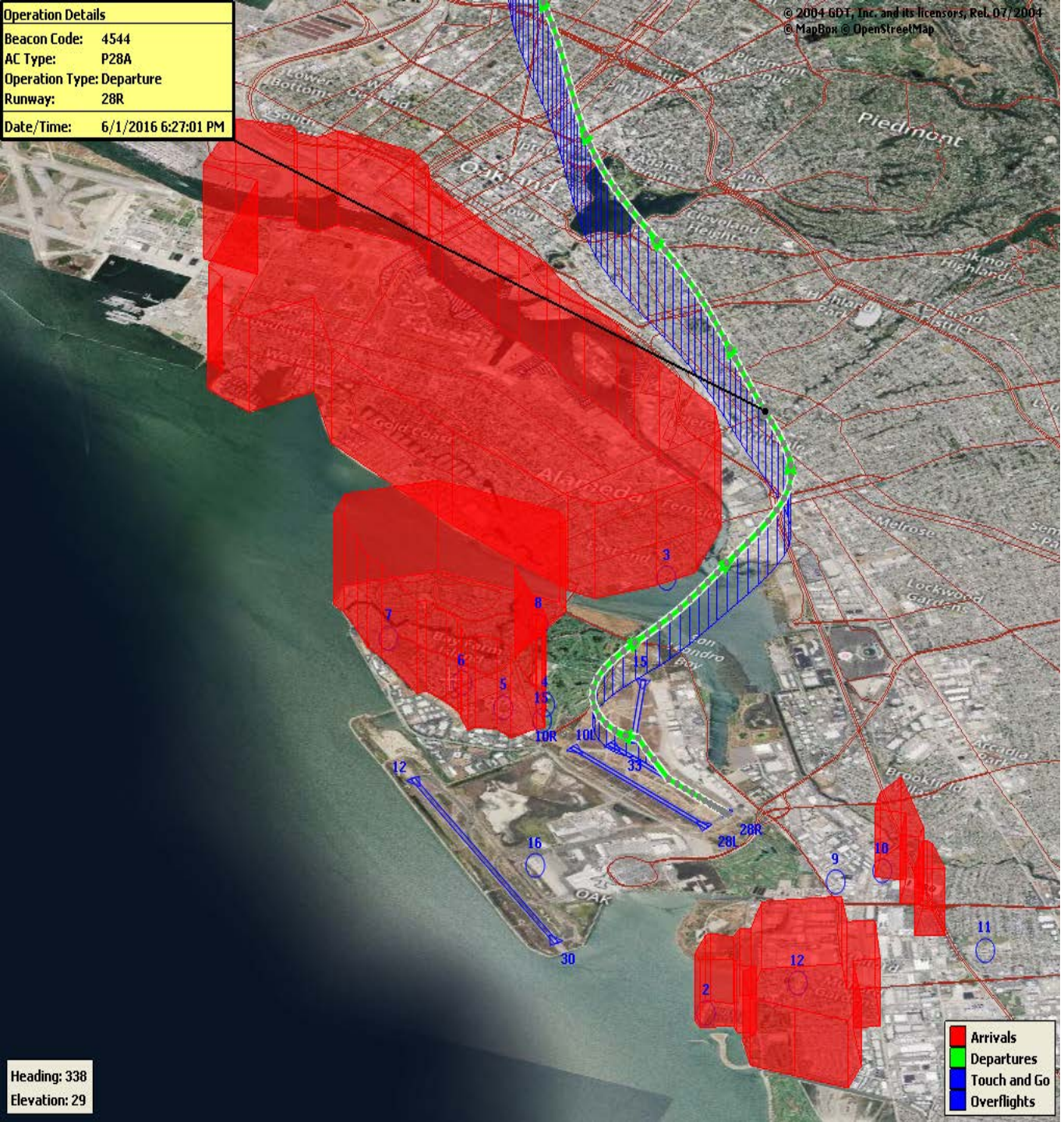




Runway 10R/L Jet Landing NAP

2019Q4
69% Compliance
(317 total landings)
(97 non-compliant)

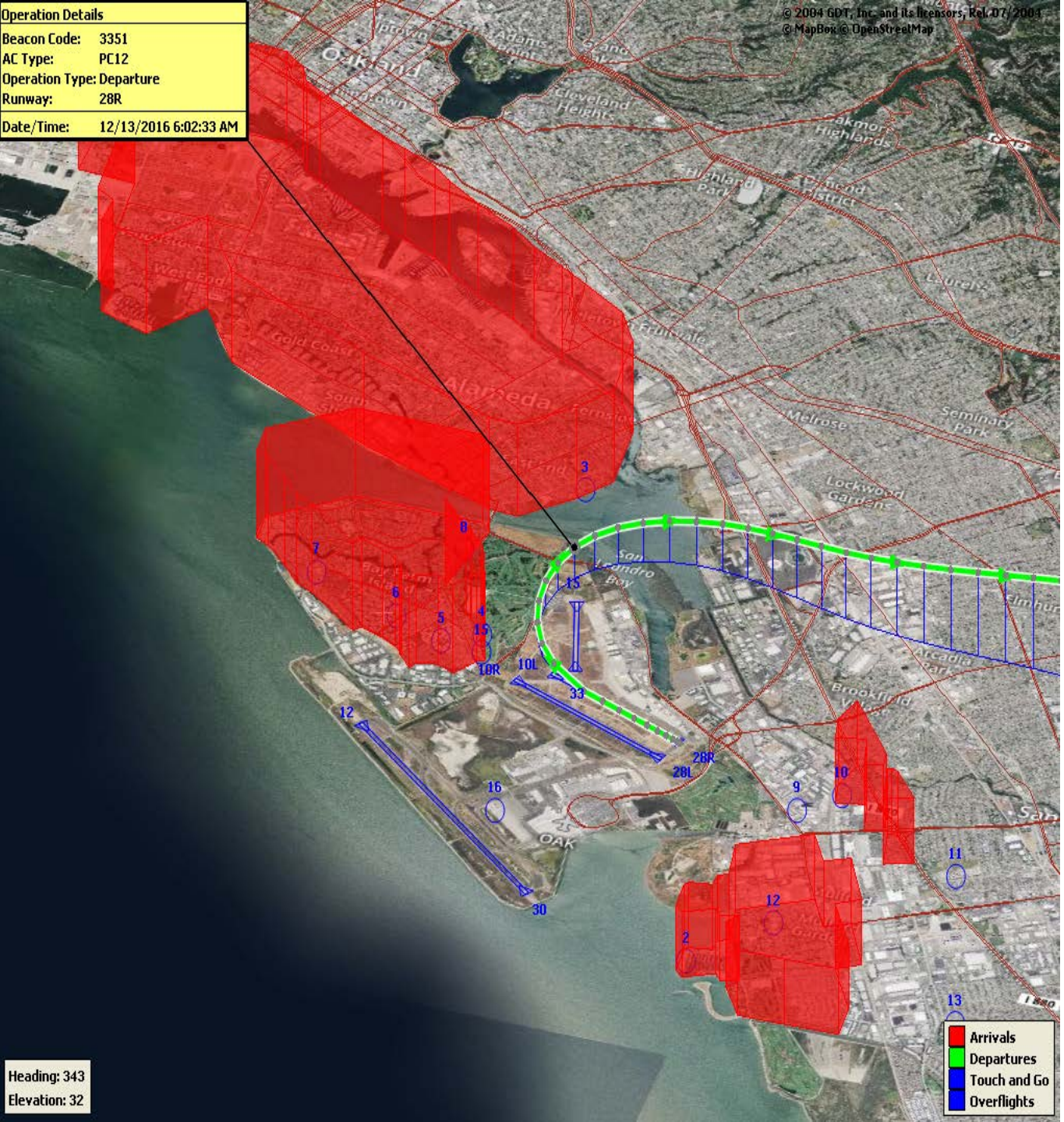
2018Q4
59% Compliance
(162 total landings)
(66 non-compliant)



VFR Aircraft Departure NAP

2019Q4
91% Compliance
(236 total departures)
(22 non-compliant)

2018Q4
93% Compliance
(253 total departures)
(18 non-compliant)

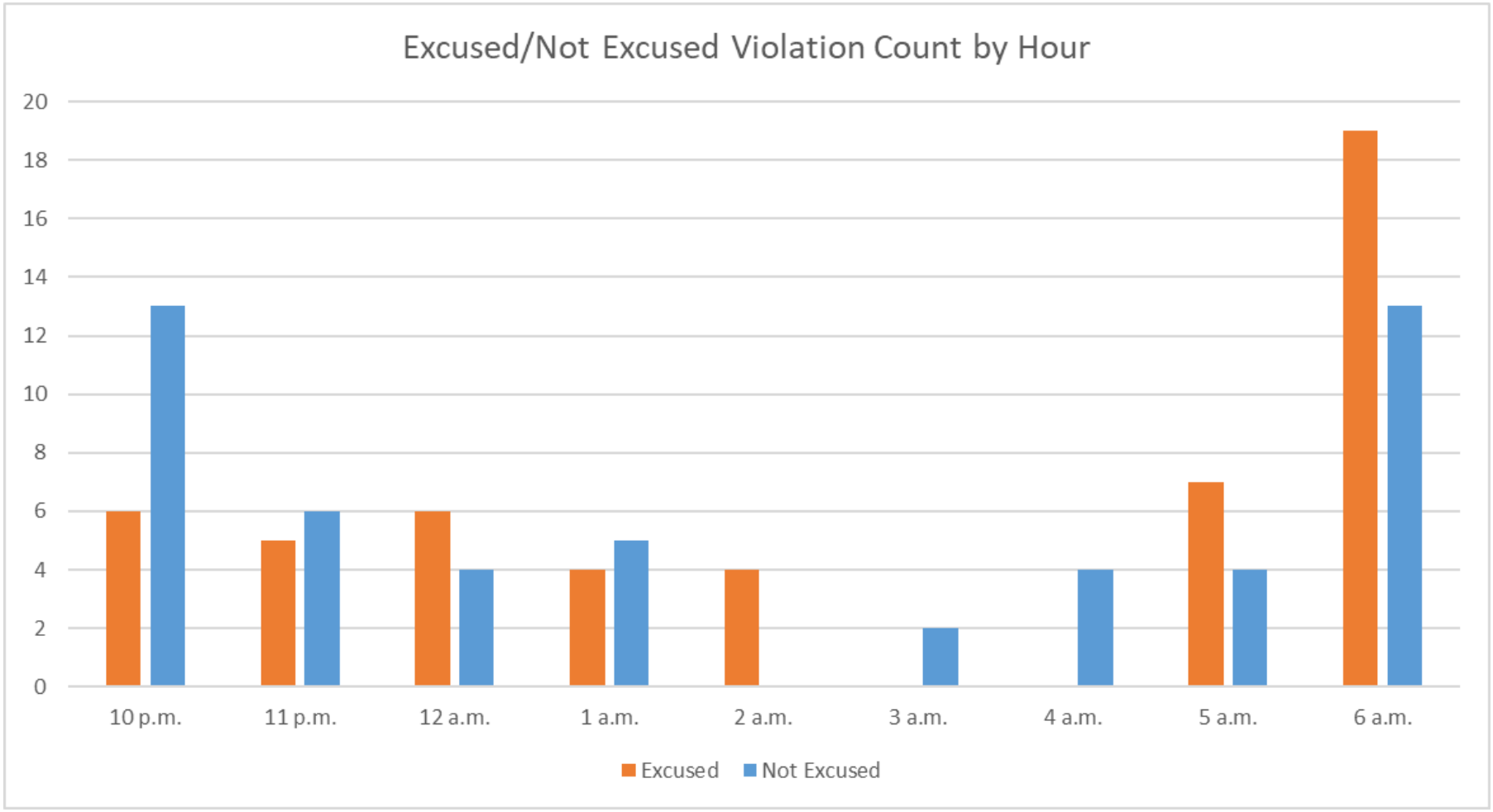


North Field
Quiet Hours NAP

2019Q4
77% Compliance
(225 total departures)
(51 non-compliant)

2018Q4
70% Compliance
(197 total departures)
(59 non-compliant)

North Field Quiet Hours NAP Non-Compliant by Hour



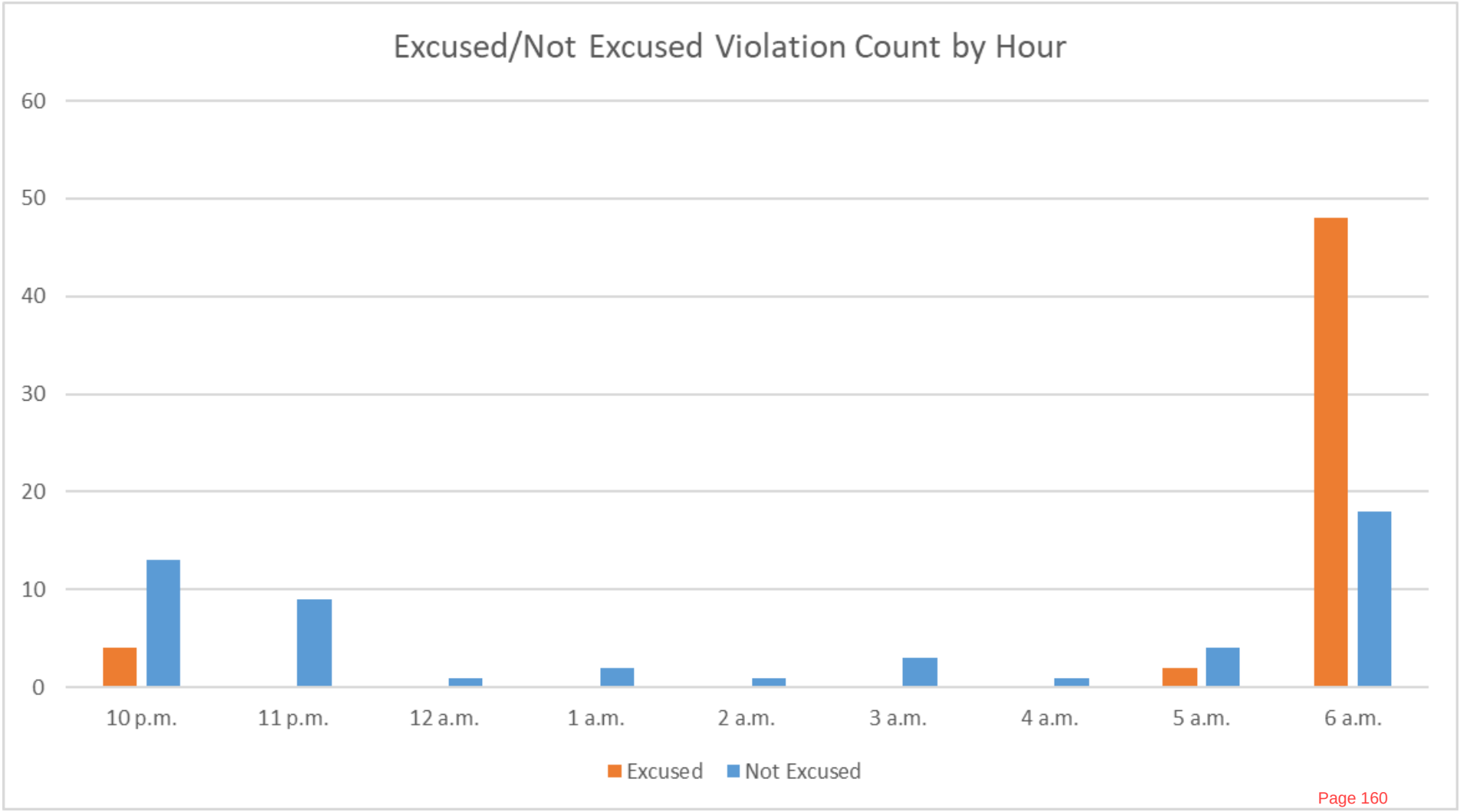
Night Time Departure NAP

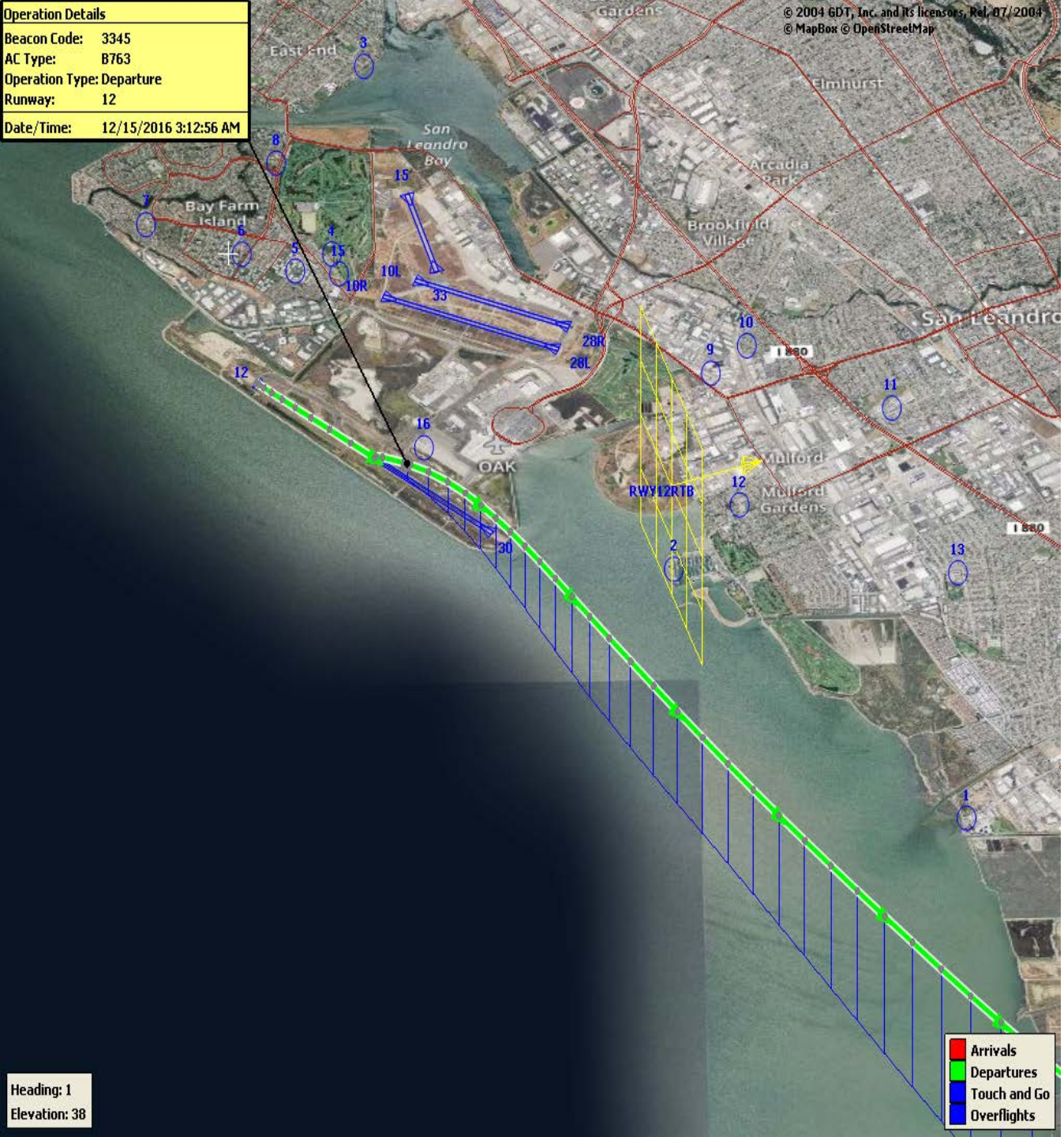
2019Q4
99% Compliance
(3,710 total departures)
(52 non-compliant)

***REBAS Gate non-compliant = 51**

2018Q4
97% Compliance
(3,162 total departures)
(84 non-compliant)

Night Time NAP Non-Compliant Count by Hour



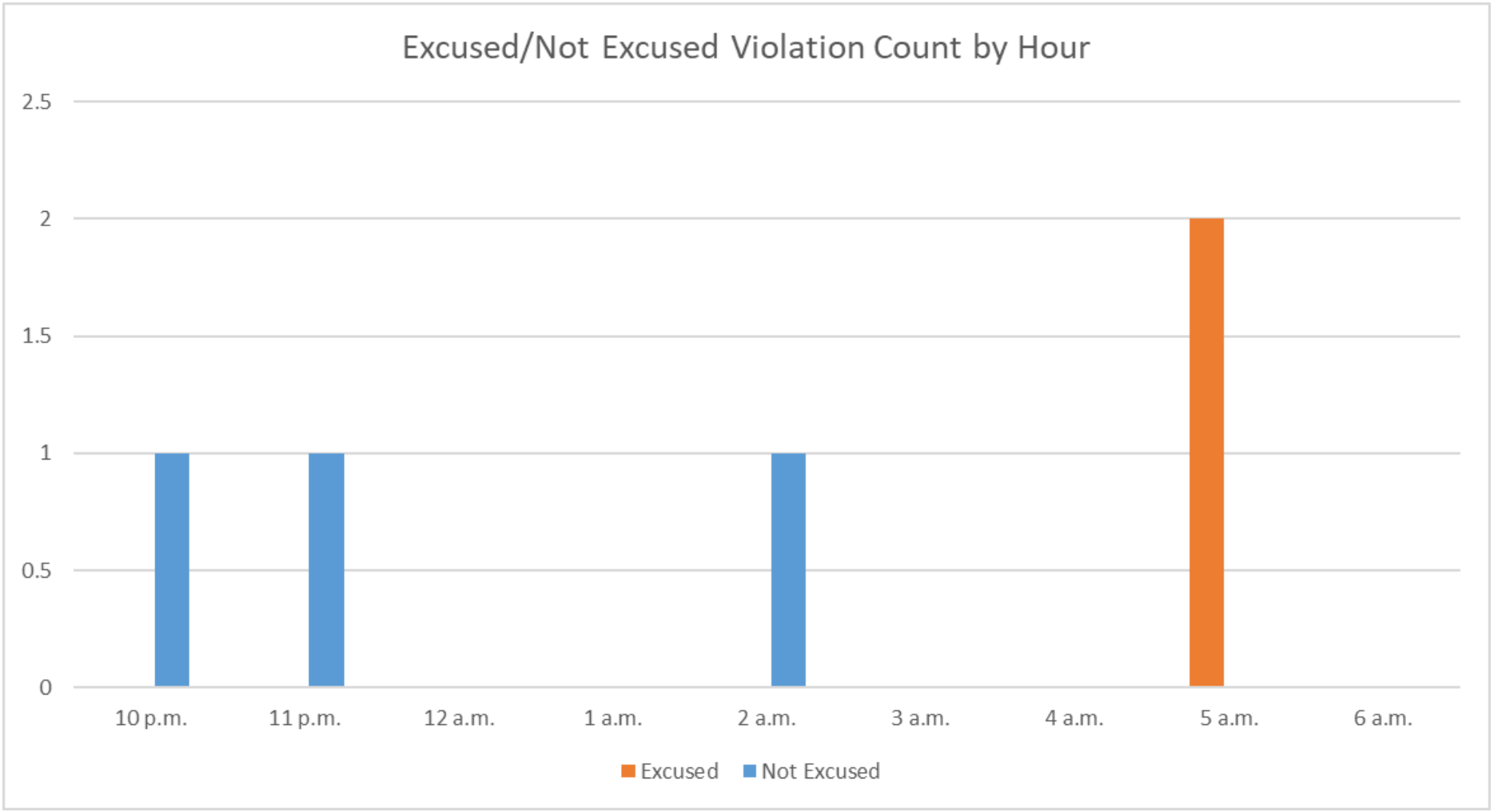


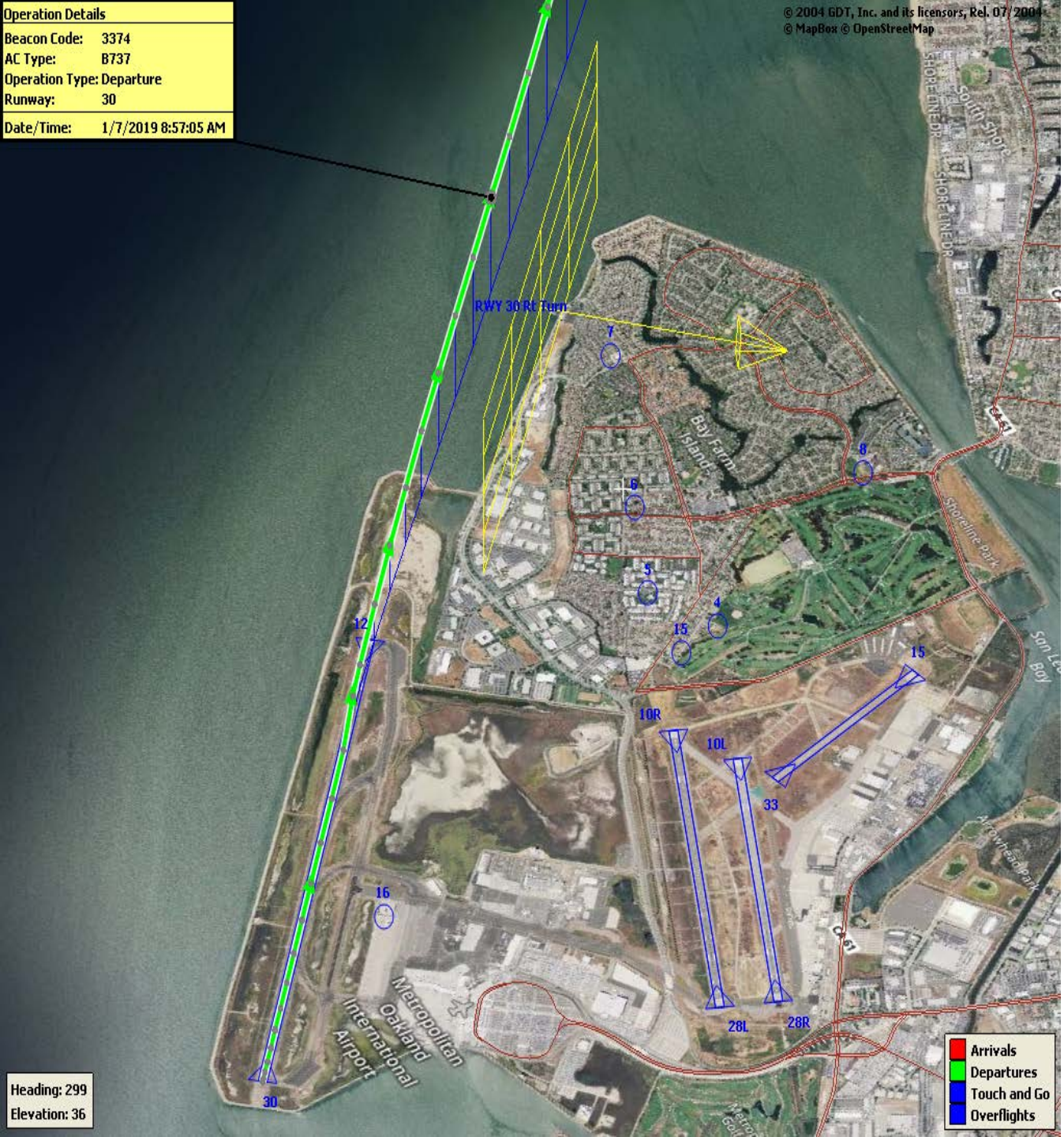
Runway 12 Night Departure NAP

2019Q4
99% Compliance
(279 total departures)
(3 non-compliant)

2018Q4
98% Compliance
(191 total departures)
(4 non-compliant)

Runway 12 Night Departure Non-Compliant Count by Hour





Runway 30 Bay Farm Right Turn NAP

2019Q4
100% Compliance
(19,243 total departures)
(73 non-compliant)

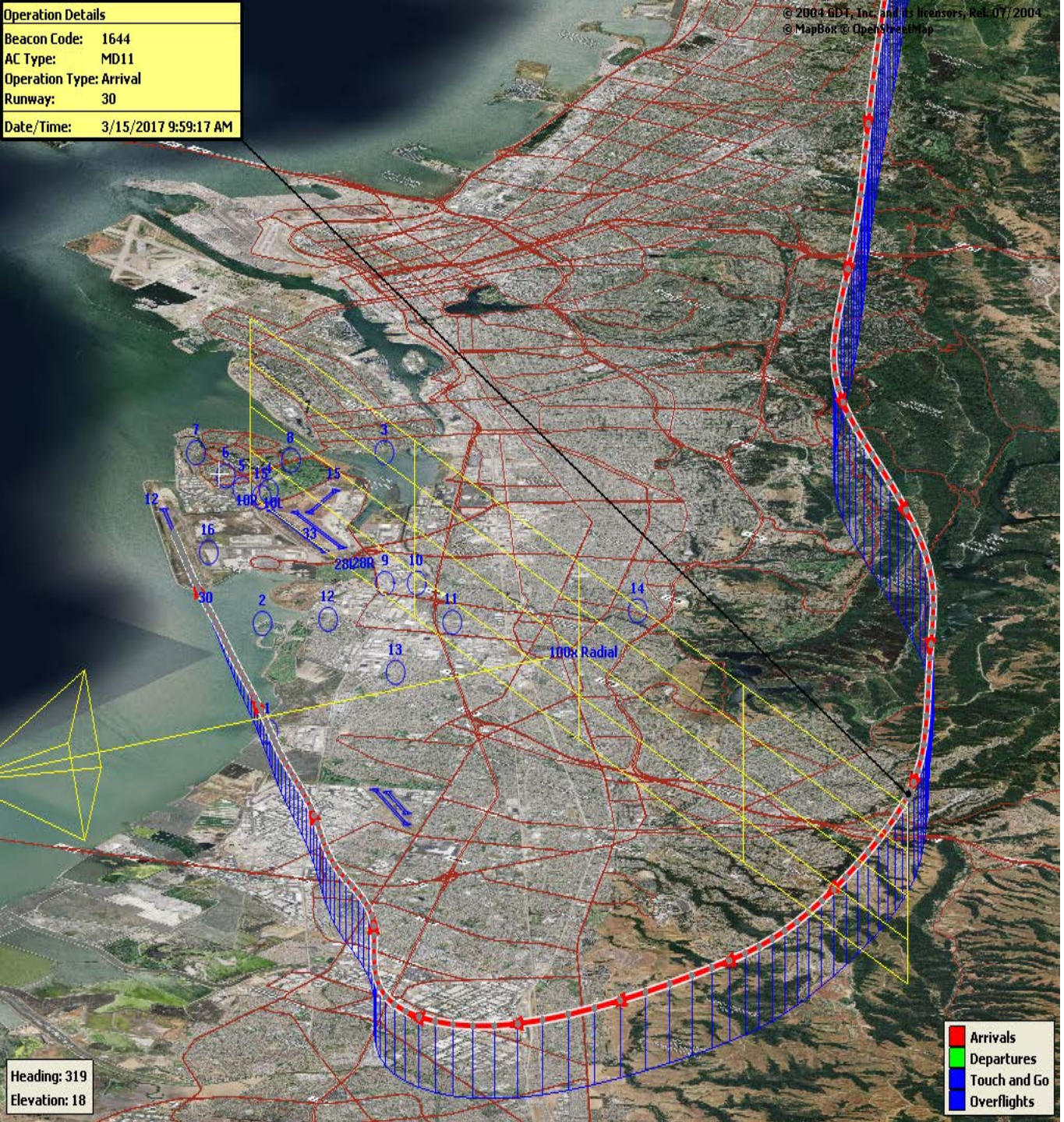
2018Q4
100% Compliance
(18,679 total departures)
(70 non-compliant)

Runway 30 East Turn NAP

2019Q4
99% Compliance
(5,279 total departures)
(59 non-compliant)

***2019Q4 Excused Departures = 35**

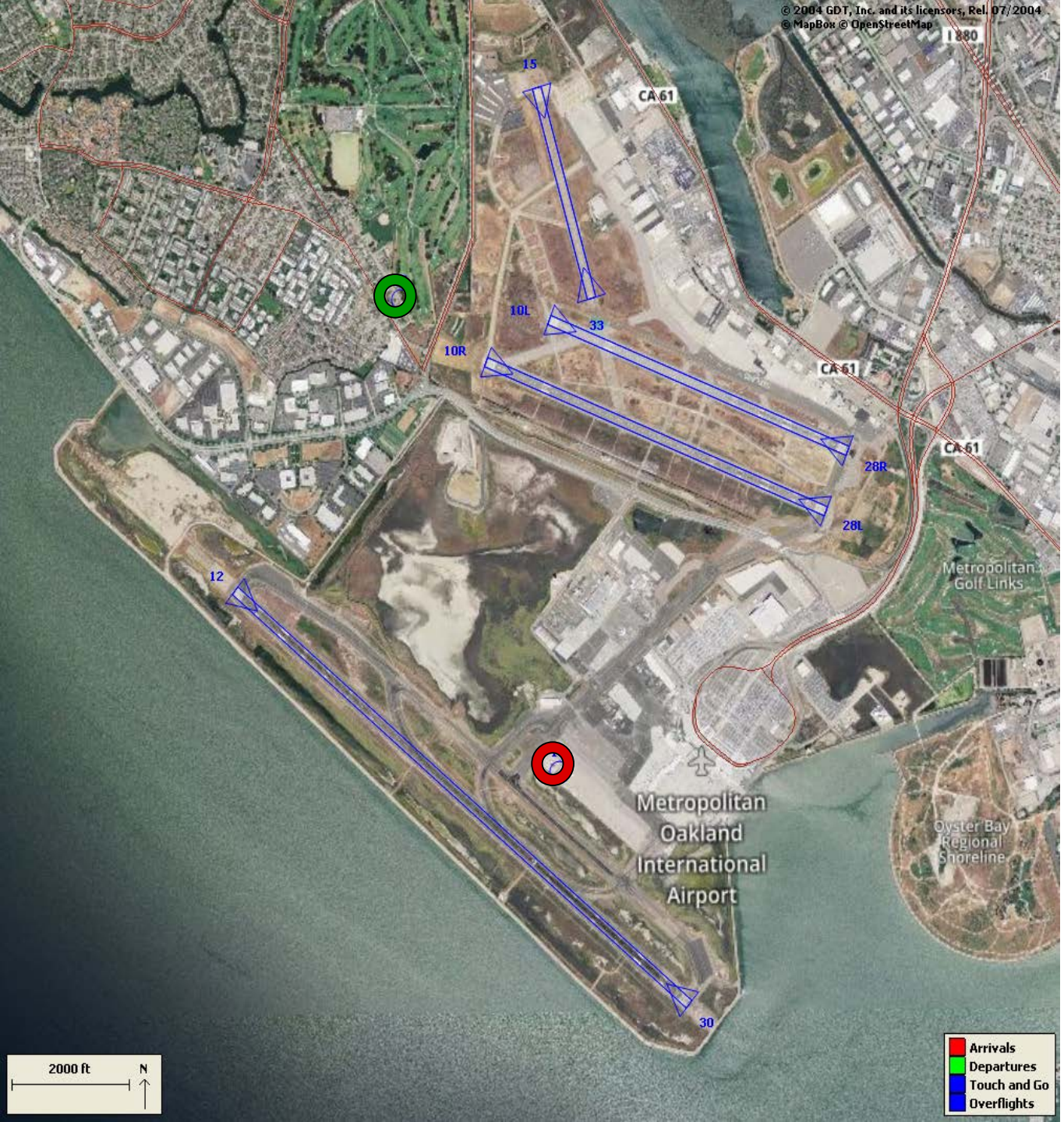
2018Q4
99% Compliance
(5,762 total departures)
(52 non-compliant)



100 Degree Radial
At 3,000 ft. NAP

2019Q4
99% Compliance
(1,256 total landings)
(11 non-compliant)

2018Q4
99% Compliance
(1,419 total landings)
(11 non-compliant)



Engine Run-up NAP

2019Q4
100% Compliance
(8 engine run-ups)*
(0 non-compliant)

2018Q4
100% Compliance
(9 engine run-ups)
(0 non-compliant)

***Only above idle-power run-ups recorded.**

Compliance Monitoring Quarterly Summary Comparison
Fourth Quarter 2019 - Quarter-to-Quarter

	2019Q3		2019Q4	
	Compl.	N/C	Compl.	N/C
Runway 28R/L Jet Departure Compliance	95%	5%	95%	5%
Total Airport-wide Corporate Jet Departures	2,917	141	2,709	147
Runway 10R/L Jet Landing Compliance	100%	0%	69%	31%
Total Southeast Plan Corporate Jet Landings	0	0	220	97
North Field VFR Departure Compliance	96%	4%	91%	9%
Total Runways 28R/L & 33 Departures	325	14	214	22
North Field Quiet Hours Compliance	75%	25%	77%	23%
Total North Field Quiet Hours Departures	219	72	174	51
Runway 30 BFI Right Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 Turbojet Departures	21,252	5	19,170	73
Night Time Departure Compliance	93%	7%	99%	1%
Total Runway 30 Night Turbojet Departures	3,748	266	3,658	52
Runway 12 Night Departure Compliance	100%	0%	99%	1%
Total Runway 12 Night Turbojet Departures	0	0	276	3
Runway 30 East Turn Departure Compliance	100%	0%	99%	1%
Total Runway 30 East Turn Departures	5,981	13	5,220	59
100 Degree Radial Turbojet Landing Compliance	99%	1%	99%	1%
Total 100 Degree Radial Turbojet Landings	1,381	14	1,245	11
Engine Runup Program Compliance	100%	0%	100%	0%
Total Evening and Nighttime Engine Runups	11	0	8	0

Note: N/C means non-compliant. Percentage values are rounded out.

Table 1. North Field Night Aircraft Departure SEL Noise Measurements
Total Aircraft Departures = 101

Fourth Quarter 2019 (10:00 p.m. to 7:00 a.m.)

NMT Number	Aircraft Noise Events Below SEL 80 dBA	Aircraft Noise Events SEL 80 - 84.9 dBA			Aircraft Noise Events SEL 85 - 89.9 dBA			Aircraft Noise Events SEL ≥ 90 dBA			Total Aircraft Noise Events
		Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	
1	4	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	4
2	9	3	0.0	0.5%	1	0.0	0.2%	0	0.0	0.0%	13
3	22	3	0.0	0.5%	1	0.0	0.2%	0	0.0	0.0%	26
4	24	26	0.3	4.6%	22	0.2	3.9%	8	0.1	1.4%	80
5	31	12	0.1	2.1%	4	0.0	0.7%	16	0.2	2.8%	63
6	10	3	0.0	0.5%	9	0.1	1.6%	10	0.1	1.8%	32
7	9	5	0.1	0.9%	10	0.1	1.8%	1	0.0	0.2%	25
8	12	11	0.1	1.9%	0	0.0	0.0%	0	0.0	0.0%	23
9	5	8	0.1	1.4%	4	0.0	0.7%	0	0.0	0.0%	17
10	19	6	0.1	1.1%	0	0.0	0.0%	0	0.0	0.0%	25
11	0	1	0.0	0.2%	0	0.0	0.0%	1	0.0	0.2%	2
12	7	6	0.1	1.1%	1	0.0	0.2%	0	0.0	0.0%	14
13	6	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	6
14	0	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	0
All NMTs	158	84	1	0	52	1	0	36	0	0	330

Table 2. Aircraft SEL Noise Measurements in Alameda - Total Aircraft Departures = 74

Fourth Quarter 2019 (10:00 p.m. to 7:00 a.m.)

NMT Number	Aircraft Noise Events Below SEL 80 dBA	Aircraft Noise Events SEL 80 - 84.9 dBA			Aircraft Noise Events SEL 85 - 89.9 dBA			Aircraft Noise Events SEL ≥ 90 dBA			Total Aircraft Noise Events
		Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	
3	22	3	0.0	1.3%	1	0.0	0.4%	0	0.0	0.0%	26
4	24	26	0.3	10.9%	22	0.2	9.2%	8	0.1	3.3%	80
5	31	12	0.1	5.0%	4	0.0	1.7%	16	0.2	6.7%	63
6	10	3	0.0	1.3%	9	0.1	3.8%	10	0.1	4.2%	32
7	9	5	0.1	2.1%	10	0.1	4.2%	1	0.0	0.4%	25
8	12	11	0.1	4.6%	0	0.0	0.0%	0	0.0	0.0%	23
Total	**108**	**60**	**0.7**		**46**	**0.5**		**35**	**0.4**		**249**

Table 3. Aircraft SEL Noise Measurements in San Leandro - Total Aircraft Departures = 27

Fourth Quarter 2019 (10:00 p.m. to 7:00 a.m.)

NMT Number	Aircraft Noise Events Below SEL 80 dBA	Aircraft Noise Events SEL 80 - 84.9 dBA			Aircraft Noise Events SEL 85 - 89.9 dBA			Aircraft Noise Events SEL ≥ 90 dBA			Total Aircraft Noise Events
		Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	
2	9	3	0.0	0.9%	1	0.0	0.3%	0	0.0	0.0%	13
9	5	8	0.1	2.4%	4	0.0	1.2%	0	0.0	0.0%	17
10	19	6	0.1	1.8%	0	0.0	0.0%	0	0.0	0.0%	25
11	0	1	0.0	0.3%	0	0.0	0.0%	1	0.0	0.3%	2
12	7	6	0.1	1.8%	1	0.0	0.3%	0	0.0	0.0%	14
13	6	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	6
14	0	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	0
Total	**46**	**24**	**0.3**		**6**	**0.1**		**1**	**0.0**		**77**

Rolling Take-off Night Departure Procedure (1:00 to 5:00 AM)
Fourth Quarter 2019, NMT 2

	Aircraft Departures		Recorded Noise Events (a)	Lmax Average	SEL Average	Avg. Duration (seconds)
Baseline (November 2002) [A]						
DC10/MD10	87		32	69	78	22
MD11	32		13	70	79	24
A306	67		21	67	77	25
Fourth Quarter 2019 [B]						
	Total [X]	Est. Avg. Monthly [X/3]				
B763	131	44	41	66	74	14
DC10/MD10	46	15	20	66	76	19
MD11	254	85	134	67	77	18
A306	92	31	28	66	74	15
B757	166	55	60	66	74	15
B77L	101	34	18	65	74	17
Difference [A-B]						
DC10/MD10		-72	-12	-3	-2	-3
MD11		53	121	-3	-2	-6
A306		-36	7	-1	-3	-10

(a) For the current calendar quarter reported, ANOMS does not correlate all departures to their respective noise events; that is most, but not all, aircraft back-blast noise events are effectively correlated as the program software algorithms may misidentify an aircraft noise event.
Source: ANOMS (Airport Noise and Operations Monitoring System)

Rolling Take-off Night Departure Procedure (1:00 to 5:00 AM)
Fourth Quarter 2018, NMT 2

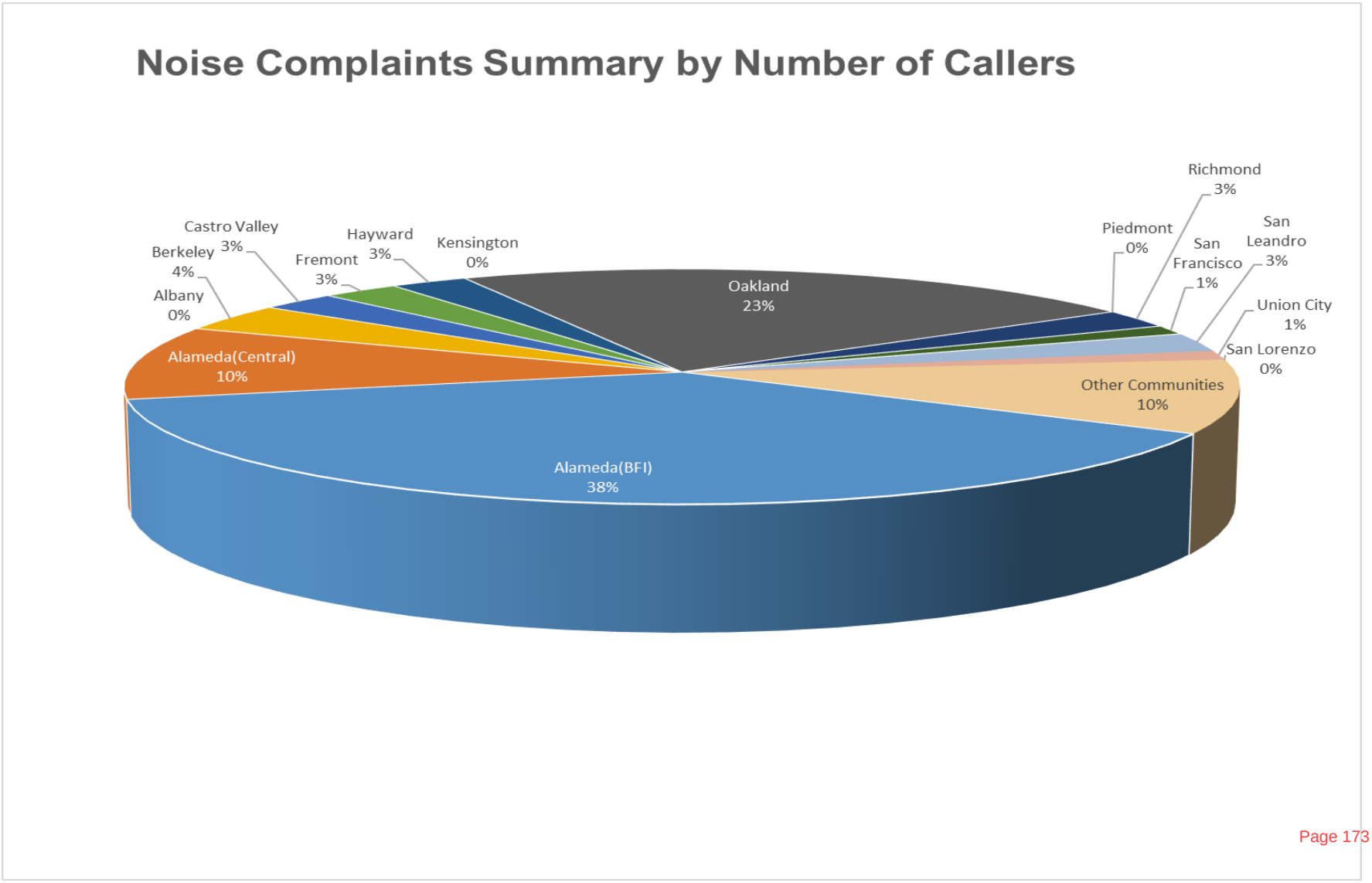
	Aircraft Departures		Recorded Noise Events (a)	Lmax Average	SEL Average	Avg. Duration (seconds)
Baseline (November 2002) [A]						
DC10/MD10	87		32	69	78	22
MD11	32		13	70	79	24
A306	67		21	67	77	25
Fourth Quarter 2018 [B]						
	Total [X]	Est. Avg. Monthly [X/3]				
B763	129	43	45	65	74	13
DC10/MD10	33	11	20	66	75	18
MD11	238	79	173	67	77	19
A306	96	32	51	65	74	14
B757	172	57	76	65	75	15
B77L	76	25	27	66	74	14
Difference [A-B]						
DC10/MD10		-76	-12	-3	-3	-4
MD11		47	160	-3	-2	-5
A306		-35	30	-2	-3	-11

(a) For the current calendar quarter reported, ANOMS does not correlate all departures to their respective noise events; that is most, but not all, aircraft back-blast noise events are effectively correlated as the program software algorithms may misidentify an aircraft noise event.
Source: ANOMS (Airport Noise and Operations Monitoring System)

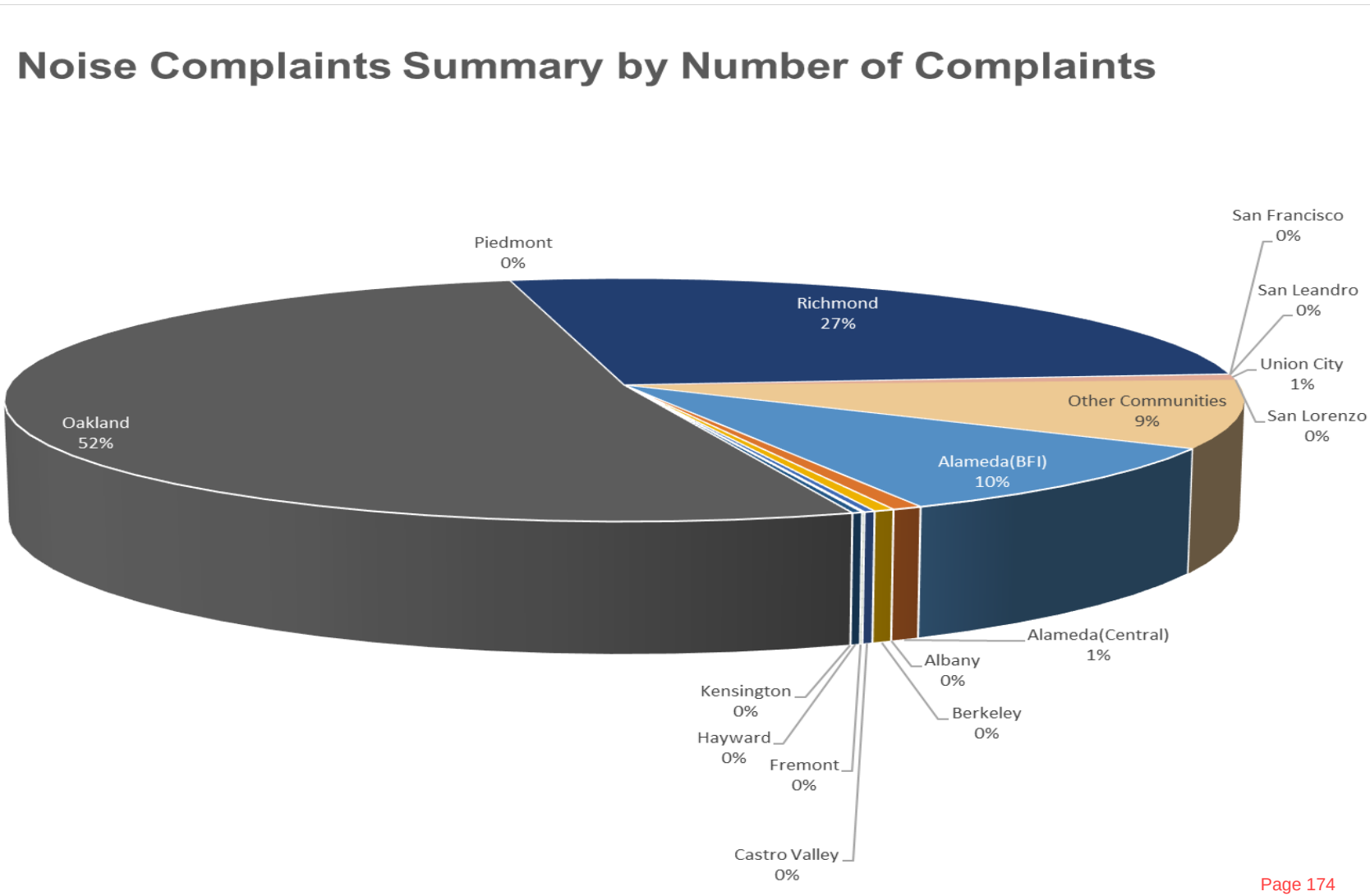
Oakland International Airport
Noise Complaint Summary
October 2019

Community	Callers	Complaints
Alameda(BFI)	30	647
Alameda(Central)	8	47
Albany	0	0
Berkeley	3	32
Castro Valley	2	17
Fremont	2	4
Hayward	2	16
Kensington	0	0
Oakland	18	3494
Piedmont	0	0
Richmond	2	1804
San Francisco	1	1
San Leandro	2	3
Union City	1	47
San Lorenzo	0	0
Other Communities	8	609
Total	**79**	**6721**
Complaints by Type		
Website	0	
E-mail	4391	
Phone	0	
Viewpoint App	2330	
Complaints by Time of Day		
Day (0700 - 1900)	1402	
Evening (1900 - 2200)	1237	
Night (2200 - 0700)	4082	
Complaints by Type of Operation		
Arrivals	4039	
Departures	2326	
Over-flights	328	
Touch & Go	28	
Not Linked to an Operation	0	
Complaints by Type of Aircraft		
Business Jet	107	
Helicopter	86	
Jet	5807	
Military	0	
Not Reported (not linked to an aircraft)	0	
Other (Type information not available)	136	
Propeller	391	
Turbo-prop	194	

Number of Callers
October 2019



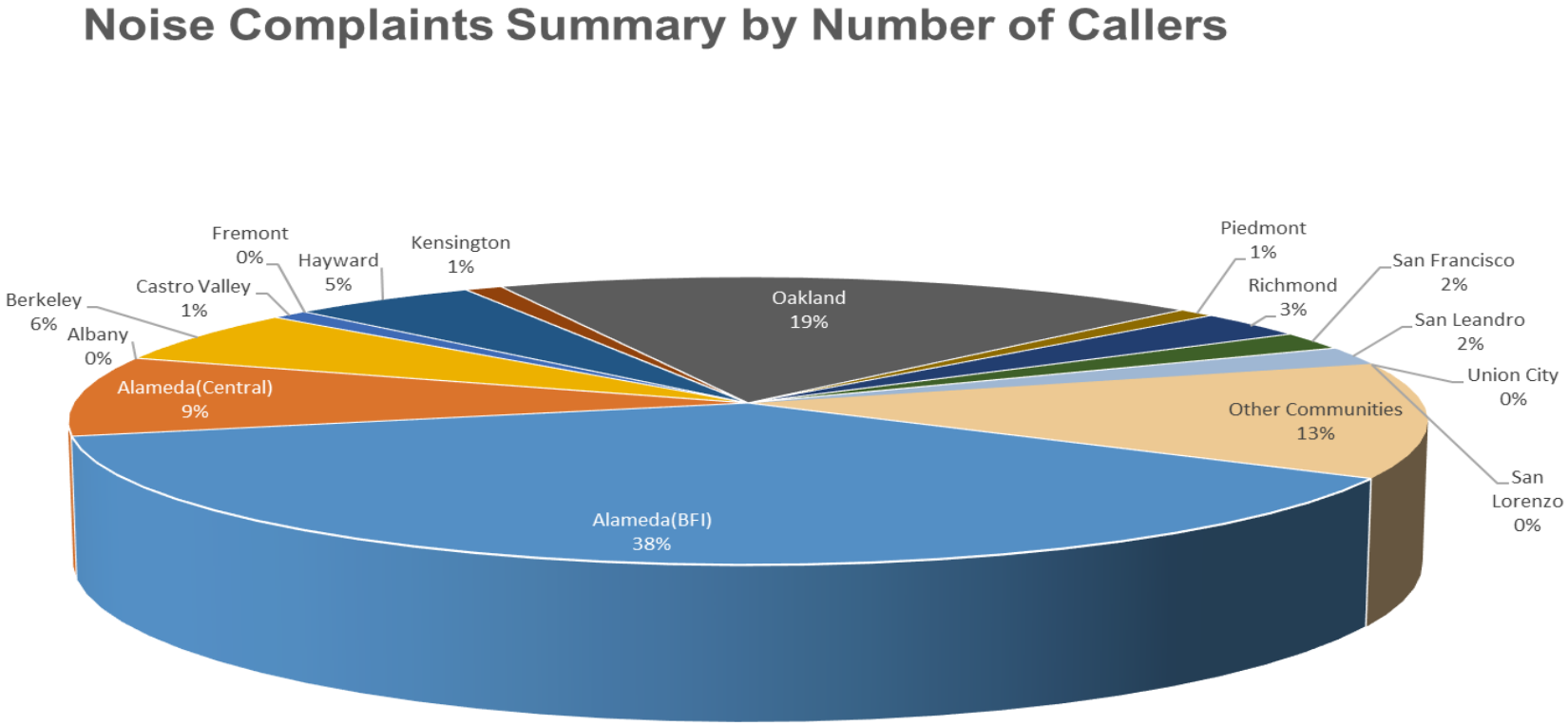
Number of Complaints October 2019



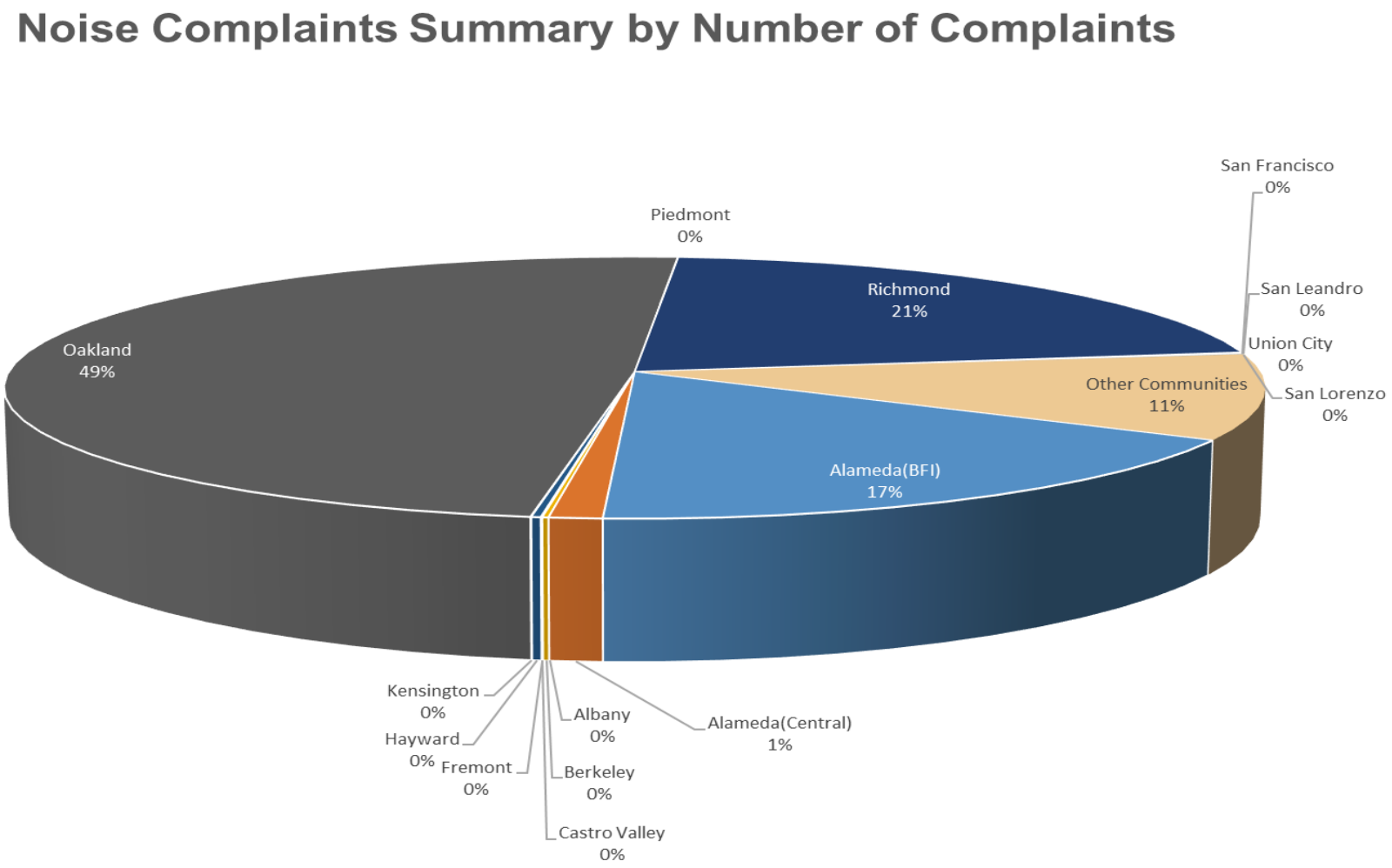
Oakland International Airport
Noise Complaint Summary
November 2019

Community	Callers	Complaints
Alameda(BFI)	38	1114
Alameda(Central)	9	78
Albany	0	0
Berkeley	6	9
Castro Valley	1	2
Fremont	0	0
Hayward	5	14
Kensington	1	1
Oakland	19	3134
Piedmont	1	1
Richmond	3	1365
San Francisco	2	9
San Leandro	2	4
Union City	0	0
San Lorenzo	0	0
Other Communities	13	679
Total	**100**	**6410**
Complaints by Type		
Website	0	
E-mail	3569	
Phone	0	
Viewpoint App	2841	
Complaints by Time of Day		
Day (0700 - 1900)	1933	
Evening (1900 - 2200)	1211	
Night (2200 - 0700)	3266	
Complaints by Type of Operation		
Arrivals	3042	
Departures	3083	
Over-flights	239	
Touch & Go	46	
Not Linked to an Operation	0	
Complaints by Type of Aircraft		
Business Jet	240	
Helicopter	41	
Jet	5513	
Military	0	
Not Reported (not linked to an aircraft)	0	
Other (Type information not available)	138	
Propeller	369	
Turbo-prop	109	

Number of Callers November 2019



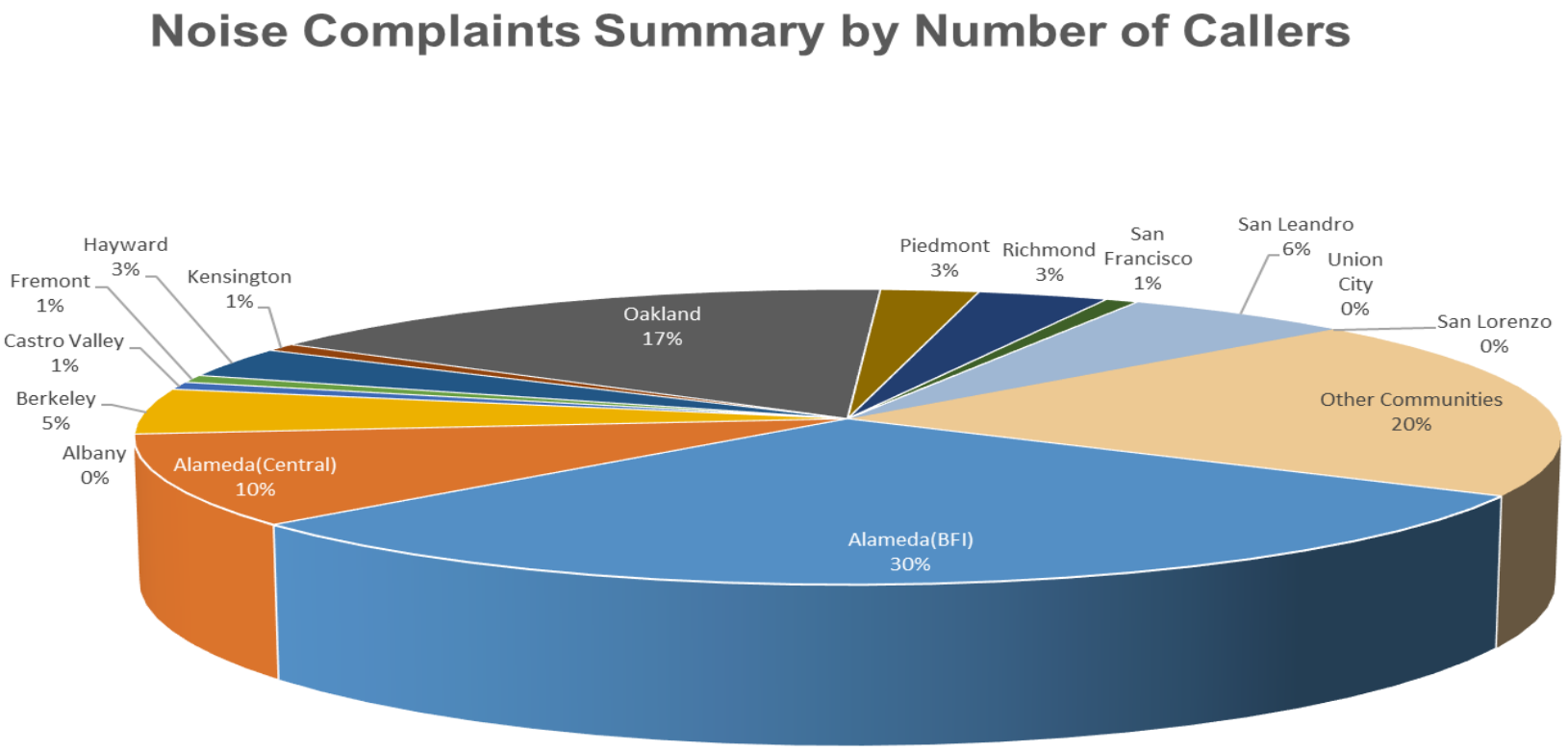
Number of Complaints November 2019



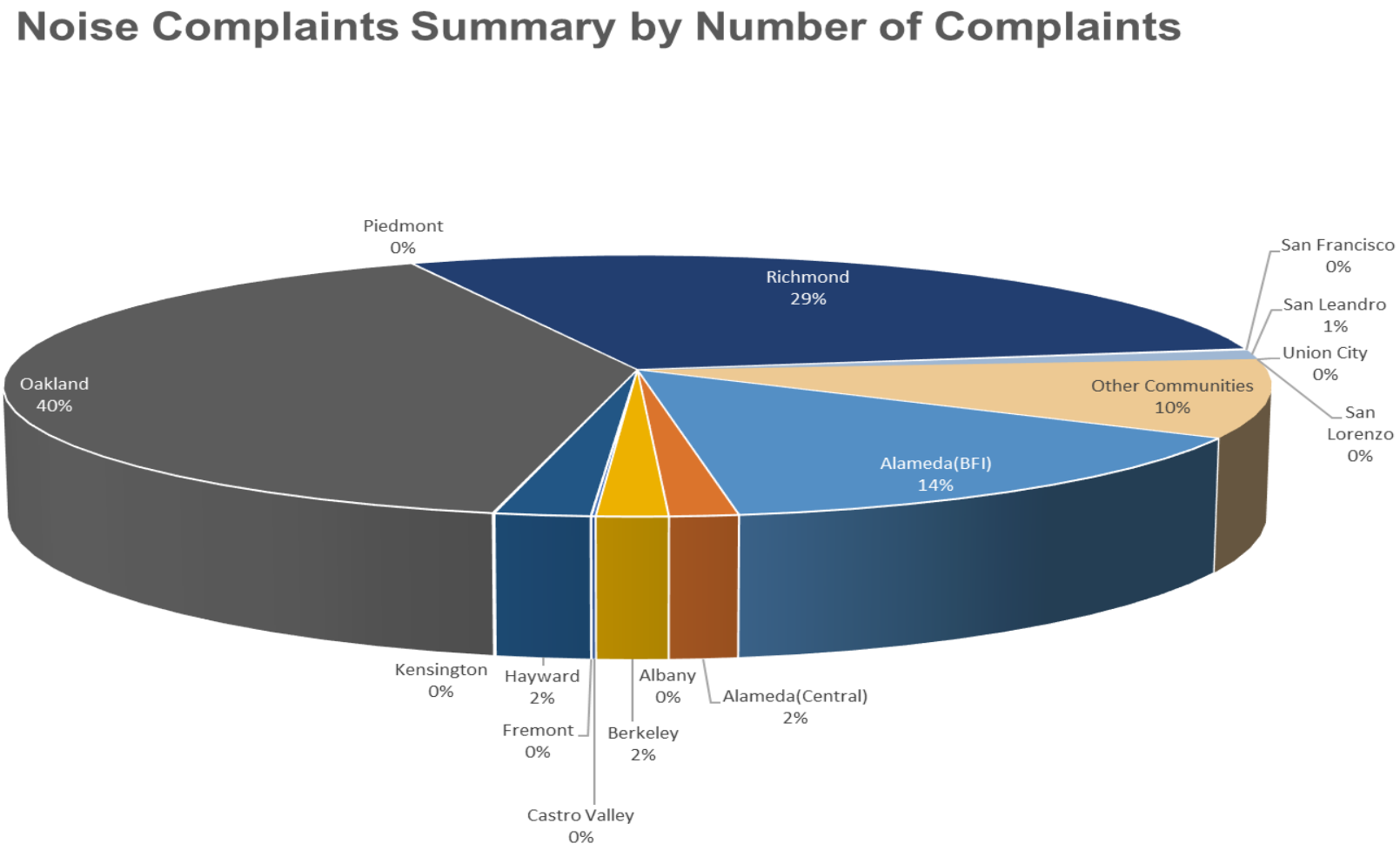
Oakland International Airport
Noise Complaint Summary
December 2019

Community	Callers	Complaints
Alameda(BFI)	36	1178
Alameda(Central)	12	128
Albany	0	0
Berkeley	6	133
Castro Valley	1	8
Fremont	1	1
Hayward	4	177
Kensington	1	3
Oakland	20	3291
Piedmont	3	3
Richmond	4	2359
San Francisco	1	11
San Leandro	7	94
Union City	0	0
San Lorenzo	0	0
Other Communities	24	794
Total	**120**	**8180**
Complaints by Type		
Website	0	
E-mail	5004	
Phone	53	
Viewpoint App	3123	
Complaints by Time of Day		
Day (0700 - 1900)	2905	
Evening (1900 - 2200)	1454	
Night (2200 - 0700)	3821	
Complaints by Type of Operation		
Arrivals	4493	
Departures	3469	
Over-flights	171	
Touch & Go	47	
Not Linked to an Operation	0	
Complaints by Type of Aircraft		
Business Jet	336	
Helicopter	68	
Jet	7189	
Military	0	
Not Reported (not linked to an aircraft)	0	
Other (Type information not available)	84	
Propeller	276	
Turbo-prop	227	

Number of Callers December 2019

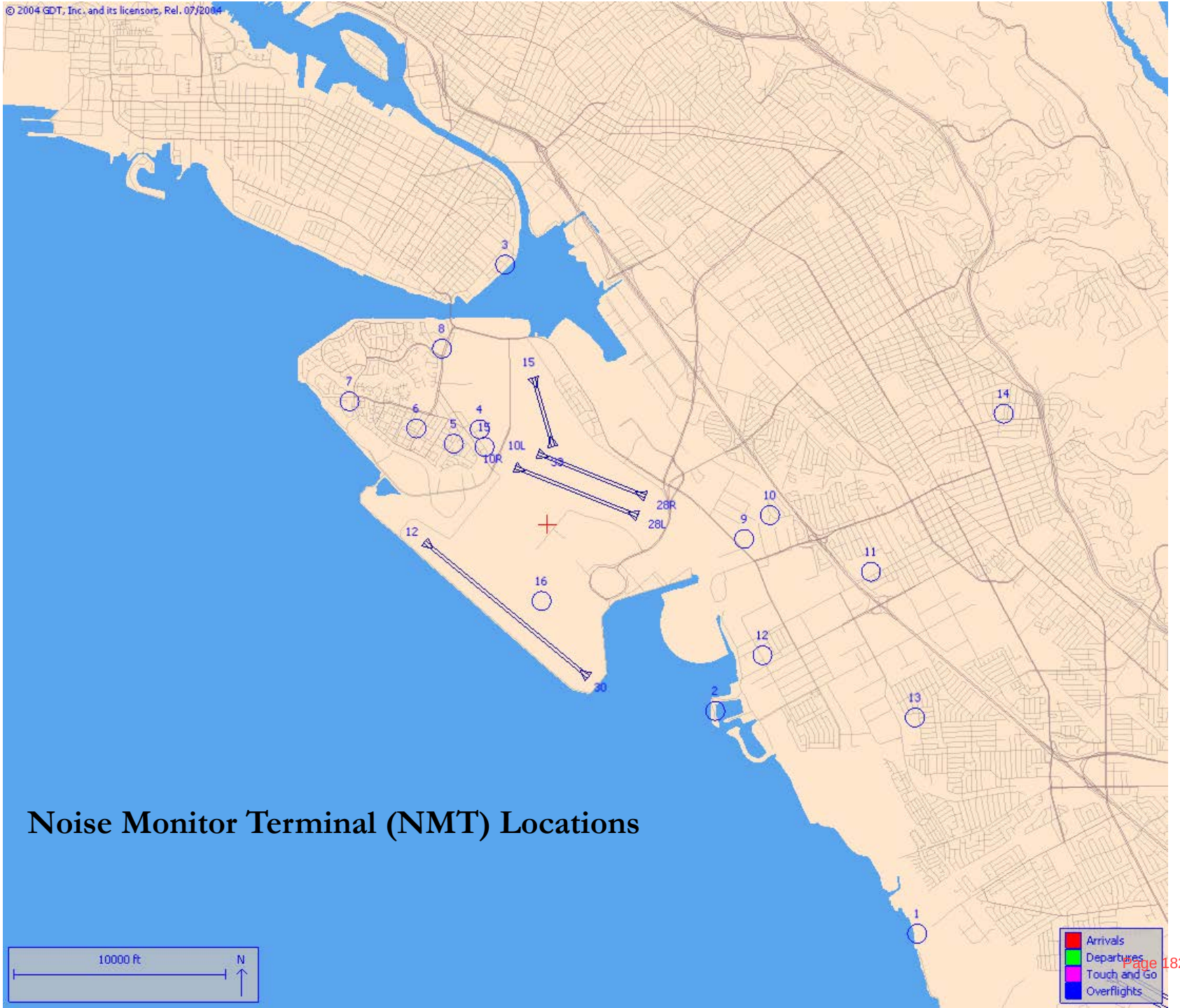


Number of Complaints December 2019



Oakland International Airport
Annual Noise Complaint Summary

	Callers		Complaints	
Community	**2018**	**2019**	**2018**	**2019**
Alameda(BFI)	301	200	5,034	8,254
Alameda(Central)	51	50	767	883
Albany	-	1	-	1
Berkeley	38	20	205	287
Bolinas	-	-	-	-
Castro Valley	9	6	120	139
Danville	1	2	1	13
El Cerrito	1	1	1	1
El Sobrante	1	1	52	3,739
Fremont	8	8	31	38
Hayward	29	12	1,783	1,847
Kensington	1	3	5	9
Lafayette	1	2	1,144	83
Oakland	88	77	52,227	42,820
Orinda	-	5	-	5
Piedmont	2	7	17	14
Richmond	3	5	207	8,321
San Francisco	11	14	696	37
San Leandro	25	25	174	1,172
San Lorenzo	2	2	15	3
San Pablo	1	-	1	-
San Ramon	-	1	-	1
Union City	4	1	3,430	3,683
Walnut Creek	1	3	2	3
Other Communities	62	58	3,434	947
Total	**640**	**504**	**69,346**	**72,300**
Change		**-21%**		**4%**



Noise Monitor Terminal (NMT) Locations

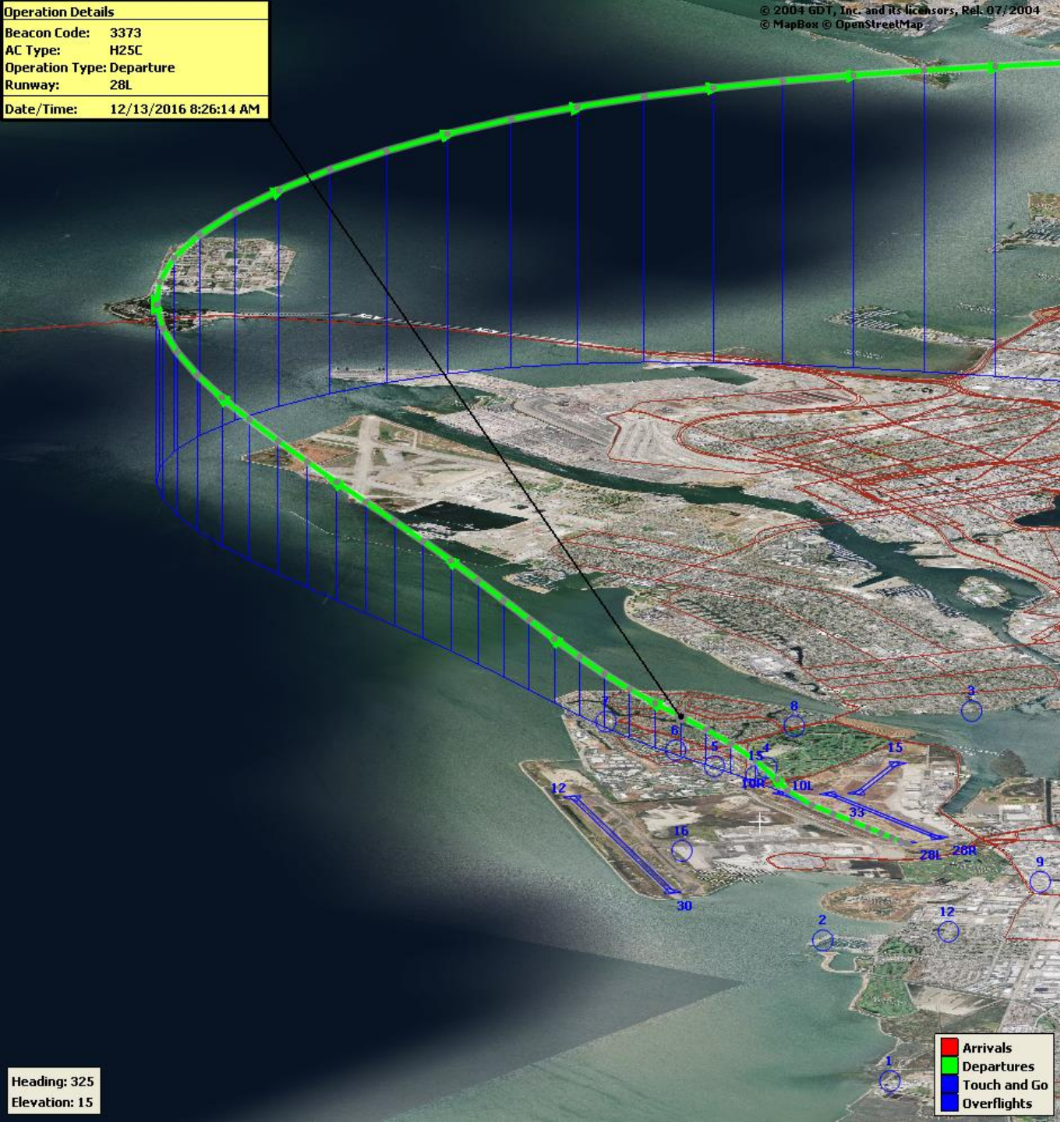
NOISE FORUM SUMMARY

North/South Field Working Groups

NOISE ABATEMENT REPORT

FIRST QUARTER 2020

Compliance Monitoring Quarterly Summary Comparison First Quarter 2020				
	2019Q1		2020Q1	
	Compl.	N/C	Compl.	N/C
Runway 28R/L Jet Departure Compliance	97%	3%	96%	4%
Total Airport-wide Corporate Jet Departures	3,461	118	2,404	111
Runway 10R/L Jet Landing Compliance	74%	26%	73%	27%
Total Southeast Plan Corporate Jet Landings	688	241	44	16
North Field VFR Departure Compliance	94%	6%	93%	7%
Total Runways 28R/L & 33 Departures	221	13	211	15
North Field Quiet Hours Compliance	60%	40%	80%	20%
Total North Field Quiet Hours Departures	144	98	178	45
Runway 30 BFI Right Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 Turbojet Departures	15,343	6	17,617	10
Night Time Departure Compliance	99%	1%	99%	1%
Total Runway 30 Night Turbojet Departures	2,811	42	3,246	36
Runway 12 Night Departure Compliance	93%	7%	100%	0%
Total Runway 12 Night Turbojet Departures	609	46	59	0
Runway 30 East Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 East Turn Departures	4,289	12	4,438	9
100 Degree Radial Turbojet Landing Compliance	99%	1%	99%	1%
Total 100 Degree Radial Turbojet Landings	1,148	7	1,108	8
Engine Runup Program Compliance	100%	0%	100%	0%
Total Evening and Nighttime Engine Runups	14	0	11	0
Note: N/C means non-compliant. Percentage values are rounded out.				

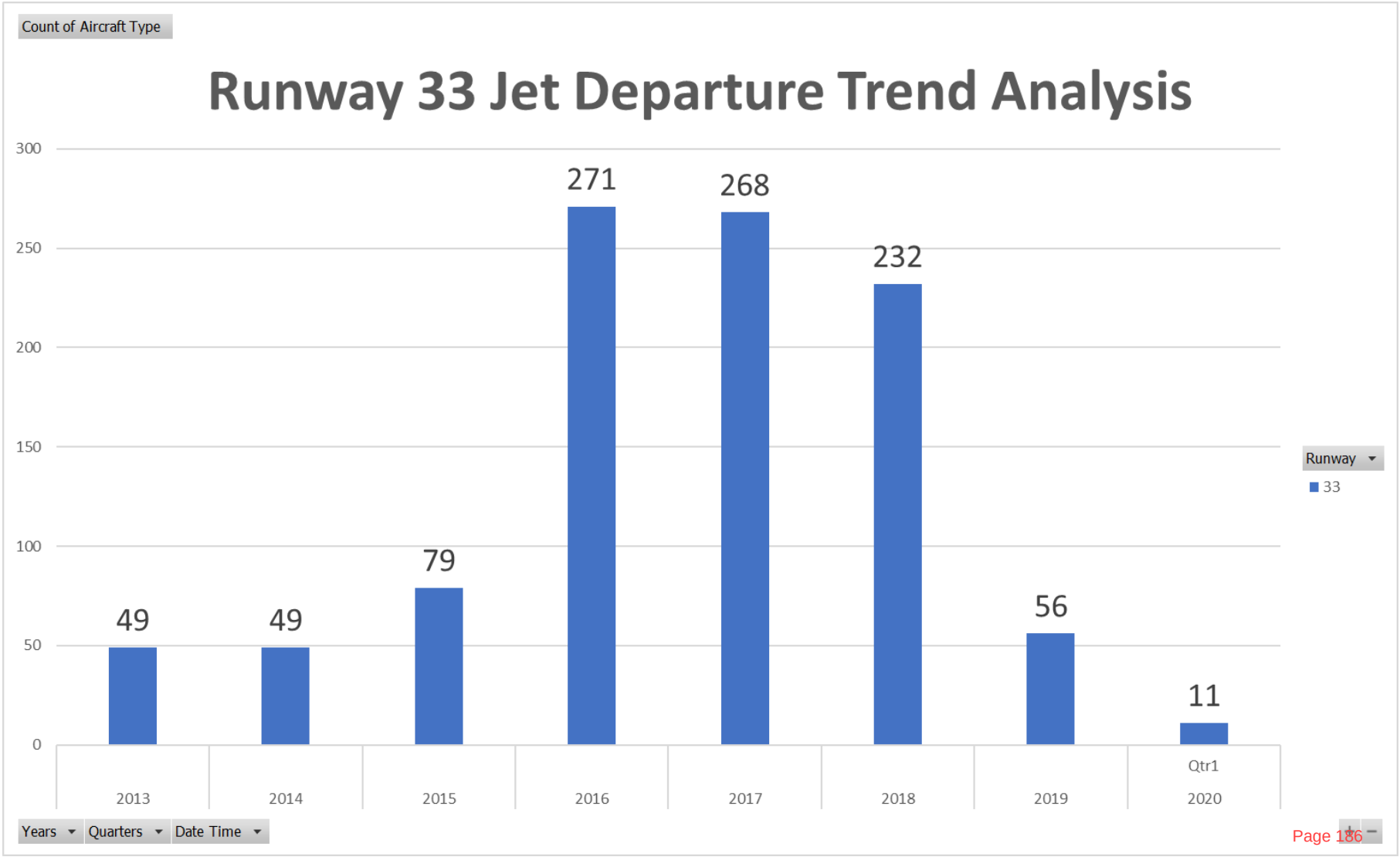


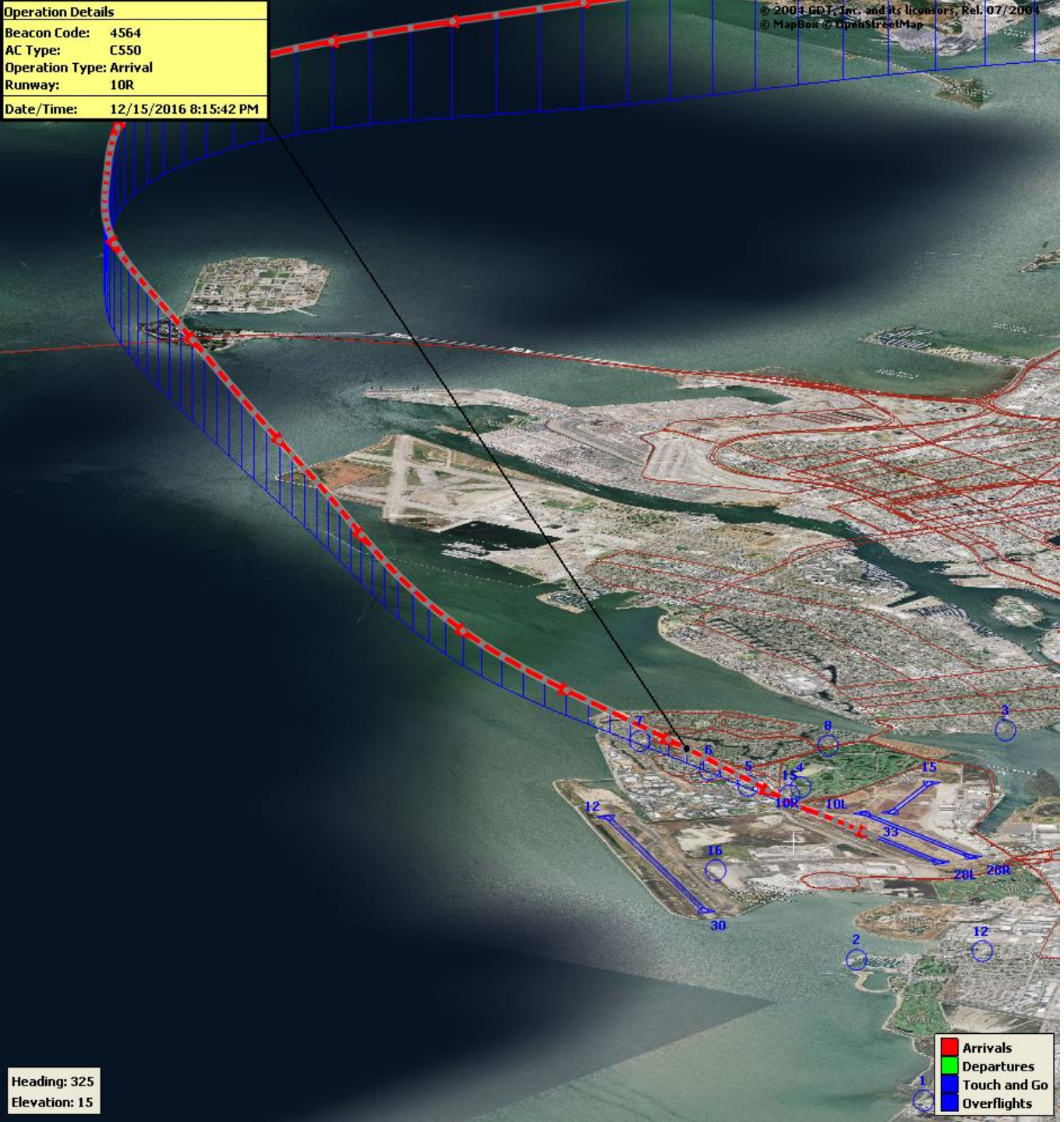
Runway 28R/L
Jet Departure NAP

2020Q1
96% Compliance
(2,515 total departures)
(111 non-compliant)

2019Q1
97% Compliance
(3,579 total departures)
(118 non-compliant)

RUNWAY 33 JET DEPARTURES
First Quarter 2020

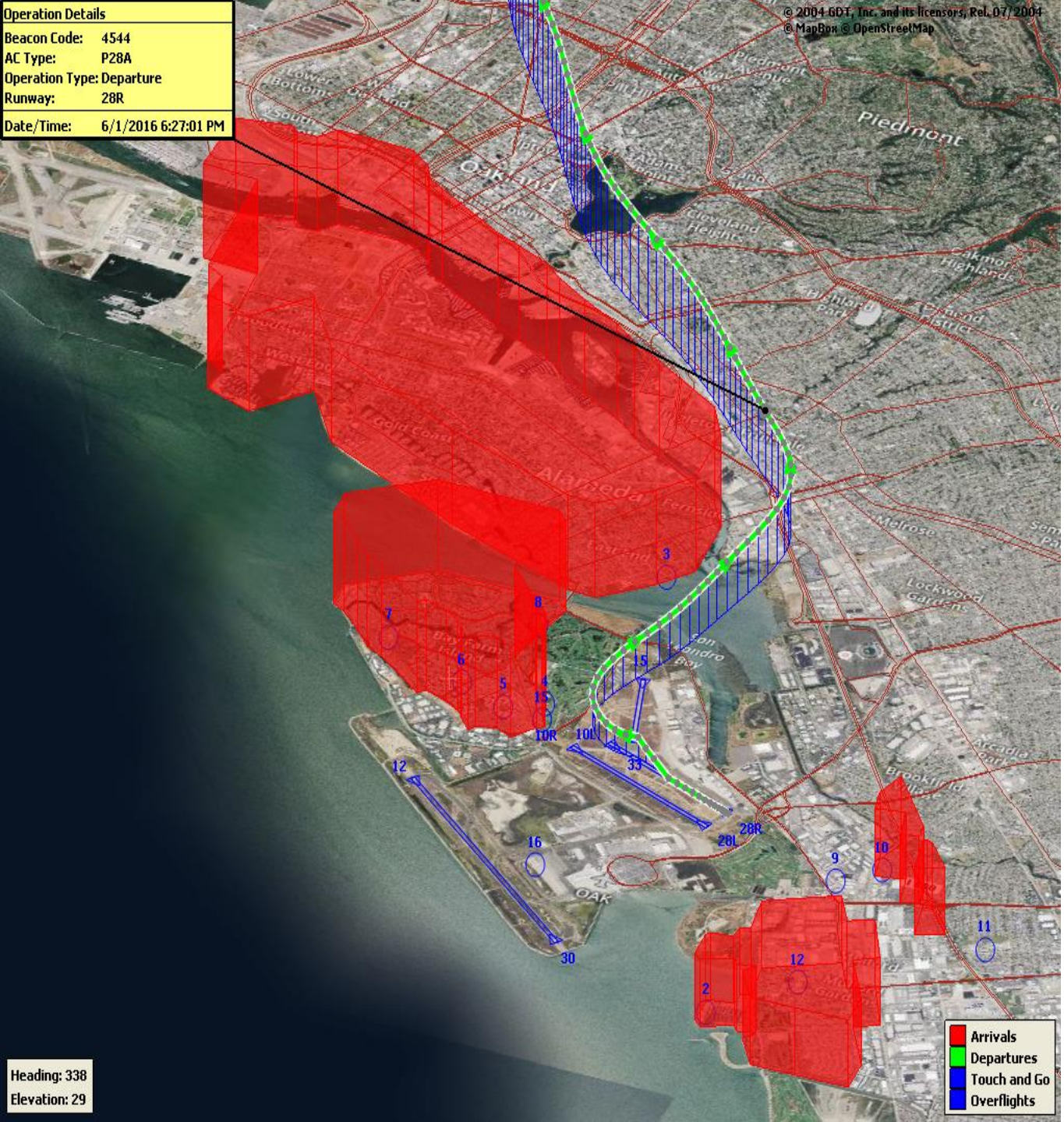




Runway 10R/L Jet Landing NAP

2020Q1
73% Compliance
(60 total landings)
(16 non-compliant)

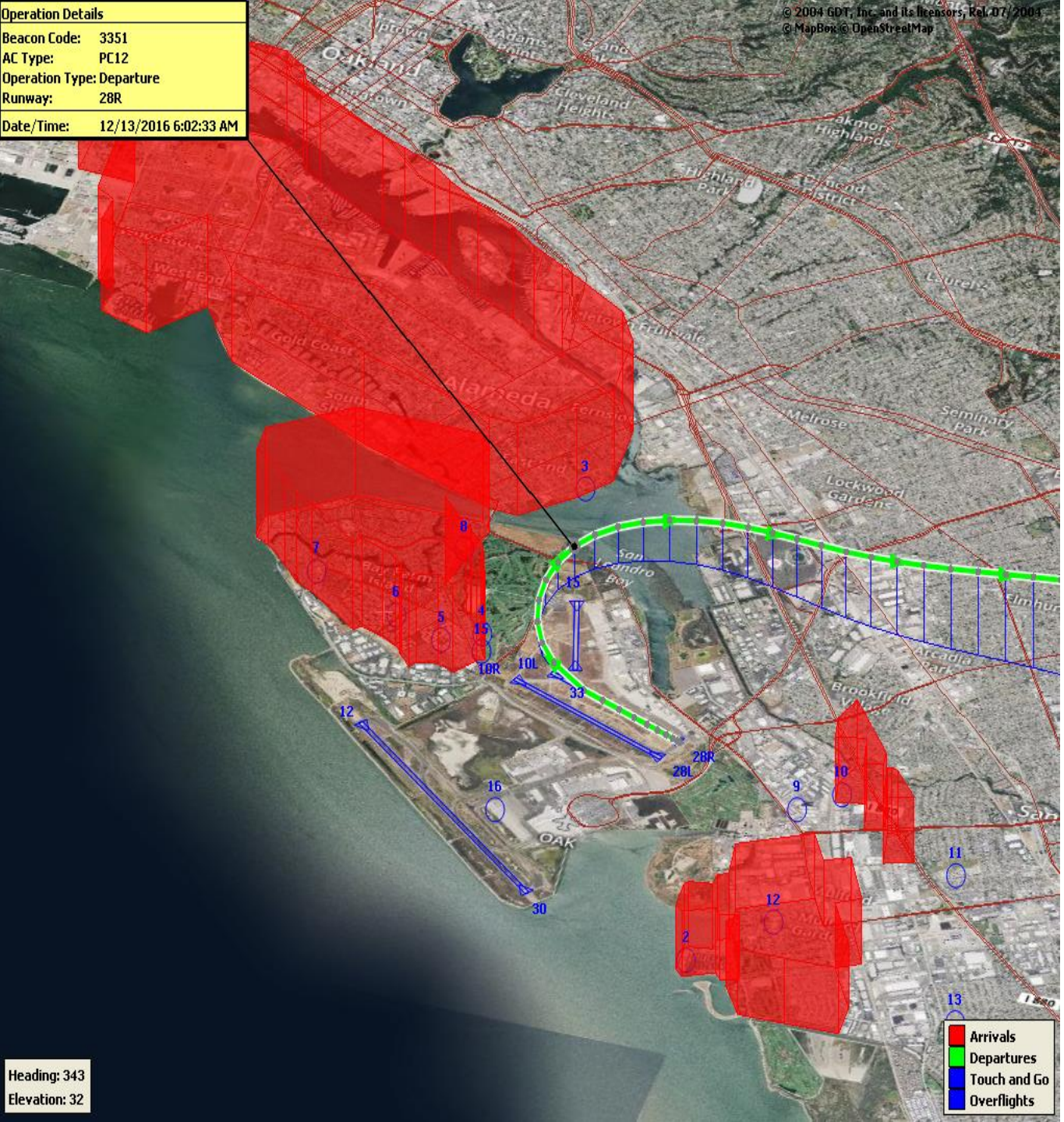
2019Q1
74% Compliance
(929 total landings)
(241 non-compliant)



VFR Aircraft Departure NAP

2020Q1
93% Compliance
(226 total departures)
(15 non-compliant)

2019Q1
94% Compliance
(234 total departures)
(13 non-compliant)

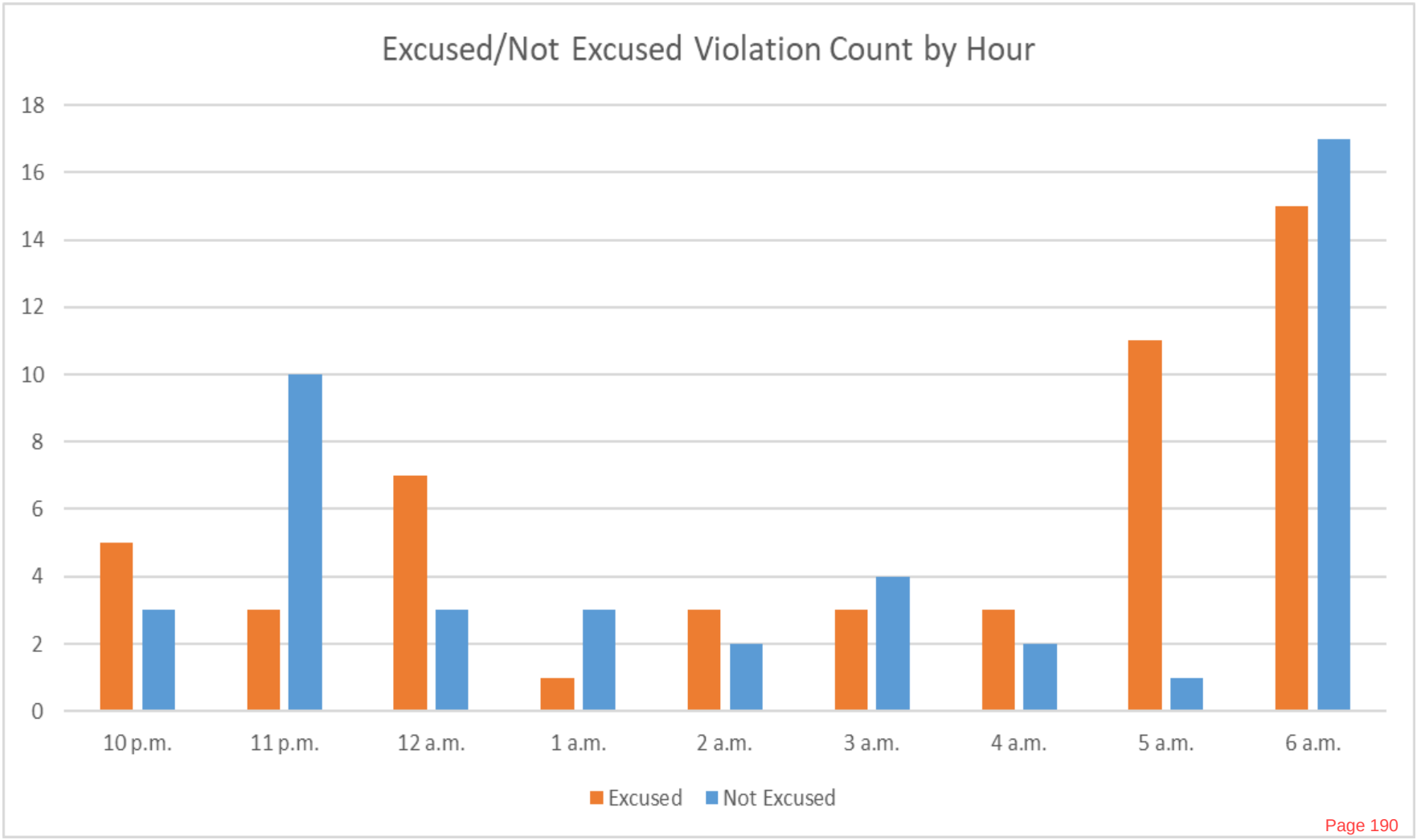


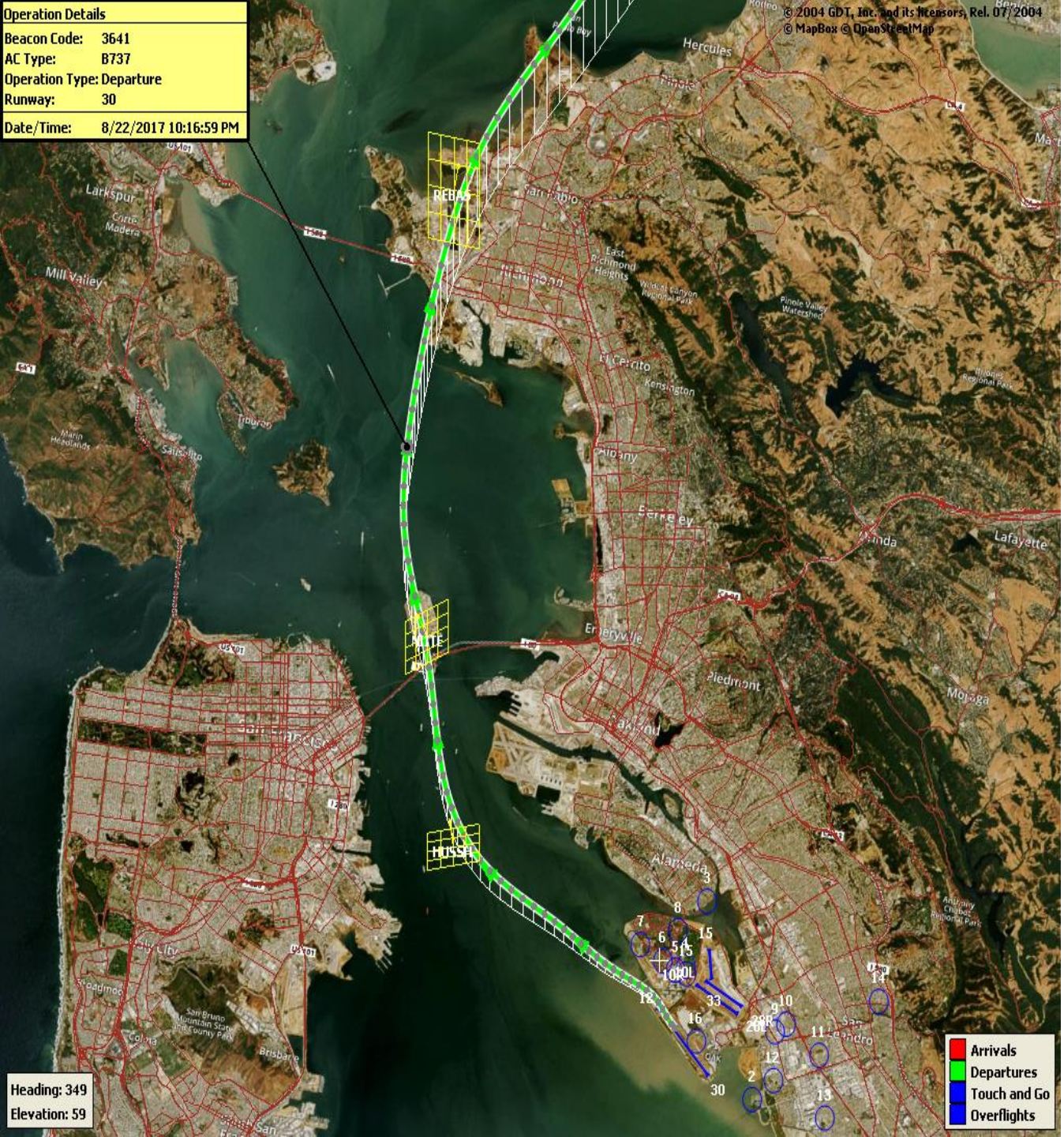
North Field
Quiet Hours NAP

2020Q1
80% Compliance
(223 total departures)
(45 non-compliant)

2019Q1
60% Compliance
(242 total departures)
(98 non-compliant)

North Field Quiet Hours NAP Non-Compliant by Hour





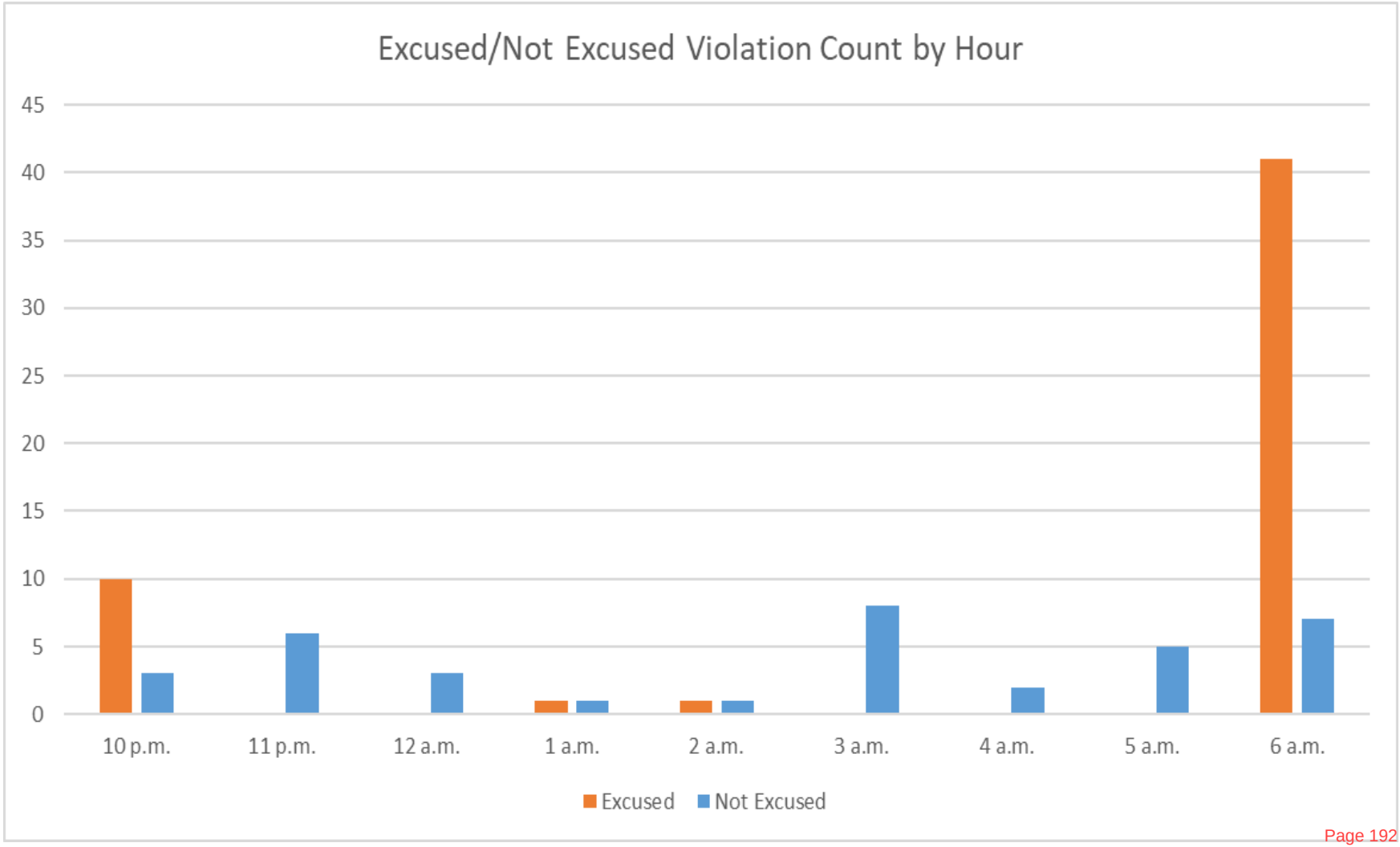
Night Time Departure NAP

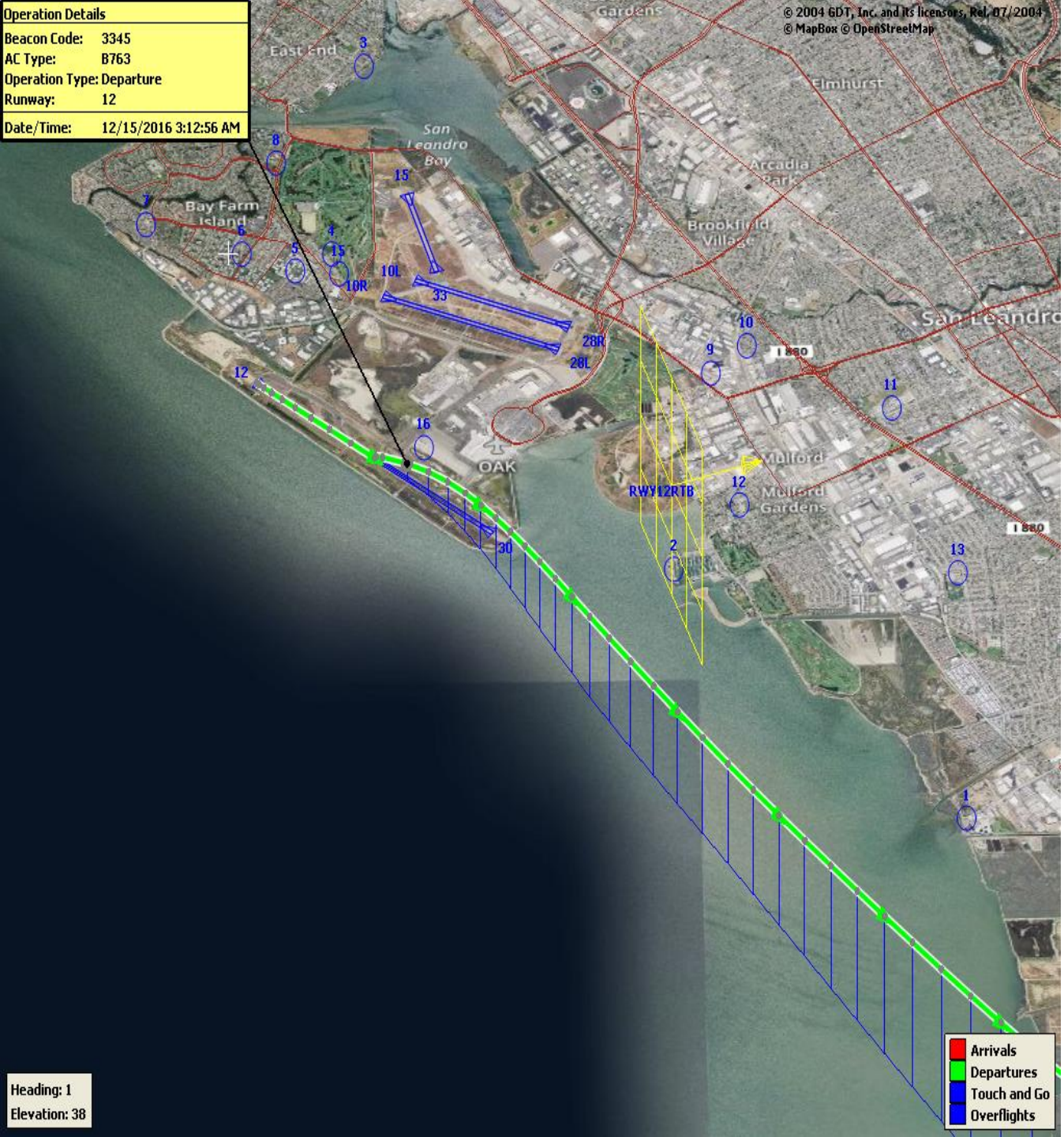
2020Q1
99% Compliance
(3,282 total departures)
(36 non-compliant)

***REBAS Gate non-compliant = 36**

2019Q1
99% Compliance
(2,853 total departures)
(42 non-compliant)

Night Time NAP Non-Compliant Count by Hour



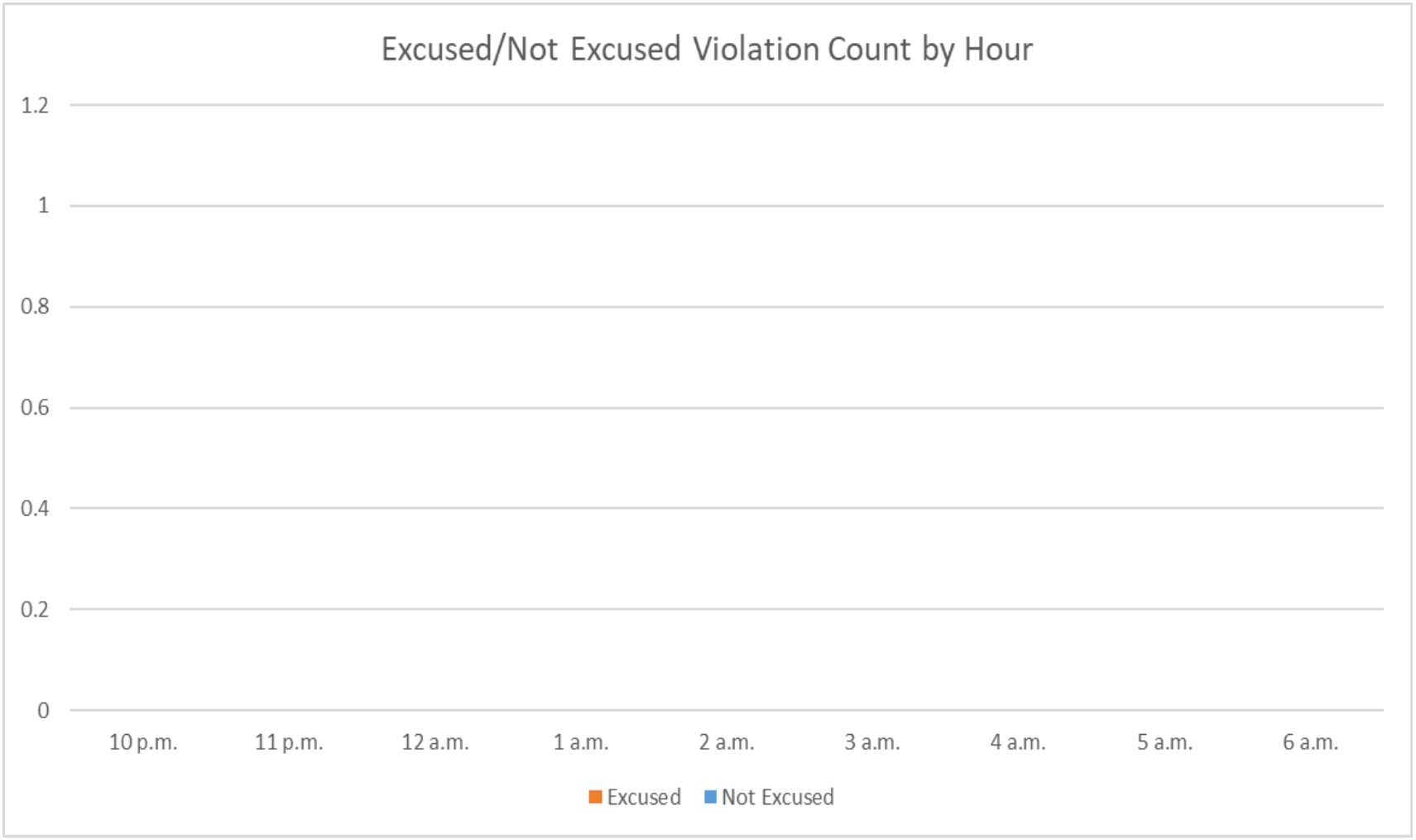


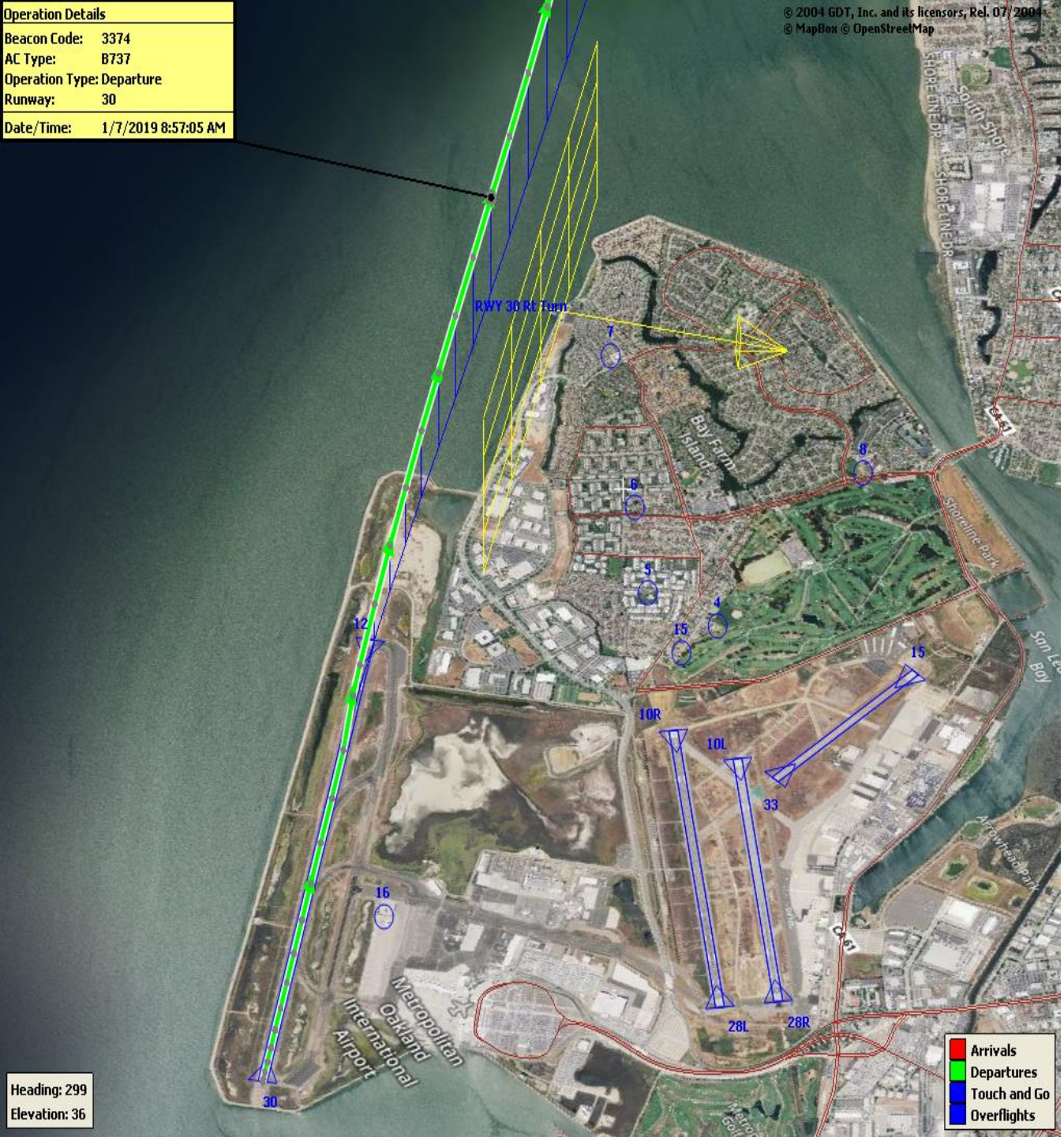
Runway 12 Night Departure NAP

2020Q1
100% Compliance
(59 total departures)
(0 non-compliant)

2019Q1
93% Compliance
(655 total departures)
(46 non-compliant)

Runway 12 Night Departure Non-Compliant Count by Hour





Runway 30 Bay Farm Right Turn NAP

2020Q1
100% Compliance
(17,627 total departures)
(10 non-compliant)

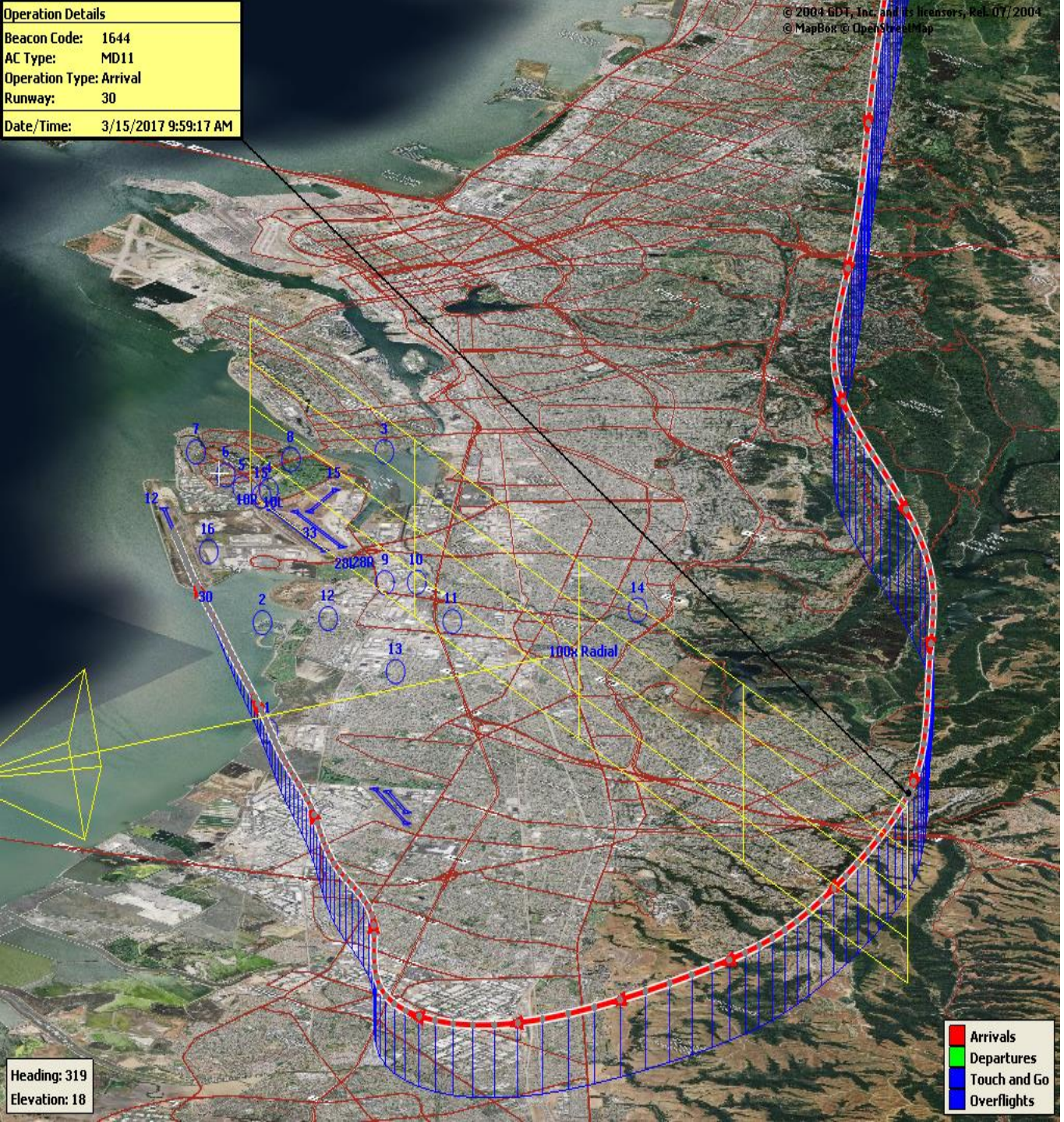
2019Q1
100% Compliance
(15,349 total departures)
(6 non-compliant)

Runway 30 East Turn NAP

2020Q1
100% Compliance
(4,447 total departures)
(9 non-compliant)

***2020Q1 Excused Departures = 20**

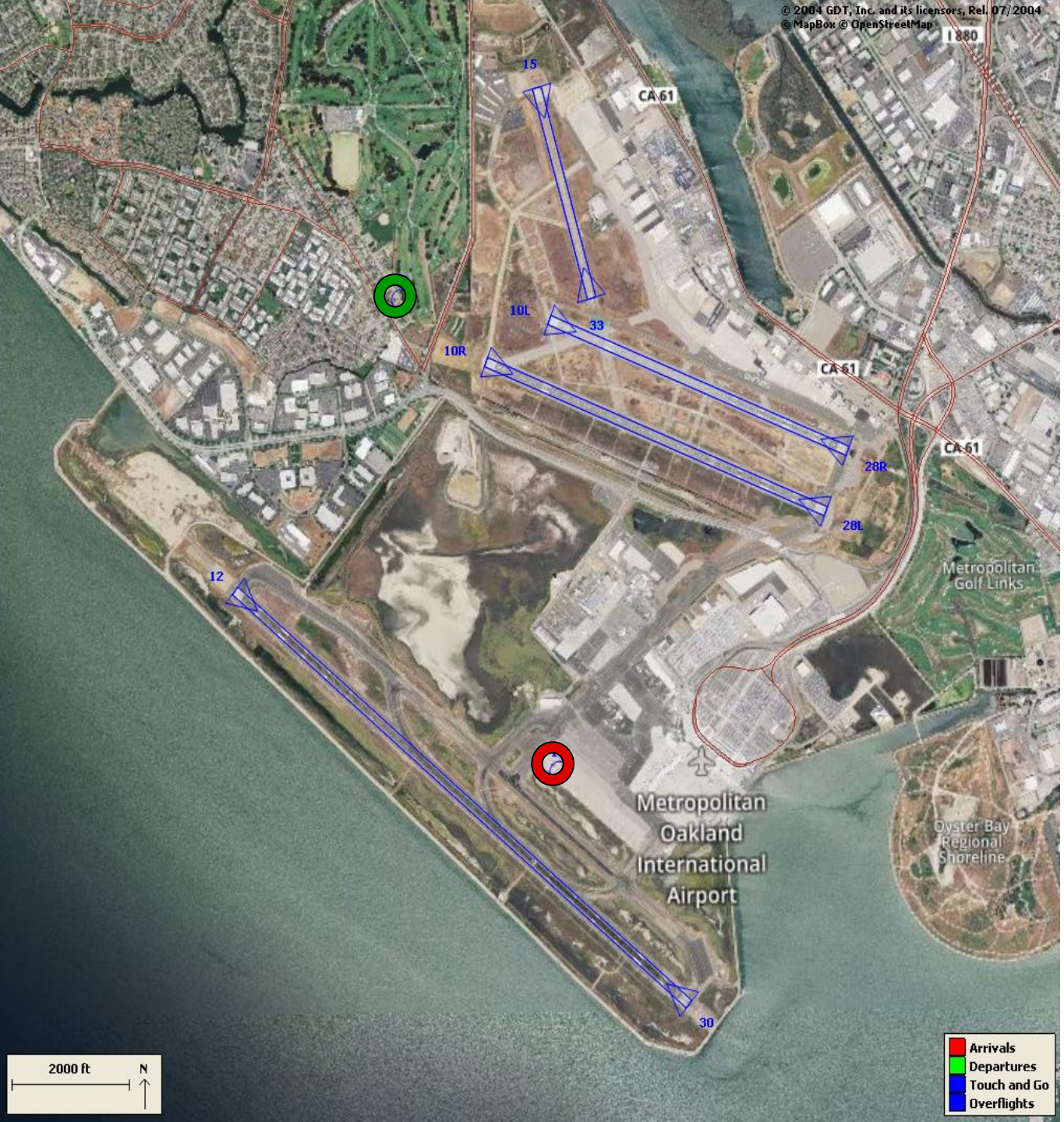
2019Q1
100% Compliance
(4,301 total departures)
(12 non-compliant)



100 Degree Radial
At 3,000 ft. NAP

2020Q1
99% Compliance
(1,116 total landings)
(8 non-compliant)

2019Q1
99% Compliance
(1,155 total landings)
(7 non-compliant)



Engine Run-up NAP

2020Q1
100% Compliance
(11 engine run-ups)*
(0 non-compliant)

2019Q1
100% Compliance
(14 engine run-ups)
(0 non-compliant)

***Only above idle-power run-ups recorded.**

Compliance Monitoring Quarterly Summary Comparison
First Quarter 2020 - Quarter-to-Quarter

	2019Q4		2020Q1	
	Compl.	N/C	Compl.	N/C
Runway 28R/L Jet Departure Compliance	95%	5%	96%	4%
Total Airport-wide Corporate Jet Departures	2,709	147	2,404	111
Runway 10R/L Jet Landing Compliance	69%	31%	73%	27%
Total Southeast Plan Corporate Jet Landings	220	97	44	16
North Field VFR Departure Compliance	91%	9%	93%	7%
Total Runways 28R/L & 33 Departures	214	22	211	15
North Field Quiet Hours Compliance	77%	23%	80%	20%
Total North Field Quiet Hours Departures	174	51	178	45
Runway 30 BFI Right Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 Turbojet Departures	19,170	73	17,617	10
Night Time Departure Compliance	99%	1%	99%	1%
Total Runway 30 Night Turbojet Departures	3,658	52	3,246	36
Runway 12 Night Departure Compliance	99%	1%	100%	0%
Total Runway 12 Night Turbojet Departures	276	3	59	0
Runway 30 East Turn Departure Compliance	99%	1%	100%	0%
Total Runway 30 East Turn Departures	5,220	59	4,438	9
100 Degree Radial Turbojet Landing Compliance	99%	1%	99%	1%
Total 100 Degree Radial Turbojet Landings	1,245	11	1,108	8
Engine Runup Program Compliance	100%	0%	100%	0%
Total Evening and Nighttime Engine Runups	8	0	11	0

Note: N/C means non-compliant. Percentage values are rounded out.

Table 1. North Field Night Aircraft Departure SEL Noise Measurements
Total Aircraft Departures = 82

First Quarter 2020 (10:00 p.m. to 7:00 a.m.)

NMT Number	Aircraft Noise Events Below SEL 80 dBA	Aircraft Noise Events SEL 80 - 84.9 dBA			Aircraft Noise Events SEL 85 - 89.9 dBA			Aircraft Noise Events SEL ≥ 90 dBA			Total Aircraft Noise Events
		Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	
1	0	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	0
2	5	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	5
3	23	1	0.0	0.2%	1	0.0	0.2%	0	0.0	0.0%	25
4	30	16	0.2	2.8%	12	0.1	2.1%	5	0.1	0.9%	63
5	16	17	0.2	3.0%	6	0.1	1.1%	15	0.2	2.6%	54
6	11	7	0.1	1.2%	9	0.1	1.6%	8	0.1	1.4%	35
7	9	7	0.1	1.2%	12	0.1	2.1%	1	0.0	0.2%	29
8	17	7	0.1	1.2%	2	0.0	0.4%	0	0.0	0.0%	26
9	2	3	0.0	0.5%	2	0.0	0.4%	1	0.0	0.2%	8
10	11	5	0.1	0.9%	0	0.0	0.0%	0	0.0	0.0%	16
11	1	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	1
12	2	0	0.0	0.0%	1	0.0	0.2%	0	0.0	0.0%	3
13	1	1	0.0	0.2%	0	0.0	0.0%	0	0.0	0.0%	2
14	0	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	0
All NMTs	128	64	1	0	45	1	0	30	0	0	267

Table 2. Aircraft SEL Noise Measurements in Alameda - Total Aircraft Departures = 72

First Quarter 2020 (10:00 p.m. to 7:00 a.m.)

NMT Number	Aircraft Noise Events Below SEL 80 dBA	Aircraft Noise Events SEL 80 - 84.9 dBA			Aircraft Noise Events SEL 85 - 89.9 dBA			Aircraft Noise Events SEL ≥ 90 dBA			Total Aircraft Noise Events
		Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	
3	23	1	0.0	0.4%	1	0.0	0.4%	0	0.0	0.0%	25
4	30	16	0.2	6.7%	12	0.1	5.0%	5	0.1	2.1%	63
5	16	17	0.2	7.1%	6	0.1	2.5%	15	0.2	6.3%	54
6	11	7	0.1	2.9%	9	0.1	3.8%	8	0.1	3.3%	35
7	9	7	0.1	2.9%	12	0.1	5.0%	1	0.0	0.4%	29
8	17	7	0.1	2.9%	2	0.0	0.8%	0	0.0	0.0%	26
Total	**106**	**55**	**0.6**		**42**	**0.5**		**29**	**0.3**		**232**

Table 3. Aircraft SEL Noise Measurements in San Leandro - Total Aircraft Departures = 10

First Quarter 2020 (10:00 p.m. to 7:00 a.m.)

NMT Number	Aircraft Noise Events Below SEL 80 dBA	Aircraft Noise Events SEL 80 - 84.9 dBA			Aircraft Noise Events SEL 85 - 89.9 dBA			Aircraft Noise Events SEL ≥ 90 dBA			Total Aircraft Noise Events
		Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	
2	5	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	5
9	2	3	0.0	0.9%	2	0.0	0.6%	1	0.0	0.3%	8
10	11	5	0.1	1.5%	0	0.0	0.0%	0	0.0	0.0%	16
11	1	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	1
12	2	0	0.0	0.0%	1	0.0	0.3%	0	0.0	0.0%	3
13	1	1	0.0	0.3%	0	0.0	0.0%	0	0.0	0.0%	2
14	0	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	0
Total	**22**	**9**	**0.1**		**3**	**0.0**		**1**	**0.0**		**35**

Rolling Take-off Night Departure Procedure (1:00 to 5:00 AM)
First Quarter 2020, NMT 2

	Aircraft Departures		Recorded Noise Events (a)	Lmax Average	SEL Average	Avg. Duration (seconds)
Baseline (November 2002) [A]						
DC10/MD10	87		32	69	78	22
MD11	32		13	70	79	24
A306	67		21	67	77	25
First Quarter 2020 [B]						
	Total [X]	Est. Avg. Monthly [X/3]				
B763	144	48	40	65	74	15
DC10/MD10	47	16	22	65	75	17
MD11	227	76	127	67	76	17
A306	93	31	39	66	75	17
B757	172	57	55	66	76	16
B77L	113	38	25	65	73	12
Difference [A-B]						
DC10/MD10		-71	-10	-4	-3	-5
MD11		44	114	-3	-3	-7
A306		-36	18	-1	-2	-8

(a) For the current calendar quarter reported, ANOMS does not correlate all departures to their respective noise events; that is most, but not all, aircraft back-blast noise events are effectively correlated as the program software algorithms may misidentify an aircraft noise event.
Source: ANOMS (Airport Noise and Operations Monitoring System)

Rolling Take-off Night Departure Procedure (1:00 to 5:00 AM)
First Quarter 2019, NMT 2

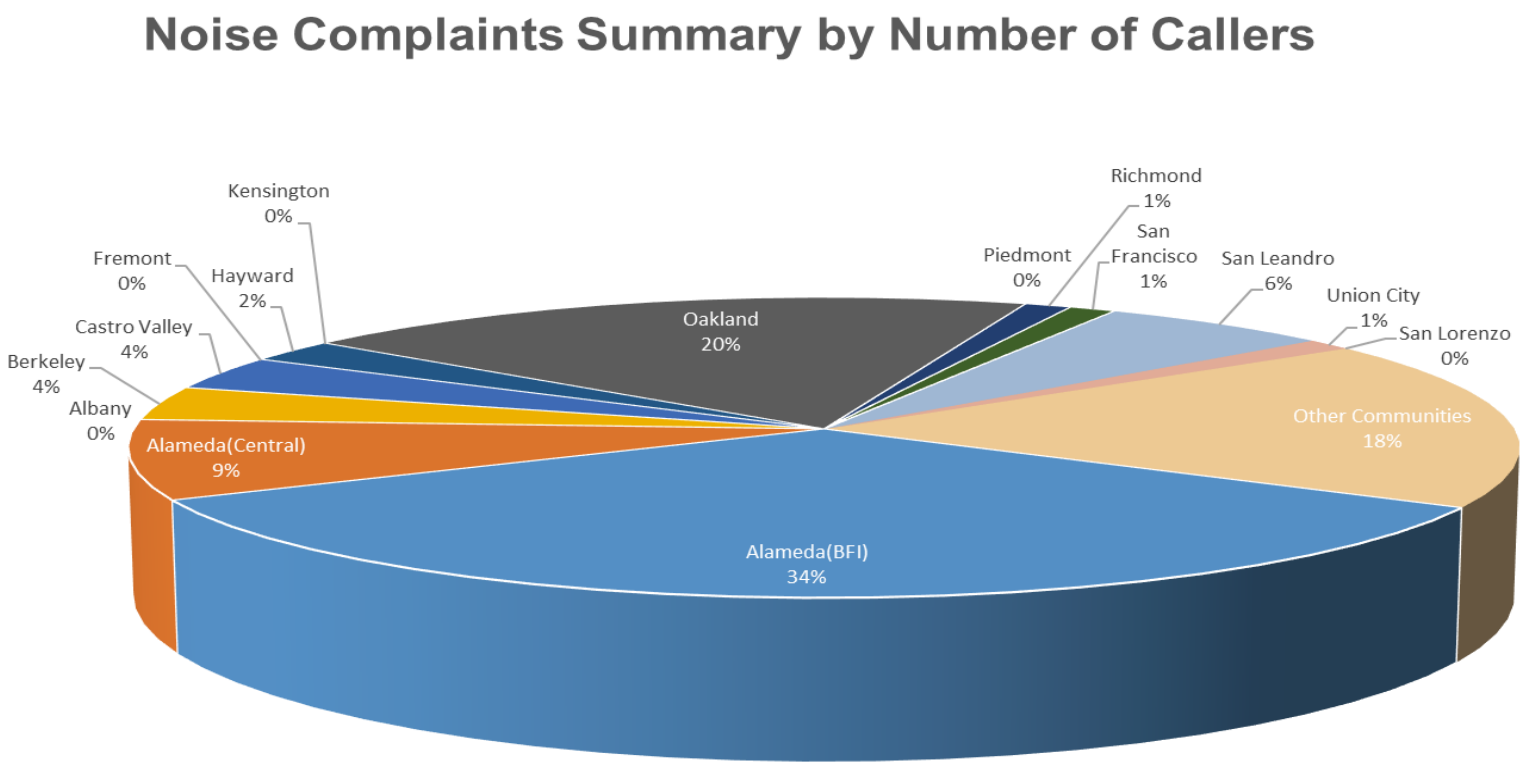
	Aircraft Departures		Recorded Noise Events (a)	Lmax Average	SEL Average	Avg. Duration (seconds)
Baseline (November 2002) [A]						
DC10/MD10	87		32	69	78	22
MD11	32		13	70	79	24
A306	67		21	67	77	25
First Quarter 2019 [B]						
	Total [X]	Est. Avg. Monthly [X/3]				
B763	109	36	25	65	74	15
DC10/MD10	44	15	19	66	75	21
MD11	186	62	112	67	76	19
A306	86	29	38	65	74	18
B757	142	47	51	65	75	15
B77L	59	20	16	65	73	11
Difference [A-B]						
DC10/MD10		-72	-13	-3	-3	-1
MD11		30	99	-3	-3	-5
A306		-38	17	-2	-3	-7

(a) For the current calendar quarter reported, ANOMS does not correlate all departures to their respective noise events; that is most, but not all, aircraft back-blast noise events are effectively correlated as the program software algorithms may misidentify an aircraft noise event.
Source: ANOMS (Airport Noise and Operations Monitoring System)

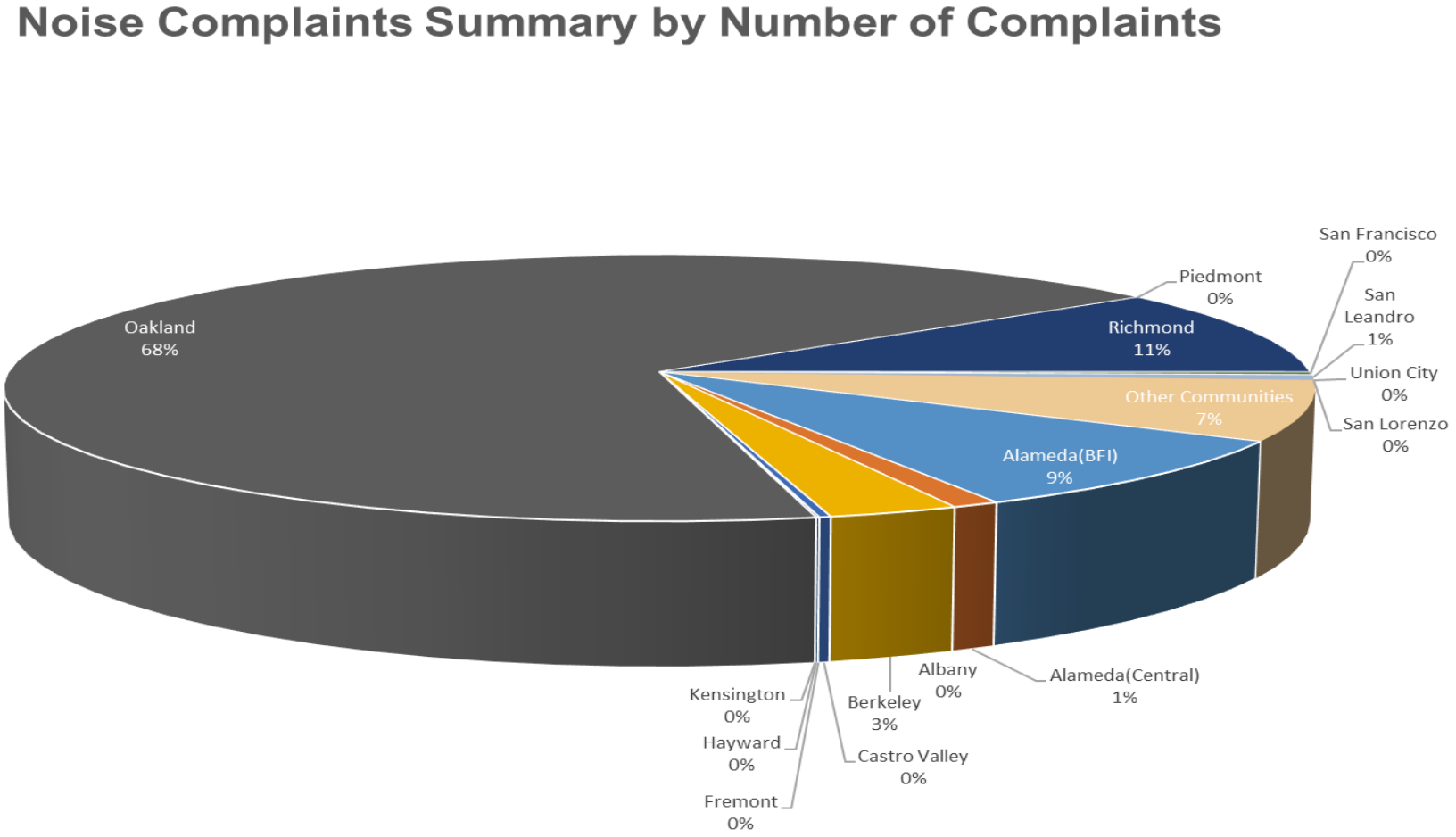
Oakland International Airport
Noise Complaint Summary
January 2020

Community	Callers	Complaints
Alameda(BFI)	28	636
Alameda(Central)	7	73
Albany	0	0
Berkeley	3	202
Castro Valley	3	18
Fremont	0	0
Hayward	2	5
Kensington	0	0
Oakland	16	4780
Piedmont	0	0
Richmond	1	741
San Francisco	1	23
San Leandro	5	41
Union City	1	3
San Lorenzo	0	0
Other Communities	15	518
Total	**82**	**7040**
Complaints by Type		
Website	0	
E-mail	4858	
Phone	30	
Viewpoint App	2152	
Complaints by Time of Day		
Day (0700 - 1900)	2510	
Evening (1900 - 2200)	1028	
Night (2200 - 0700)	3502	
Complaints by Type of Operation		
Arrivals	5218	
Departures	1598	
Over-flights	203	
Touch & Go	21	
Not Linked to an Operation	0	
Complaints by Type of Aircraft		
Business Jet	124	
Helicopter	37	
Jet	6349	
Military	1	
Not Reported (not linked to an aircraft)	0	
Other (Type information not available)	103	
Propeller	278	
Turbo-prop	148	

Number of Callers
January 2020



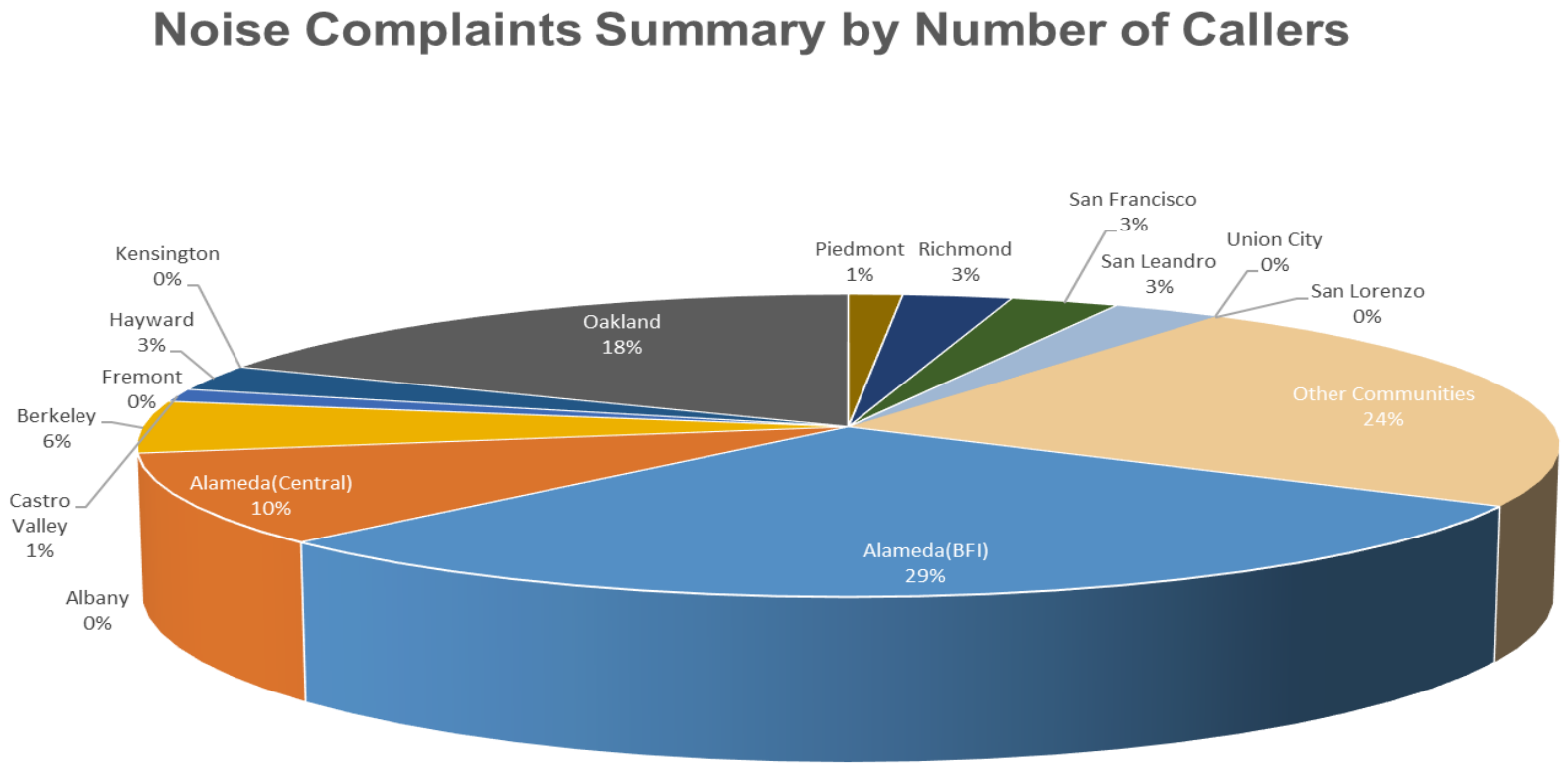
Number of Complaints January 2020



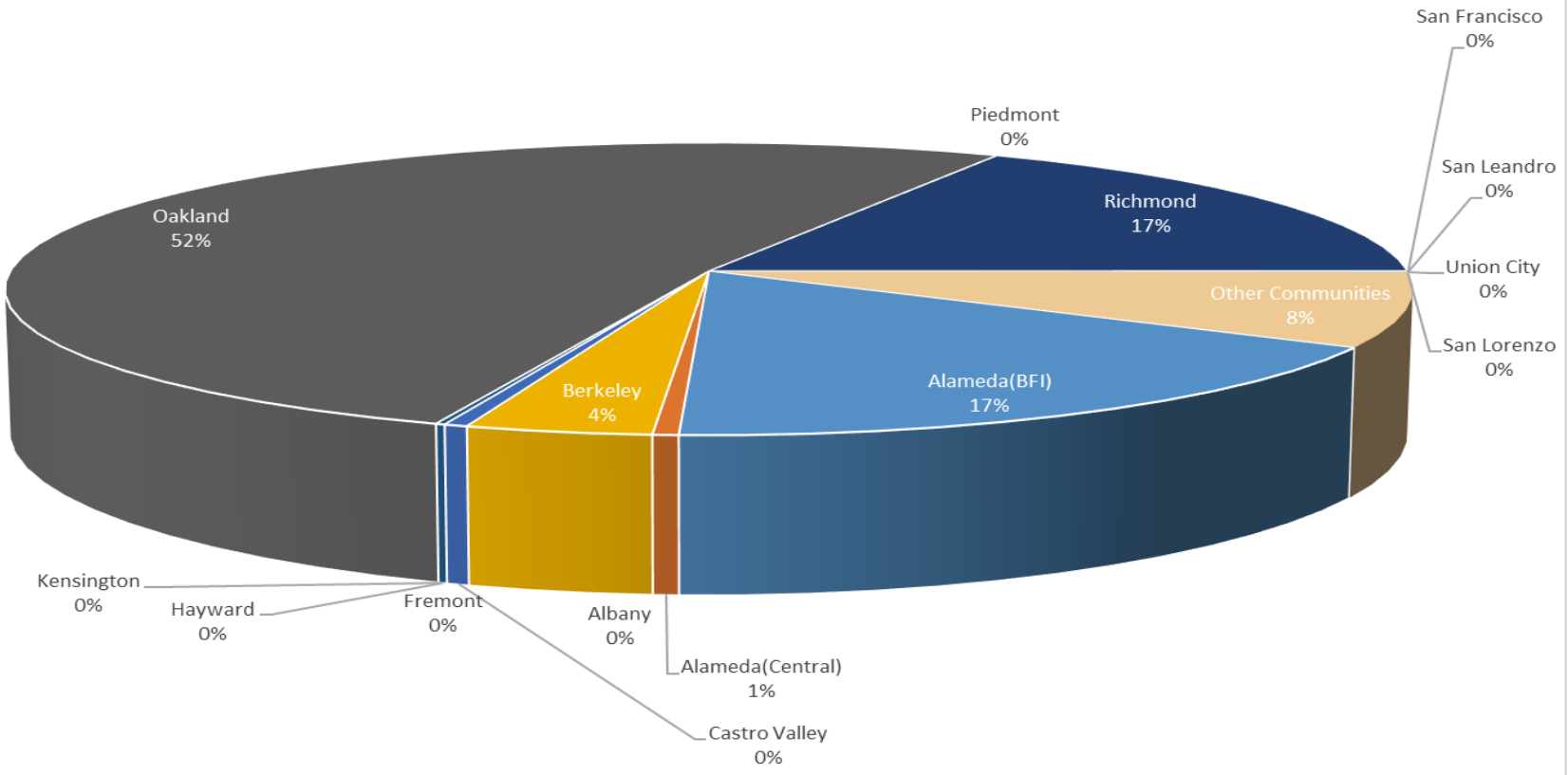
Oakland International Airport
Noise Complaint Summary
February 2020

Community	Callers	Complaints
Alameda(BFI)	21	1010
Alameda(Central)	7	31
Albany	0	0
Berkeley	4	223
Castro Valley	1	28
Fremont	0	0
Hayward	2	11
Kensington	0	0
Oakland	13	3036
Piedmont	1	1
Richmond	2	1020
San Francisco	2	2
San Leandro	2	5
Union City	0	0
San Lorenzo	0	0
Other Communities	17	481
Total	**72**	**5848**
Complaints by Type		
Website	0	
E-mail	3475	
Phone	0	
Viewpoint App	2373	
Complaints by Time of Day		
Day (0700 - 1900)	1821	
Evening (1900 - 2200)	1478	
Night (2200 - 0700)	2549	
Complaints by Type of Operation		
Arrivals	3266	
Departures	2250	
Over-flights	294	
Touch & Go	38	
Not Linked to an Operation	0	
Complaints by Type of Aircraft		
Business Jet	574	
Helicopter	57	
Jet	4506	
Military	0	
Not Reported (not linked to an aircraft)	0	
Other (Type information not available)	167	
Propeller	380	
Turbo-prop	164	

Number of Callers
February 2020



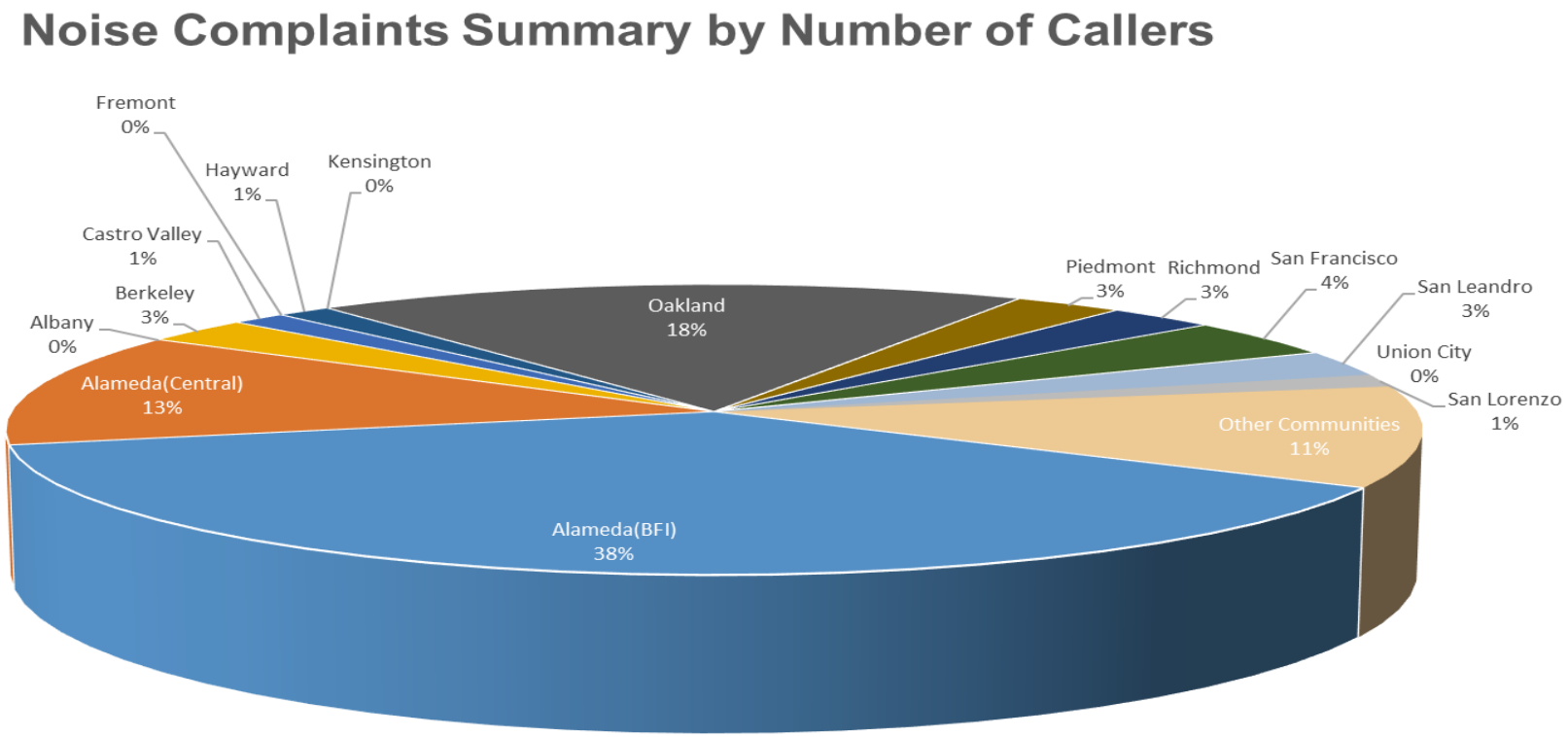
Number of Complaints February 2020



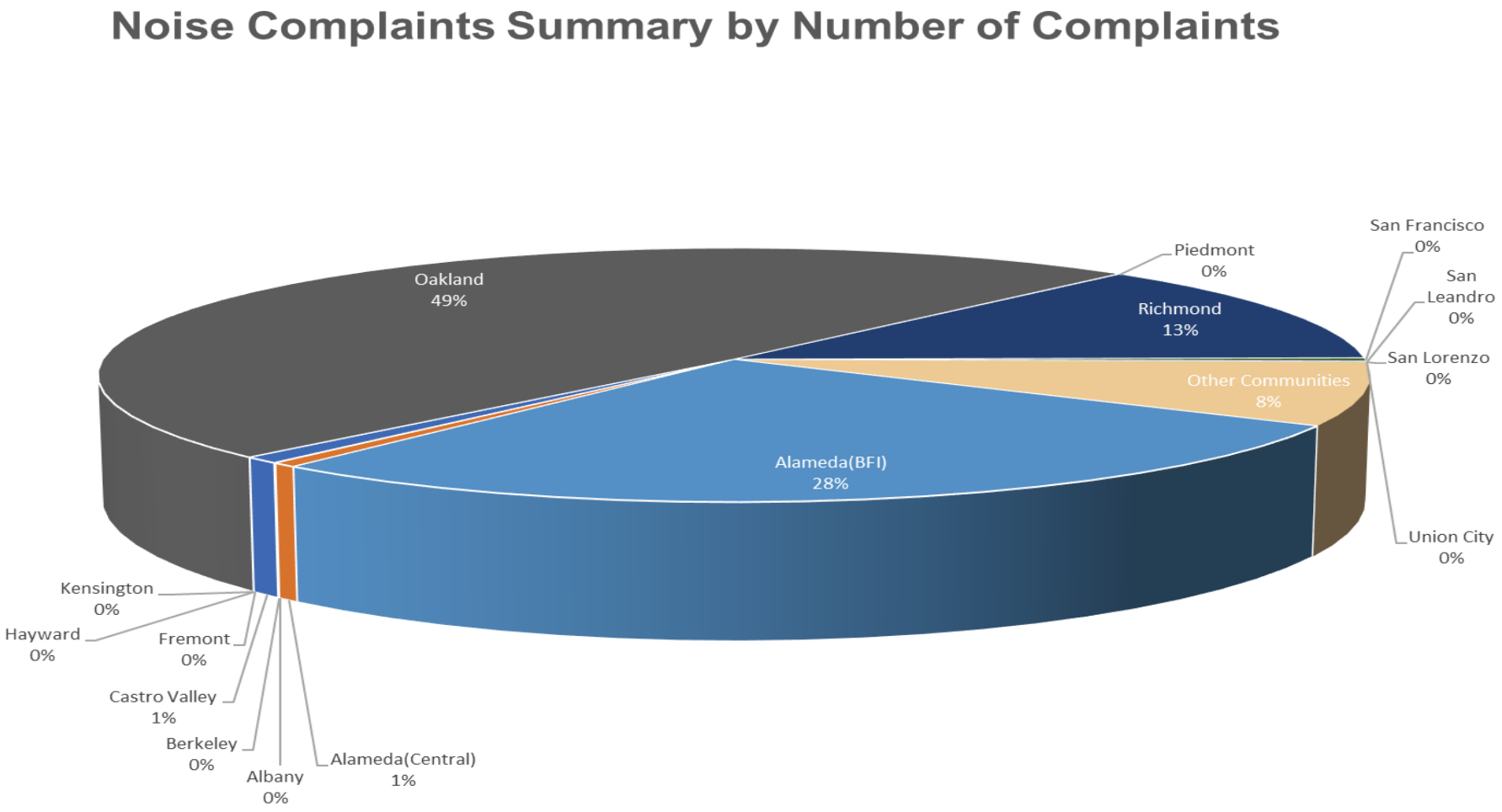
Oakland International Airport
Noise Complaint Summary
March 2020

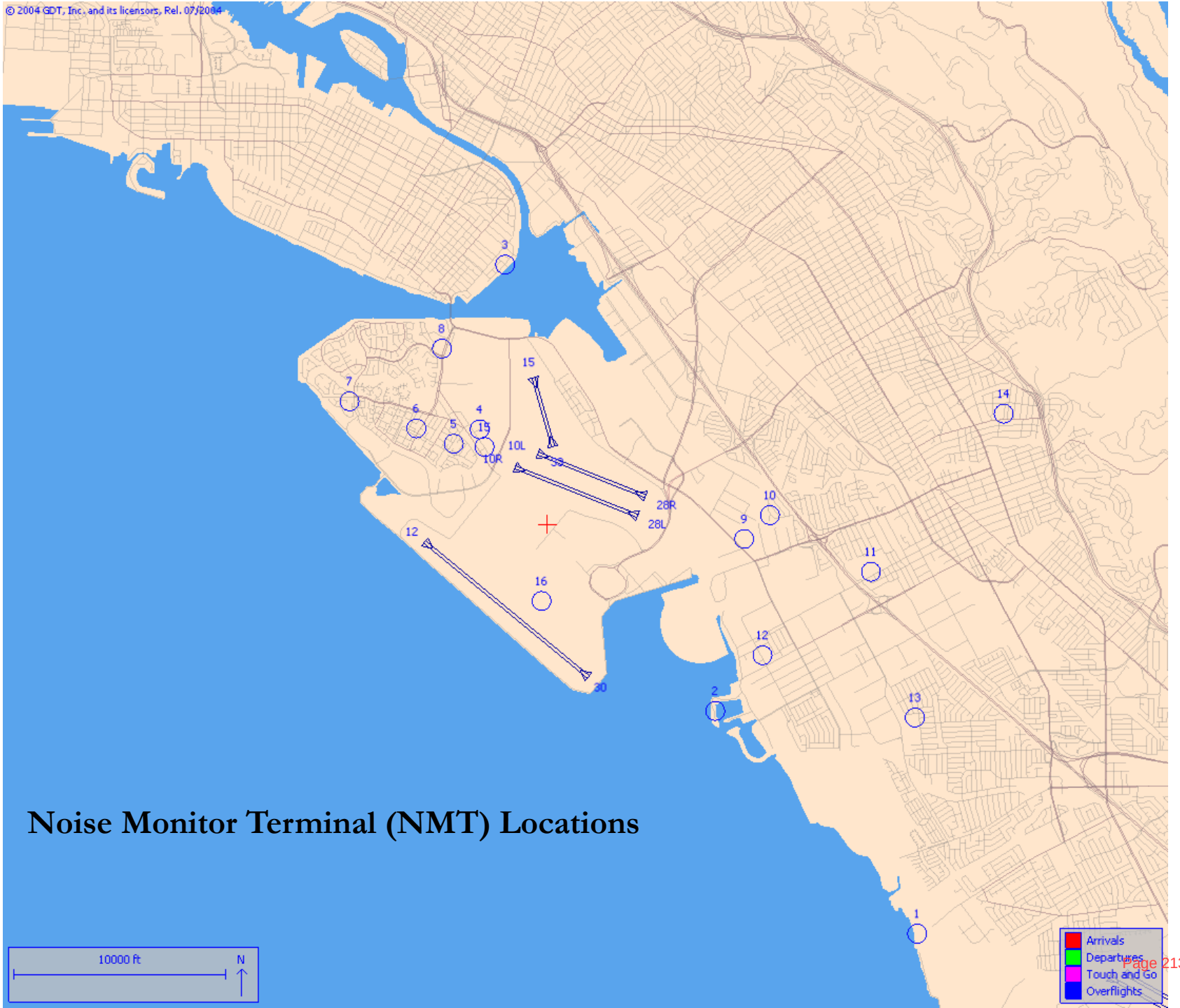
Community	Callers	Complaints
Alameda(BFI)	27	1952
Alameda(Central)	9	41
Albany	0	0
Berkeley	2	3
Castro Valley	1	59
Fremont	0	0
Hayward	1	1
Kensington	0	0
Oakland	13	3491
Piedmont	2	2
Richmond	2	936
San Francisco	3	30
San Leandro	2	6
Union City	0	0
San Lorenzo	1	1
Other Communities	8	567
Total	**71**	**7089**
Complaints by Type		
Website	0	
E-mail	3662	
Phone	0	
Viewpoint App	3427	
Complaints by Time of Day		
Day (0700 - 1900)	2496	
Evening (1900 - 2200)	1858	
Night (2200 - 0700)	2735	
Complaints by Type of Operation		
Arrivals	3720	
Departures	3062	
Over-flights	224	
Touch & Go	83	
Not Linked to an Operation	0	
Complaints by Type of Aircraft		
Business Jet	230	
Helicopter	60	
Jet	6095	
Military	0	
Not Reported (not linked to an aircraft)	0	
Other (Type information not available)	143	
Propeller	391	
Turbo-prop	170	

Number of Callers
March 2020



Number of Complaints March 2020





Noise Monitor Terminal (NMT) Locations

ROLLING THREE YEAR REPORT CY17/18/19

	2017Q1		2017Q2		2017Q3		2017Q4		2018Q1		2018Q2		2018Q3		2018Q4		2019Q1		2019Q2		2019Q3		2019Q4	
	Compl.	N/C	Compl.	N/C	Compl.	N/C	Compl.	N/C	Compl.	N/C	Compl.	N/C	Compl.	N/C	Compl.	N/C	Compl.	N/C	Compl.	N/C	Compl.	N/C	Compl.	N/C
Runway 28R/L Jet Departure Compliance	94%	6%	90%	10%	95%	5%	94%	6%	94%	6%	93%	7%	94%	6%	96%	4%	97%	3%	96%	4%	95%	5%	95%	5%
Total Airport-wide Corporate Jet Departures	2,860	167	2,727	312	2,742	155	2,856	178	3,141	199	2,932	209	2,635	167	2,868	123	3,461	118	3,162	126	2,917	141	2,709	147
Runway 10R/L Jet Landing Compliance	72%	28%	69%	31%	100%	0%	76%	24%	68%	32%	88%	12%	44%	56%	59%	41%	74%	26%	83%	17%	100%	0%	69%	31%
Total Southeast Plan Corporate Jet Landings	603	238	44	20	0	0	97	30	189	88	44	6	4	5	96	66	688	241	84	14	0	0	220	97
North Field VFR Departure Compliance	99%	1%	97%	3%	98%	2%	94%	6%	93%	7%	90%	10%	93%	7%	93%	7%	94%	6%	94%	6%	96%	4%	91%	9%
Total Runways 28R/L & 33 Departures	410	5	572	18	534	9	369	25	362	28	466	50	375	30	235	18	221	13	294	19	325	14	214	22
North Field Quiet Hours Compliance	73%	27%	83%	17%	88%	12%	82%	18%	80%	20%	74%	26%	69%	31%	70%	30%	60%	40%	82%	18%	75%	25%	77%	23%
Total North Field Quiet Hours Departures	120	44	182	37	409	54	265	60	211	52	256	88	221	97	138	59	144	98	283	52	219	72	174	51
Runway 30 BFI Right Turn Departure Compliance	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%
Total Runway 30 Turbojet Departures	12,942	2	17,618	5	18,623	3	18,845	1	17,067	2	19,585	3	20,436	4	18,609	70	15,343	6	20,139	9	21,252	5	19,170	73
Night Time Procedure Compliance	99%	1%	99%	1%	96%	4%	99%	1%	99%	1%	98%	2%	98%	2%	97%	3%	99%	1%	99%	1%	93%	7%	99%	1%
Total Runway 30 Night Turbojet Departures	2,447	23	3,324	27	3,570	165	3,638	50	3,040	32	4,041	74	3,814	78	3,078	84	2,811	42	4,190	43	3,748	266	3,658	52
Runway 12 Night Departure Compliance	86%	14%	83%	17%	75%	25%	86%	14%	99%	1%	82%	18%	100%	0%	98%	2%	93%	7%	100%	0%	100%	0%	99%	1%
Total Runway 12 Night Turbojet Departures	324	51	62	13	3	1	131	22	187	1	36	8	0	0	187	4	609	46	49	0	0	0	276	3
Runway 30 East Turn Departure Compliance	100%	0%	99%	1%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	99%	1%	100%	0%	100%	0%	100%	0%	99%	1%
Total Runway 30 East Turn Departures	3,813	5	5,363	27	5,878	20	5,764	8	4,959	3	5,979	5	6,647	3	5,710	52	4,289	12	5,546	9	5,981	13	5,220	59
100 Degree Radial Turbojet Landing Compliance	93%	7%	95%	5%	96%	4%	99%	1%	99%	1%	99%	1%	99%	1%	99%	1%	99%	1%	99%	1%	99%	1%	99%	1%
Total 100 Degree Radial Turbojet Landings	1,603	112	2,337	130	2,745	109	3,028	46	2,578	14	1,354	11	1,294	9	1,408	11	1,148	7	1,329	9	1,381	14	1,245	11
Engine Runup Program Compliance	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%	0%
Total Evening and Nighttime Engine Runups	14	0	7	0	12	0	7	0	14	0	8	0	26	0	9	0	14	0	9	0	11	0	8	0

NOTE: Compl. means complaince values; N/C means non-compliant values. N/A means there were no applicable flights e.g. Southeast Plan flights.

DRAFT MEETING MINUTES
OAKLAND AIRPORT-COMMUNITY NOISE MANAGEMENT FORUM

January 15, 2020

INDEX TO THE PROCEEDINGS

Page No.

1. INTRODUCTIONS

The January 15, 2020 meeting of the Oakland Airport-Community Noise Management Forum was called to order at 6:32 p.m. by the Forum's Elected Co-Chair, San Leandro Councilmember Benny Lee. Co-Chair Lee said he would be facilitating the meeting in the absence of the Forum's facilitator, Mike McClintock. Co-Chair Lee asked the Forum members and advisors to introduce themselves for the benefit of the audience:

Forum Members/Alternates Present:

Kristi McKenney, Assistant Director of Aviation, Port of Oakland
Benny Lee, Co-Chair/Councilmember, City of San Leandro
Walt Jacobs, Co-Chair/Citizen Representative, Alameda
Tony Daysog, Councilmember, City of Alameda
Ernest DelliGatti, Citizen Representative, Alameda County
Cheryl Davila, Councilmember, City of Berkeley
James Nelson, Citizen Representative, Berkeley
Edward Bogue, Citizen Representative, Hayward
Peter Marcuzzo, NextGen/Metroplex Subcommittee Chair/Citizen Representative, Oakland
Tom Wagner, Citizen Representative, San Leandro

FAA Representatives

Tamara Swann, Deputy Regional Administrator, FAA Western-Pacific Region
Adam Vetter, FAA Western Service Area Operations Support Group, Analytics/Community Engagement Team Lead
Sky Laron, FAA, Community Engagement Officer

Staff Members/Advisors/Guests:

Matt P. Davis, Airport Operations Manager, Port of Oakland
Matt Davis, Governmental Affairs Director, Port of Oakland
Jesse Richardson, Acting Noise Abatement Supervisor/Sr. Noise and Environmental Affairs Specialist
Joan Zatopek, Manager of Aviation Planning, and Development, Port of Oakland
Allen Tai, Planning Services Manager, City of Alameda
Kyle Bertsche, FAA, Front Line Manager, Oakland Air Traffic Control Tower
Rhea Gundry, HMMH, Acoustical Consultant
Adam Scholten, HMMH, Airspace Consultant
Tom Middleton. HMMH, Noise Consultant
Christian Valdes, Technical Consultant, Landrum & Brown
Valerie E. Jensen Harris, Court Reporter (CSR 4401)

Facilitator Lee noted that if anyone had any questions or wished to speak on any of the agenda items, they should fill out a speaker's card and give it to him. He said for public comment, speakers should mark down agenda item 5 on the card.

2. ANNOUNCEMENTS

A. Acceptance of 3rd Quarter 2019 Noise Report

Co-Chair Lee asked if there were any questions on the 3rd quarter 2019 noise abatement report, noting that he had some questions of his own. He commented to Matt P. Davis that in going through the report he found it to be phenomenal because "there is so much more content that we can actually [use and understand], and identify the issues and actually see if there's any action items we need to [look at]." He asked about the differences in compliance data for the nighttime noise abatement departure procedure for the 2019 Q3 data versus the 2018 Q3 data. He asked Mr. Davis to speak to this and explain what caused it, and if there are any action items we need to take? Matt responded that in the 3rd quarter, SFO was overlaying one of its parallel runways. Runway 28 was closed from September 1 through September 20. During that time, because of the additional traffic on Runway 01, the FAA asked that, basically, our noise abatement procedure be suspended at 6:00 a.m. instead of 7:00 a.m. for the three-week period so they

could complete the work. Basically, what would happen otherwise was there would be significant delays at both Oakland and San Francisco. During that time, he said, we did have departures that were non-compliant. The report breaks them out, and every single flight that occurred before 7:00 a.m. was considered non-compliant. Davis said he could review the data and develop a separate compliance report for this time period and compare the differences between what it looked like and what it could have looked like. He noted also, that they had reached out to the communities and advised them we would have a three-week period of additional flights in the morning hours.

Co-Chair Lee said his question was whether this was a scheduled or unscheduled repair. Davis replied that it was both "yes and no," adding that SFO has had a series of pavement failures on Runways 28L and 28R. Normally, these types of repairs are scheduled months and even years in advance, as was the case with the runway safety area work in 2018. The work was scheduled, but in order to complete it on time, it was necessary to modify the noise abatement hours. This was not something that was presented to the Port prior to the FAA's request, but we tried to notify the communities as quickly as possible once we were made aware of it. Lee asked if the Port maintained a schedule for projected maintenance. Davis replied that "yes," they do, but he could not speak for SFO. Typically, an asphalt runway has a fifteen-year life cycle. However, the runway issue at SFO was unanticipated. It was a failure of the subbase due to high usage. He noted that at OAK, they try to complete runway maintenance work on Monday mornings prior to 6:00 a.m.

James Nelson said he had spoken with a Berkeley resident regarding the complaint summary, and had discussed this with Jesse Richardson. Evidently, he said, there is an app/website that competes with the Port's noise complaint hotline—stop.jet.noise.net. It was his understanding that numerous complaints are registered on stop.jet.noise.net that do not show up in the Oakland noise report. He said he was wondering if there was any way to incorporate these complaints into the Port's noise reports? He understands that SFO is able to do this. Facilitator Lee said this is a question for staff because stop.jet.noise.net is a separate system outside the Port's noise complaint reporting system.

Matt P. Davis responded that the Port does not integrate the actual stop.jet.noise.net information with its noise reports. However, he noted, users of this app can e-mail their input to the app to the noise office where it will be incorporated into the noise reports. The information will show up if it is e-mailed to the noise office immediately. So, he said, if someone files a complaint through the app, and that's all they do, that individual's complaint would not be known to the noise office, and, hence, not be logged-in. However, if that individual e-mails the complaint information to the noise office, it is logged-in to the system. So, in terms of actually integrating the app data. This issue came up a few years ago. Because this software is a third-party app it is not supported by the airport. Alternatively, he said, the airport asked its noise management system vendor, Bruel & Kjaer (B&K) to help produce an app. This has been available for some time now it would be great to have additional feedback on that app. The airport always prefers to have a noise management app produced by B&K because it can work directly with them for integration and implementation. Matt said he thought that there was another app created for Alameda, but that it was no longer compatible when the airport upgraded its noise system. He noted that, for any third-party app, they may be able to integrate it into the airport's system, but they cannot guarantee that it will continue to integrate effectively when the system is upgraded. His primary concern with respect to the stop.jet.noise.net app, is that if it is integrated with the airport's noise system it may not continue to function as the system is upgraded. Assistant Aviation Director McKenney noted that it was important for them to continue to work with sustainable software and apps. She encouraged staff to continue to share with the community the tools that the airport provides so that they know that all noise complaints will be counted accurately; and that they can be categorized and analyzed appropriately.

Alameda Councilmember Tony Daysog said that he thought that this issue is a broader one having to do with open data. A lot of governments at all levels, whether local or state, are committing to providing

data in an open way so that people can figure out how they want to use it. Perhaps, he said, that's something for not only the Forum, but for the Oakland Airport as well. He suggested that the other airports get together to figure out what's their policy toward open data policy sharing. Co-Chair Lee concurred, saying that at the last Forum meeting we had a presentation regarding Viewpoint, a publicly-available interactive tool being developed for the airport. Lee said that he had discussions with Jesse Richardson about reaching out to the vendor to see how we can use this tool to leverage this information from a regional perspective and separate out data for SFO, Oakland and San Jose, but combine it when we need to. These, he said, are some of the things that I think we'll have future discussions on.

Ernie DelliGatti said he had reviewed the number of noise complaints for July through September. He noted that in the "complaints by aircraft," under "other" for July there were 137 aircraft, for August there were 139, and for September there were 215. That's a total of 491 "other" aircraft. He asked, what are considered to be other types of aircraft? Mr. Richardson replied that the category of "other" would be those aircraft that were not identified by the ANOMS system; but the system did provide other data, such as date, time of day, and tail number. Jesse said that the airport continues to work with B&K to try to capture all of the data, but some of it gets missed or filtered out. Kristi McKenney explained that the category of "other" should not be construed to imply that it is another type of aircraft versus unidentified or something else. She thought the term "other" might need to be changed. Co-Chair Lee asked if it is identified as either general aviation or commercial? Jesse said it was not. Lee said that this was a work in progress and that it would be better if we could identify and properly classify the aircraft.

James Nelson said he would follow-up with Jesse with re the stop.jet.noise.net app. He thought that a separate report for these external complaints would be appropriate because he was concerned about the double counting of duplicate complaints. He suggested that the noise office might investigate some alternatives or additions to the current noise report to provide a summary of stop.jet.noise.net complaints. Facilitator Lee said he wanted to follow-up on this, asking if the Viewpoint app can identify aircraft in the "other" category. Matt P. Davis said he would have the noise office staff look into this. He said he did not think that there was any app that can do this, because it entails a manual process of listening to air traffic control tapes to get a tail number, then correlating that number with the aircraft registration to get the aircraft type. Davis said they would look at what needs to be done to clean-up the "other" category. Ernie DelliGatti asked if the "other' category had anything to do with general aviation aircraft that refuse to broadcast their ID numbers. Davis said that this could be part of the issue. Matt Pourfarzaneh of CLASS said he had briefly discussed the issue of noise complaints about the increased number of SFO flights over the East Bay. He asked how these noise complaints were being documented, and noted that there will be time when it will be necessary to "approach [the FAA] to do a better job." He said the Forum would be the best venue for this. Facilitator Lee concurred, and added that he thought that this dialogue has made staff aware that there is further work we have to do in terms of trying to improve the situation.

Facilitator Lee called for a second on the motion to receive and file the 3rd Quarter 2019 noise report. Tom Wagner so moved. The question was called and the motion approved.

3. APPROVAL OF MINUTES

A. October 16, 2019

Co-Chair Lee asked if there were any questions or comments with re the October 16, 2019 draft meeting minutes? Tom Wagner moved approval. Councilmember Davila moved to second. James Nelson noted one correction that he had already provided to Mike McClintock concerning his status as a registered professional mechanical engineer in California and the State of Washington and Washington D.C. Motion was amended to ensure that the Forum's regular facilitator would make the change as was noted by Mr. Nelson. Peter Marcuzzo seconded. The draft minutes were approved.

4. NEXTGEN RELATED NOISE CONCERNS

A. SUBCOMMITTEE REPORT

Peter Marcuzzo, NextGen/Metroplex Subcommittee Chair, began his report by thanking the FAA representatives who came today: Ms. Tamara Swann, Adam Vetter and Sky Laron. They came in early today and have met with the NextGen Subcommittee, where they discussed the current progress of changes proposed on the instrument departure and other approaches that we suggested; basically four topics: (1) The Cal State Visual Approach, which the FAA emphasized is on hold until the Forum can advise them of what it would like to see. Ernie DelliGatti is working on this and HMMH will provide more information on this later on; (2) The WNDSR arrival procedure, which was somewhat delayed due to the difficulty in achieving a quorum in their working group because of the Holiday Season. Right now, he said, they are working furiously to make up for the lost time. Peter noted that the FAA working group is comprised of representatives from the airlines, FAA technical staff and air traffic, and labor. They are seeking to determine the best methods and ways they can amend the WINDSR arrival. So, he said, this is in progress; (3) The WNDSR SID and the HUSSH departure SID were discussed along with the changes we'd like to see on that procedure. This has been entered into the FAA's Instrument Flight Procedures Gateway so it now has a line item number and it is in progress. But, there are still a lot of steps yet to be taken; and (4) The SUNNE ONE departure out of Oakland, which is a "proceduralization" or a graphic fix for pilots for what is currently the left turn off of Runway 30 down the bay for departures going southbound. He said it is a really a good procedure for noise abatement, and it helps a lot of people out, not to mention reducing both controller and pilot workload. It will be easier for controllers to issue a "SUNNY ONE" departure, instead of having to tell the pilot to turn left, climb, maintain, do this or that, etc. Lastly, he said, the Subcommittee's next meeting with the FAA will be on April 15, 2020, the date of the next Forum meeting.

James Nelson pointed out that it would take about 18 to 24 months for the HUSSH clearance to go through and asked where the WNDSR procedure was in the IFP Gateway. Peter concurred with the 18- to 24-month timeline for HUSSH and said that the WNDSR IFP Gateway proposal was just beginning [N.B. Mr. Marcuzzo asked Adam Vetter for a copy of the slide used in an earlier-in-the-day presentation that shows the processes and the timeline. Mr. Vetter said, "yes"]. Co-Chair Lee thanked Mr. Marcuzzo for his leadership in this area and working with the FAA. He also thanked the FAA representatives for their attendance at the Forum and Subcommittee meetings, and for their commitment to working with the Forum to solve these problems.

B. FAA NOISE FORUM MEETINGS UPDATE

Kristi McKenney updated the Forum on the FAA Western Service Region noise forums for airports. She said the last one was a couple months ago in Colorado Springs, and it had a very productive agenda. Discussion included some of the communications methods that the FAA is using with communities. The FAA has found that it really helps them if they hear from airports that are working directly with community members. They are receiving more feedback on the type of information the communities are looking for, and are better able to get them that information and work with them. She said, she thinks that this shows that the FAA has made great strides in its commitment to engage with affected communities. The next meeting is going to be in Tucson at the end of February, and she is helping to shape the agenda and will be reflecting the issues that we are concerned about here in the East Bay, Oakland, and the Bay Area in general. The next meeting will be in May, and will be hosted by the Oakland Airport. She said she was pleased with the progress made by this group since it started some 18 months or so ago. These relationships keep building every meeting, and they have resulted in some of the same people who are engaged in these meetings participating in our meetings and our working groups. So, she said, this is how we hoped they would go.

C. FAA DEPUTY REGIONAL ADMINISTRATOR UPDATE

Deputy FAA Regional Administrator Tamara Swann thanked the Forum for the opportunity to be here, and said that her team is looking forward to continuing the work that they've been doing with the subcommittee. She that today was her first opportunity to meet with the Forum's NextGen/Metroplex Subcommittee, and was impressed with the presentations and the collaboration that went on. It was very valuable and helped in moving things forward, she said, and that they would continue to support the Forum by bringing the right subject matter experts, as appropriate to the agenda, to the meetings. She said she appreciated the procedure updates that Peter Marcuzzo provided. She noted that the nighttime HUSSH procedure was still in environmental review, and that this is independent of OAK's requested amendment, which is still moving along. Peter Marcuzzo said that this was an SFO request—"the turn out of the gate?" Ms. Swann said, "yes."

Ernie DelliGatti said, with respect to the environmental review, is the FAA using the standard aircraft narrow body/wide body heading? He said, he was asking because the airlines constantly swap out aircraft based on load factors and other things. He said, he was curious if the FAA was using a generic aircraft for the environmental review. Adam Vetter replied that the aircraft used in the model were not necessarily generic. Generally, he said, depending on the level of review, it takes into account a certain number of days of historical aircraft operations; meaning the past 365 days or past calendar year. Whatever the fleet was during the study period is what is used to assess any potential changes within the model; in this case for the HUSSH procedure or for any procedure. He said they understand that fleet mixes do change, and sometimes our fleet mix database is slow to catch up, but it is updated about every six months.

Co-Chair Lee thanked the FAA for its participation, and noted that there is a lot of focus on data He said, he thought that this would be of great help in terms of identifying past events and help to improve future outcomes. Benny also thanked the NextGen/Metroplex Subcommittee for the work they are doing in working collaboratively with the FAA, and that he is looking forward to solving the issues that we have in our communities.

5. PUBLIC COMMENT

Dr. Yvonne McHugh of Point Richmond said she was asking for help to find out who to contact for help concerning all of the flights concentrated over Point Richmond, and is this part of a plan? She said Point Richmond experiences a lot of noise and a lot of aircraft—sometimes 50 planes in 1 ½ hours. She said she would like to know who to contact. Peter Marcuzzo said he would meet with her after the meeting and he would explain it to her. Kristi McKenney offered that the airport noise office is always available to answer such questions, and that the airport's web site is a good source of information. Jesse Richardson is also available to speak with her individually. Ms. McHugh said that Jesse had been "remarkable" with his support and in helping her to visualize what's going on. She said also, that she likes "Stop Jet Noise" because all you have to do is press a button, while the airport's system is "much more time consuming." Facilitator Lee asked about Richmond's historical relationship with the Forum. [NB: Western Contra Costa County (Richmond) was a member of the Forum for a short period of time before dropping out due to financial considerations]. Benny said reaching out to Richmond could be added as an item of new business.

6. LEGISLATIVE UPDATE

Tim Middleton from HMMH provided background and a briefing on some recent bills that have been introduced in committees of both the United States House of Representatives and the United States Senate. Some of these bills have been moved out of the committee they were submitted in, and most were submitted in November 2019 by California Representative Jackie Speier, who represents the northern two-

thirds of San Mateo County and the southwest quarter of San Francisco. Tim gave an overview of the individual bills:

- **RESPECT Act (H.R 5105)**

The "Responsive Employees Support Productive Educated Congressional Talk Act." This act requires the administrator of the FAA to respond to requests for information from members of Congress and for other purposes. Essentially, he said, this bill would put timelines on when FAA staff would have to respond to members of Congress.

- **REST Act of 2019 (H.R. 5106)**

The "Restore Everyone's Sleep Tonight Act," would amend U.S.C. Title 49 [N.B. the part of the U.S. Code that governs transportation] to allow airports to impose access restrictions for certain hours and assess certain penalties against air carriers and aircraft operators. Tim said that this could change how airports impose curfews and could potentially change how a lot of airports could operate. He did not believe it would actually pass, but noted that over the years since the "Airport Noise Control Act of 1990" (ANCA) was approved, there have been numerous efforts to impose curfews on airports. Because of potential impacts on interstate commerce, few, if any, ever get approved.

- **SNORE Act of 2019 (H.R. 5107)**

The "Serious Noise Reduction Efforts Act of 2019'' would amend the U.S.C. Title 49 to establish a program at SFO for purposes of sound proofing residential buildings in the vicinity of the airport, and it only apples to SFO. Tim did not think it had much chance of passing.

- **SHHH Act (H.R. 5108)**

The ''Southbound HUSSH and NIITE Help Households Act'' would require the FAA administrator to continue processing the proposed SFO night departure, southbound transition and the OAK HUSSH departure. This is in response, he presumed to the Congresswoman's perception that the process isn't moving as quickly as it should.

- **F-AIR Act (H.R. 5109)**

The ''Fairness in Airspace Includes Residents Act amends the U.S. Code to expand priorities of the FAA administrator in developing plans and policies for the use of navigable airspace. Tim said this bill has more support than some of the others. If enacted, it would amend and re-prioritize the FAA's mission statement. The text of the bill has the full mission statement in it. It would maintain safety as the first priority of the FAA, but then it would elevate noise and health impacts to have an equal footing as efficiency. The perception here is that if environmental noise and health impacts are on the same level as efficiency, the idea is perhaps that this would be more favorable for some people.

- **APPRISE Act (H.R. 5110)**

The ''All Participating in Process Reaching Informed Solutions for Everyone Act'' would direct the FAA administrator to ensure that representatives of aviation roundtables may participate in the NextGen performance-based navigation implementation process of the FAA. This would basically ensure that the roundtable technical representatives were involved in the design procedure. Tim thought that this comes out of the perception that airspace procedures are designed in a box, and that people find out about them after the fact.

- **NOTIFIED Act (H.R. 5111)**

The ''Notify Officials to Inform Fully and Impel Educated Decisions Act'' would require the FAA administrator to notify the public of proposed new Performance Based Navigation Implementation Process flight procedures (PBN) implementation process. Tim said this act is similar to the previous act. It is very broad, and essentially says that the FAA would have to notify all relevant local, state and federal reps and aviation roundtables within five miles of the flight path for changes to airspace under 18,000 feet, which is a very large swath of land. This again, he said, seems to have come from the perception that all relevant parties have not been notified or that there isn't a standard notification procedure for airspace changes.

- **LEAVE Act (H.R. 5112)**

The ‘‘Low-frequency Energetic Acoustics and Vibrations Exasperate Act’’ would address the ground-based noise from aircraft takeoffs and landings. Tim felt that this bill was somewhat premature, in that it’s directing the states to define how they would implement ground-based noise measuring and monitoring, and then establish new compliance requirements for this.

The next two bills [NB: the bills were not specifically identified because Tim was speaking from an on-screen presentation] were introduced into both the House and Senate at the same time and are identical. This was done, he suspected, in the hope that they might move through both chambers that much quicker. They direct the FAA administrator to enter into arrangements with the National Academy of Sciences to provide a report on the health impacts of air traffic noise and pollution, which, he said, is slightly redundant to the FAA re-authorization bill, which specified multiple studies for the FAA to conduct concerning the health impacts of aircraft and air traffic noise and pollution. Lastly, Tim introduced H.R. 2351, as the ‘‘Protecting Airport Communities from Particle Emissions Act’’ Again, he said, it directs the FAA to conduct a study relating to ultra-fine emission particles. If it were to be passed, it specifically names the NorCal Metroplex as a region to look at.

Ed Downing, vice president of CLASS, said that based on his reading of H.R. 5108 it would seem to indicate that Oakland and the impact of the HUSSH departure on the Oakland community would be somewhat secondary to what's happening at SFO, because the primary part of it is going to the SFO Roundtable. Tim replied that because SFO is in Ms. Speier’s district, that would appear to be the case. Downing asked if Barbara Lee had signed on to the bill as a co-sponsor. Tim replied that, that was the case. Ed noted further that Representative Lee was a co-sponsor on most, if not all of Ms. Speier’s proposed noise/aviation legislation. Facilitator Lee noted that there was no representative from Barbara Lee’s office in attendance tonight. Tim Middleton said that there should have been a column on the spreadsheet that indicated if Rep. Lee had co-sponsored any of the bills. He said that could be fixed. Benny Lee commented that he had gone to the legislation website and noticed that some of the bills have two or three co-sponsors and others have up to 14 co-sponsors. Kristi McKenney added that outside of the legislation, the actual FAA process mandated in the reauthorization act includes Oakland. Facilitator Lee continued, noting that there needs to be a minimum of 200 co-sponsors in order to move the propose legislative item to a vote.

7. FORUM WORK PLAN 2020

This item was tabled by Co-Chair Lee until the Forum’s regular facilitator returned.

8. ANALYSIS OF PROPOSED SAN LORENZO 1 (SLZ1) VISUAL APPROACH

Adam Scholten of HMMH reviewed the proposed Runway 30 San Lorenzo One visual approach. He said that this was a proposal submitted from the community to address concerns regarding compliance with the Oakland 100-degree radial noise abatement procedure where aircraft were supposed to maintain an altitude of at least 3,000 feet when crossing the 100-degree radial. The proposed procedure is designed to keep aircraft higher until they turn to align with Runway 30, and to utilize a flight path over the more industrialized areas of Hayward and San Lorenzo that maximizes overflight off the bay to the maximum extent possible. Adam provided graphical imagery of the proposed procedure. He said HMMH did an analysis of the land uses underlying the proposed procedure as it was submitted to them. Of note, he said, is that due to the design of the procedure, it would only be able to be used under visual flight rule (VFR) conditions because the procedure relies on utilizing visual landmarks. Adam referred to additional graphical representations of the proposed procedure showing underlying land uses; specifically, residential, commercial, public use, and industrial. He noted that the proposed procedure is actually an offset approach. Arriving aircraft won't initially align with the runway heading on final approach, but will have to fly out over the bay a little more and come in to the runway at a slight angle. When an aircraft gets closer to the airport, it will have to turn to align with the runway for touch down.

Another of Adam's slides depicted where aircraft would make the turn to do the offset to the runway. The turn would primarily be over industrialized land uses, but prior to getting to that point, he said, it would come in over Hayward, where there's a mixture of commercial and multi-family, single family uses, as well as numerous other places of worship, schools and hospitals. These are all within one half nautical mile on either side of the proposed procedure. Adam's next slide reviewed the FAA's proposed Runway 30 Cal State visual approach. The FAA's proposed procedure would have aircraft fly out a little farther away from the airport and then cross the Cal State East Bay campus at an altitude of about 3,000 feet and then make the turn to align straight in with the runway; still flying over the industrial area, but closer to land and not flying over the bay. His next slides compared the land use impacts of both procedures. The biggest difference between the two proposed procedures, he said, is where they'd make the turn to align with the runway and the fact that San Lorenzo One would be offset in terms of it being over the bay until coming close to the runway end.

Also, he noted, with the Cal State visual approach, arriving aircraft would turn a little farther to the south-east of Hayward over the Cal State East Bay campus. He reviewed additional differences between the two proposed approaches on subsequent slides and summarized the potential benefits and disbenefits of the San Lorenzo One approach. Some of the potential benefits of this proposed approach are that it may improve the noise abatement procedure compliance with the OAK 100-degree radial, and it would provide an additional visual reference that would allow pilots to better comply with the 100-degree radial. It also would provide a semi-repeatable route for navigation by the aircraft flight crews. Today, he said, when aircraft come in and do visual approaches from the north, they make the turn to final at various points over a wider area, and not necessarily on one path that every single aircraft flies, each and every time, as would be the case with a charted visual approach. Also, he added, with the San Lorenzo One procedure there would be less single- family residential and mixed uses that would be overflown as compared to the proposed Cal State visual approach.

Adam went on to discuss additional advantages and disadvantages of the two proposed procedures in greater detail. Noting that, in general, both procedures as published charted visual approaches would concentrate the arrival flight path over the communities of Hayward, Mount Eden, Cherryland, and Castro Valley. Specifically, he said, the San Lorenzo One procedure would increase arrivals over downtown Hayward, and there would be more potential for overflying more multi-family residential land use than with the proposed Cal State visual approach, even though there would be less single family residential and mixed use. Both the San Lorenzo One and Cal State visual approaches would overfly numerous residences, schools, places of worship and hospitals. He concluded that this didn't necessarily mean that San Lorenzo One is any more beneficial or any worse than the Cal State visual approach.

Ernie DelliGatti said he had several questions concerning HMMH's analysis. He asked if HMMH analyzed the two procedures by means of computer modeling or did they actually have somebody go out and walk the neighborhood? The second question was, if someone did walk the neighborhood, did anyone talk to the residents? His third question was, did anyone contact the Hayward airport manager because the additional margin of safety was overlooked. By implementing the San Lorenzo One or the Cal State approach, you'd have an extra margin of safety for aircraft taking off from Hayward Airport. His last question was, did anyone take the time to talk to him about the proposal? He said, when he was asked to go ahead and put this proposal together back in November 2018 by the Forum, he asked specifically how many schools were located under the San Lorenzo One approach. He said this information was missing from Adam's presentation. He noted that, within San Lorenzo alone, There are currently a total of seven elementary schools, two high schools, and one adult school for a population of over 12,288 people; not including the people that are currently going to school at Life West Chiropractic College in Hayward, and Chabot College which total an additional 13,751 people currently being overflown on a daily basis because that's where incoming flights to OAK intersect, and it is a wide intersection. He said, as a resident of the

San Lorenzo area for the past 25 years, he can say that the OAK traffic has gotten progressively worse; hence his pushing for the past five years to gain some relief from the noise, because as it stands right now, they are not only getting noise from both OAK and Hayward airports, they also have trans-oceanic flights over San Lorenzo that turn down toward Union City on the QUIET bridge approach into SFO. So, Ernie said, some of your analyses and conclusions are likely flawed simply because HMMH "cherry-picked" some of the information. Based on his analyses and the fact that he has lived in the area for so long, he has concluded that there will be less noise by shifting the arrival track one to two degrees farther out over the bay as opposed to now, where you currently have aircraft overflying San Lorenzo and San Leandro neighborhoods.

Co-Chair Lee asked Adam to respond. He replied that as to the first question, it was a computerized analysis based on the data that HMMH had received. The procedural data were plotted geospatially and collected land use data collected from the various jurisdictions around the airport. For the second part of that question, in terms of going out and physically walking the route, he said, they did not do that. They were instructed to look at what the land uses were in that area and where the procedure would lie accordingly. As for question 2, he said, he personally did not talk to the Hayward Airport manager, nor did he know if anyone else had; the issue raised by Mr. DelliGatti was not part of HMMH's assignment, which was specific to land uses and what the implications for the two procedures might be. Facilitator Lee interceded to comment that, as appointed and elected representatives, we represent the voices of our community. HMMH was retained by the Port to conduct these simulations and analyses, and this gives us the opportunity to provide feedback. He said, he had some questions himself, but would hold them in reserve until after the members had a chance to ask their questions.

Mr. DelliGatti repeated that HMMH's presentation was "skewed" because from his experience of having lived under the arrival paths for Oakland, Hayward, and now SFO he believes that the HMMH presentation needs to be "reviewed and fleshed-out because there's still a lot of holes in it that he has pointed out." He yielded to the next commenter. Berkeley Councilmember Cheryl Davila asked if there was a difference in the respective altitudes of the two proposed flight procedures. Adam replied that they were roughly the same. James Nelson asked if either of the two proposals were in response to noise concerns or are they an extension of the concentration of flights? He said his concern was the potential for the concentration of the flight paths. The reduction of the dispersion of the flight paths was problematic, he said, based on the Forum's experience to date. The concentration of aircraft along a specific track is what generates quite a few complaints. Facilitator Lee asked staff how the criteria for HMMH's analysis was formulated. Matt P. Davis replied that this evolved through a couple of different phases. Again, he said, the Cal State visual approach analysis came out of the Forum's concerns over the concentration of flight tracks and the need for some relief for aircraft cutting the corner over San Leandro. To be fair, he said, the Cal State visual approach does have some control and efficiency enhancements from the FAA's perspective. This was before the flight track concentration became an issue, and at that time, it seemed like a good idea to develop a procedure to help aircraft to avoid short-cutting the 100-degree radial and overfly San Lorenzo. With all the work FAA was doing with the Metroplex, it went away for a while and came back a little more than a year ago. At that time, knowing more about the problems with the concentration of traffic, HMMH was asked to look at what the procedure would look like. That analysis was performed and presented to the Forum. Then, in response to questions from Mr. DelliGatti, the path the FAA had designed was considered to be problematic. To this end, Mr. DelliGatti was asked to prepare a presentation for an alternative procedure; one that would concentrate the incoming traffic over an industrial area. So, the task was then for HMMH to analyze the work DelliGatti had done to see if his alternative approach would provide any benefit over what the FAA had proposed in terms of overflight of residences, schools and impacted communities. The task was for a computer analysis; it was not to go out to the community itself. Co-Chair Lee stated that it was his belief that more outreach to Mr. DelliGatti and the community

would have resulted in less misunderstanding of HMMH's role and responsibility in this matter. He suggested that this be revisited under new business. Lee thanked HMMH for its analyses, and felt that their work was very comprehensive.

Co-Chair Lee asked Adam to bring some of the maps back up. He noted that the proposed flight tracks overfly the unincorporated area around San Leandro, particularly Ashland and Cherryland; which are historically very underserved, low-income communities. So, he said, the optics don't actually look too good. He thought that more community feedback was needed; what are the characteristic of these neighborhoods? This procedure is going to have impacts, regardless of how we may change it or shift it around, he said. We are trying to find some optimal relief, and we want to make sure that it serves the public well. He said he was concerned about the safety of any of this. Matt P. Davis commented that the airport also wants this to be looked at; while the FAA, when they look at the Cal State visual or any visual approach, they look at the flyability of it. That would have to be analyzed; could you fly this safely? Benny Lee asked if some of the proposed flight turns are based on visual reference points, what happens in inclement weather. Peter Marcuzzo responded that the procedure could not be used.

Edward Bogue asked to see the visual comparison of the two procedures again. He said that this was not what he was expecting to see in the final presentation because this appears to have more effect on Hayward than was the case with the previous visuals. The problem in Hayward occurs when aircraft end up using any number of different tracks. He said the San Lorenzo One proposal covers a lot of the area where he gets most of his complaints from when they cut in short, and he didn't think that this was going to be very popular. He was not too thrilled with the proposal at all, he said. Tony Daysog said he wanted to follow-up on Cheryl Davila's question about relative altitudes, and the statement that there is basically no difference between the two proposals. When he looks at the two procedures, he has to ask if the one requiring the tighter turn doesn't need to make a steeper approach, and if it does that as it passes over Hayward's Jackson Street doesn't this have a greater acoustical impact? Adam replied that, in general, even though the turn is a little steeper, the aircraft isn't necessarily going to descend that much more because it still has to cross the 100-degree radial above a certain altitude, and should not get below the glideslope to the runway. Ms. Davila said she was curious as to why the proposed Cal State procedures didn't incorporate a wider turn over the East Bay hills instead of the urban area. Adam said that this was a question for the FAA because HMMH did not design the procedure. Scholten replied that he thought it was designed the way it is was because the FAA sought to basically overlay the existing arrival path. James Nelson asked Peter Marcuzzo if the current problem of overflights in San Lorenzo are due to making that turn? Peter replied that these two proposed approaches are designed to keep pilots from cutting the corner over the Hayward Airport and over residential areas on the way into OAK's South Field (Runway 30). That's what both of these approaches do is keep airplanes out wider, more over the industrial areas, and provide a path for the aircraft to follow that will keep them west and south of the Hayward Airport, thus alleviating, he believed, a majority of the issues. Adam concurred. James Nelson said he was a firm believer of spreading the impact. His big concern with both of these proposals is the concentration of flight paths. Facilitator Lee said it was time to move forward and hear from the public.

Ed Downing said that, as someone who has flown the existing procedure many, many times off the 100-degree radial, the higher you try and keep an airplane as it approaches the airport, the more unstable that approach becomes, and you start to introduce safety issues. We'd all like to keep airplanes high so they don't generate noise, he said, but eventually they have to get down and, and doing it from a stable approach, not a power-off thing where they're in a seven degree slide; these are considerations when you undertake to redesign these procedures. Based on his knowledge of the existing procedure, he believes that this is a case of the solution looking for a problem. It was his understanding that he compliance rates for the 100-degree radial are in the 99 percent area historically. To him, we're all trying to find a solution to a problem that doesn't exist, and the idea that we would make a university with thousands of students the visual approach point to avoid noise, when you've got classes going on doesn't make any sense whatsoever. Co-

Chair Lee asked Ernie DelliGatti if he wished to formulate a basis for further discussion when we get to agenda 1tem 13? Ara Balian, airport noise and operations specialist at the Hayward Executive Airport, noted that references to the chart showing the flight tracks should be interpreted to say "east of the airport," not west. Secondly, he said, with re the Cal State visual approach, Cal State is actually a "reporting" point for arrival aircraft coming into Hayward. One other thing of concern to him is making sure that there is adequate separation between aircraft coming into Hayward and flights going into Oakland. Another thing to also consider, he said, are the arrivals for Oakland going into the North Field; how would this affect this proposed approach? Co-Chair Lee thanked both Ernie DelliGatti and HMMH for their work on this issue. He said, we do need to find that median point with respect to the criteria and make sure it's confirmed, reviewed, and acknowledged before it's submitted to HMMH. That way, there is less consternation when it comes to the discussion.

9. TECHNICAL WORKING GROUPS REPORT

A. North Field/South Field Research Group Action Items

Matt P. Davis provided a summary of the last North Field/South Field Research Group meeting. He presented the action items from the last meeting of the North and South Field Research Group. One is still a work in progress that they've been working on; the request from the Mayor of Alameda to reduce jet traffic off of Runway 33. For reference, he noted, Runway 33 is the short, almost north-south facing runway on the North Field. He said they have reached out to the carriers that operated jets off that runway, and they were able to work with them successfully. They no longer use Runway 33 for departure; they elect now to go to Runway 30. With this agreement they are seeing virtually zero jet traffic off of Runway 33. At its peak, there were 280 jet departures off that runway by small business jets, not Southwest Airlines. He said they'll continue to work to make sure they do not use Runway 33 for any more jet takeoffs. Davis said they are working with SFO to schedule another TRACON tour. The NorCal TRACON controls all the origin and destination air traffic in the Northern California region around the Bay Area at certain altitudes, and approaches and departures into and out of Oakland, San Francisco, and San Jose airports. We've done these tours before and the give people chance to meet with the controllers and talk to them. Sometimes, someone gets a chance to sit at one of the radar scopes to see what the controllers are actually seeing. It's a good opportunity for folks to see how the FAA operates. It's a good learning experience.

There was a request to review helicopter activity in Alameda's Fernside neighborhood. The results were provided to the Forum. There was also some interest in the number of freight flights over the past six years, including trends, what types of aircraft were being used by FedEX and UPS, and hours of operations. This was also provided to the Forum. FedEx and UPS are slowly retiring some of their older aircraft and bringing on newer planes. They are also looking at what hours they fly over the past six years. Another item in the pipeline is a three-year report showing compliance trends. In the realm of making it easier for people to voice their concerns or complaints to the airport is an update on efforts to reduce the time required to complete a phone complaint, along with ways to automate certain other procedures. The noise office wants to be able to focus on complaints and issues. "Complaint" versus "comment" has become a minor issue. The noise office is neutral on this, but, based on feedback from the NextGen subcommittee, the preferred term is "complaint." Another issue is the auto response that follows the filing of a noise complaint. People have complained that it does not provide a unique ID number, which it previously did, that allows you to track your complaint. We will put this feature back in.

Runway 28R will be closed for the next few months as a result of a taxiway rehabilitation adjacent to 28R. To facilitate this, 28R was converted to a taxiway for a three-month period so that aircraft are able to bypass the construction area. Jets still have taxi to South Field to take off. Concern was expressed over the SALAD departure procedure; where aircraft immediately turn to the right off the North Field at night to avoid Alameda residences. During this three-month period while 28R is closed, folks may see a slight

decrease in compliance. We reached out to CLASS to advise them there could be a little difference for Alameda based on the runway closure. That's it for the action items from the research group. Co-Chair Lee asked if there were any questions. Ed Downing thanked the airport for the efforts it made in reducing the jet departures off Runway 33. Matt Pourfarzaneh said that when he logs in to the airport's noise app, all of his information is right there. He doesn't need to log in every time; he stays logged-in. Jesse said that this is good to know, because it was his understanding that if you go to Viewpoint and do not log in, your preferences cannot be stored. Jesse said that he would need to take this back to B&K to see what they have versus what the stop.jet.noise.net app has. Yvonne McHugh said she liked the stop.jet.noise.net app. James Nelson wondered if Richmond could be added to the list of cities in the noise report. Co-Chair Lee and Kristi McKenney both said we need to reach out to Richmond.

10. NOISE OFFICE REPORT

A. Update on Action Items from October 16, 2019 Meeting

No items to report.

B. Viewpoint Update

This brings us back to the question on the stop.jet.noise.net app versus the Viewpoint app. Can Viewpoint store personal knowledge without first having to log in? Can Viewpoint be made to work like a touch type, so it's more like other apps? Unfortunately, there is not currently a way for Viewpoint to store personal information without logging in. Modern smart phones can this, but Viewpoint can't. However, the airport noise office is working with B&K on a mechanism where, if you do log in, you input your name and password then all your information automatically comes up; you won't have to input it all over again. There will be more updates on this as things progress.

11. NOISE NEWS AND UPDATE

Christian Valdes from Landrum & Brown said tonight's news starts out with Boston. Three cities around Boston Logan International Airport requested the FAA and the airport to model and implement a departure procedure off of Runway 33L that more equitably disperses aircraft noise. With the implementation of a RNAV departure from Runway 33L in 2013, residents of the three cities have been severely impacted by aircraft noise; often starting as early as 5 a.m. In response to the cities' request, the FAA is working closely with the airport and MIT as part of a 2016 memorandum of understanding which included identifying specific proposals to reduce noise from RNAV concentrations, to assess the feasibility of specific noise abatement operational or procedural design ideas, to design a model feasible to assess the level of benefits and potential impacts for testing or implementation, and to incorporate community outreach and feedback in the whole process. Back in 2016, then FAA administrator Huerta said if the Boston case was successful, they would be able to implement these ideas at other metropolitan airports. Unfortunately, Christian said, to date there is no specific date when MIT will complete its work.

Moving on to Southern California, where the City of Los Angeles sued the FAA for shifting the departure from the Burbank Airport's Runway 15; demanding that the FAA change it back to where it used to be prior to Metroplex. This will be a fairly tall order, Christian said, and perhaps even impossible, because the procedure itself, in the area in question south on the airport, has not changed. The Metroplex did not change it, and the FAA can't change it back to where it used to be, since it's still in the same place. The San Fernando Valley Noise Task Force is meeting tonight to continue working on this issue. In late breaking news, LAX made the national and international stage when Delta flight 777 departed out of LAX and immediately had engine failure. One of the engines had a compressor stall. The pilot declared an emergency, and quickly turned back to the airport. Valdes showed a photo of what appeared to be contrails coming off the aircraft's wings, but they were not contrails. The airplane was dumping fuel over

the city. The plane was enroute to Shanghai and full of fuel with 181 passengers. It flew over six schools and, unfortunately, the children and adults were outside. Many of the children reported skin and eye irritation, and trouble breathing. The FAA is investigating. A quick note about Oakland Airport aircraft. The majority of aircraft used at OAK do not have fuel release capabilities.

The House Quiet Skies Caucus met with FAA Administrator Stephen Dickson in October to discuss priorities and solutions to aircraft noise problems. One is to disperse flight patterns, to complete and release noise studies, to create a central complaint portal, and to increase community outreach. Next, the FAA is seeking public comment on the national sleep study which will investigate the relationship between aircraft noise and the probability of waking up. The goal is to select about 400 subjects. Each will receive a package of instruments to use over a five-day period. The population candidate pool is based upon the amount of nighttime aircraft noise that a candidate experiences and is not limited to a specific airport vicinity.

Several developments have taken place on the 737 MAX situation in the last months. Boeing CEO Dennis Muilenburg testified before Congress in October and explained Boeing made mistakes in the software responsible for the two crashes, but has worked diligently to fix the software and pilot documentation. In December, the FAA administrator also appeared before Congress and said the agencies should have grounded the MAX after the first accident in October 2018. The FAA continues to look into the certification of the MAX, which will return to service only after the FAA determines the aircraft to be safe. No set timeline has yet been released on when the MAX will be back in service. Both these gentlemen were heavily criticized by members of Congress for lack of correct action and mistakes. On December 23, Boeing fired CEO Muilenburg. The Boeing Board of Directors determined a change of leadership was necessary to get confidence in the company moving forward, and they will proceed with a new commitment to full transparency, including effective and proactive communications. Boeing settled with airlines, including Southwest and American Airlines, for financial losses due to the grounding of the MAX. Boeing estimates the price tag for the eventual settlement with all parties will be about $5.7 billion, although some analysts think this figure will go much higher. Just last week, Boeing said it recommends simulator training for pilots of the 737 MAX, after previously stating such training was not necessary.

Across the pond, the UK government introduced an air traffic management and unmanned aircraft bill which would give the Transport Secretary new powers to not only ensure airports modernize their airspace but also fine those airports that don't implement changes quickly enough. Airspace modernization would facilitate quicker, quieter and cleaner flights. The bill would also give police greater power to stop unlawful use of unmanned aircraft/drones. Police would have the ability to require a person to land a drone, issue fines and penalties for drone related offenses, and introduce stop and search powers. Continuing with drones, Christian said, Boeing and Porsche joined forces to enter the urban air mobility (UAM) market: drones with leather seats and better stereos. A 2018 study by Porsche forecasts the UAM market will pick up speed after 2025 when premium UAMs will become a key market segment. NASA will host a series of urban air mobility challenges this year to gain public confidence in the safety of UAMs. These challenges will also support the FAA in developing an approval process for UAM vehicle certification, develop flight procedure guidelines and categorize vehicle noise levels. During the noise task, they'll measure noise variability, test flight profiles that minimize noise, and assess community response to that sound. The first challenge will involve the transportation of a payload equivalent to at least one adult within a simulated urban environment.

Good news for electric commercial aircraft. The world's first fully electric commercial aircraft took its 15-minute flight over Vancouver skies. It was a 62-year-old de Havilland Beaver but retrofitted with a 750-horsepower electric motor. It is owned by Harbor Air, which ferries about half a million passengers a year over the Vancouver and Whistler ski area airspace. Their goal is to retrofit all 40 of its aircraft and save on maintenance and produce zero emissions. As for NASA, the X-59 Supersonic Jet has been cleared

for final assembly and may see its first flight in 2021. NASA has also come up with an alloy with unique properties so it can be trained. It can go through solid state phases, and it can be stretched, bent, heated and cooled, and it still remembers its original shape. NASA is currently using this on Vortex Generators; small engines installed on aircraft wings to control air flow during flight. Most Vortex Generators do not move; they're solid, so, at cruising speeds and altitude, they produce drag, which is not good. These so-called Vortex Generators are trained to move as they sense change in temperatures. Valdes showed a video of what happens when a Vortex Generator is sprayed with cool, cold air. Facilitator Lee thank Christian for his presentation.

12. CONFIRM NEXT MEETING – April 15, 2020

The next Forum meeting is scheduled for Wednesday, April 15, 2020

13. NEW BUSINESS/ADJOURNMENT

Ernie DelliGatti said that the Forum needs to revisit the San Lorenzo One proposal to fine tune it before it can go to the FAA. Facilitator Lee asked the Port staff how they thought this should be approached. Kristi McKenney responded that we have to trust that the proposed routing and land use data are accurate, but we can certainly sit down with Ernie again and go over the details in terms of what we think is different about the land use calculations he may have done, and what we have done. Co-Chair Lee said he thought the minutes would reflect where any discrepancies might lie. He asked Ernie if he agreed that what needed to be done would be to try to converge and make sure that we are in consensus and agreement that this is what we're looking to propose. Mr. DelliGatti concurred. Ms. McKenney said she thought she more than just that. It may be what Ernie proposed, but she heard others say that they had concerns about both the FAA Cal State proposal and the revised Cal State San Lorenzo One proposal of Ernie. McKenney said that they can bring back to the Forum whatever they are looking for, but at some point they will have to vote on whether they actually want to pursue these changes or not, and if this is actually a solution to whatever issues were identified. It may exacerbate things or create different issues. Edward Bogue said he agreed. The Forum needs to revisit this and have more discussion to know if we are going to move things forward.

Co-Chair Walt Jacobs asked if there was anything different you would do in the approach to revisiting it again? Kristi said, she believes that they've done an extremely-thorough job on both of these proposals, and they were discussed at several meetings, but we will again need to sit down if Ernie feels there is something missing, just to make sure we checked all the boxes. Walt expressed his concern that no one had discussed any of these issues with Ernie beforehand. Kristi said Jesse can speak with Ernie, and we can spend more time with him if need be. Benny Lee suggested that once that discussion happens, we document exactly what comes out of it, and that needs to be presented to the Forum. Then the comments from the Forum will be the basis for the final decision. James Nelson said he'd like to see some copies of the statistical analysis of flight paths, heat maps or other documentation. Co-Chair Lee said that this would be part of the review process, and that we will need to decide what that will be before we submit them for analysis. Matt P. Davis said they could reference some of the previous reports, and HMMH did present, at a previous meeting, heat maps to show what the expected concentration level would be. We can bring sort of the full breadth of the information HMMH provided to us to give a full and complete picture to the Forum. Lee thanked the Port staff and Forum members , along with the FAA for their collaborative work. Kristi McKenney thanked Benny for facilitating the meeting and leading the discussions.

The meeting was adjourned at 8:45 p.m.

DRAFT
OAKLAND AIRPORT-COMMUNITY NOISE MANAGEMENT FORUM WORK PLAN 2020

The Forum's Work Plan consists of three primary components:

1. Legislative and Regulatory Initiatives;
2. Studies; and
3. Presentations

1. LEGISLATIVE AND REGULATORY INITIATIVES

The "Initiatives" component of the Work Plan sets forth the Forum's legislative and policy agenda with respect to broadening the Forum's influence on federal aircraft noise and air quality legislation and the closing of ANCA loopholes for the benefit of communities affected by aircraft noise.

2. STUDIES

The "Study" component of the Work Plan is designed to address the technical issues of aircraft noise and air quality at OAK and its effects on local communities. In general, studies will require some degree of original research, technical analyses, and result in specific findings or conclusions and/or recommendations. The end product of a study task will be either a working paper or technical report prepared by a person or firm with the necessary qualifications and experience to develop a credible product.

3. PRESENTATIONS

The "Presentation" component of the Work Plan is an on-going feature of Forum meetings. Presentations are to be of an informational or educational nature, and are designed to inform Forum members on matters of interest. Presentations may also be made to interested groups as directed by the Forum. Presentations may be made by the facilitator, staff, advisors and other experts, individual Forum members, or members of the public. It will be the role of the Facilitator to arrange for informational presentations in accordance with the approved Work Plan. Individuals interested in an opportunity to make a presentation to the Forum should make a written request to the Facilitator. It would be up to the Forum to decide what additional presentations it would be interested in hearing. Individual presentations of more than five minutes must be placed on the Forum's agenda.

WORK PLAN (Initiatives, Studies and Presentations listed in order of relative priority):

A. Initiatives.

1. Review and establish Forum positions on airplane noise research, airplane impacts mitigation, and air traffic noise and pollution.

2. Review, comment on, and monitor status of "FAA Initiative to Address Concerns of Santa Cruz/Santa Clara/San Mateo/ San Francisco Counties"

The FAA's proposed initiative was instituted at the behest of several Peninsula Area Congressional Representatives. Because of its titular focus on the Peninsula area it is imperative that the Forum continue to make known that its communities are equally impacted by implementation of the Metroplex (OAPM) flight procedures and must be included in the FAA's study.

Status: The FAA has completed the first two phases of a three-phased study. In the first phase the FAA conducted an analysis and preliminary feasibility study of flight procedures criteria and overall "fly-ability" of new Performance Based Navigation (PBN) procedures, including potential modifications. Phase One also included an assessment of the impacts to operations and procedures at affected airports. In Phase Two the FAA considered any amendments and/or new procedures that were initially determined to be feasible, flyable, and operationally safe. As part of the Phase Two effort FAA conducted formal environmental and safety reviews, coordinated and sought feedback from the Forum, SFO Roundtable, members of affected industry and the National Air Traffic Controllers Association before initiating any formal amendments. During Phase Three the FAA began to implement procedures, conduct any required airspace changes, and additional negotiated actions, as needed. Concerns raised by community groups and other organizations were elevated to the level of Congressional inquiries, which have resulted in additional coordination and communications between the FAA and affected parties to review the adverse noise effects of some of the proposed procedures. Certain of these procedures have been reviewed by a committee of the Forum and recommendations for amending the procedures have been forwarded to the FAA for review. In December 2018, the FAA provided an update to the status of its Initiative to Address Noise Concerns of Santa Cruz/Santa Clara/San Mateo/San Francisco Counties.

3. Support and Maintain Forum Subcommittee to Address NextGen Implementation Issues Affecting East Bay Communities

The Forum has created a subcommittee to review the impacts of the implementation of NextGen (Metroplex) flight procedures adversely impacting East Bay communities. The subcommittee has been charged with identifying problem areas and providing information to the FAA that will allow it to determine appropriate mitigation measures.

Status: *In 2019, the subcommittee continued its correspondence with the FAA concerning the status of the Forum's NextGen recommendations. In October 2019, the subcommittee met with FAA technical representatives for the first time and is looking forward to additional meetings. The subcommittee will continue to engage with the FAA's technical experts on the following issues:*

- *Hold the FAA to its commitment to collaborate with the Forum and to provide appropriate technical personnel to work with the subcommittee to resolve NextGen issues;*
- *The Forum, as well as the SFO Roundtable and other airport noise groups, need to gain an understanding of the breadth and specificity of what the FAA requires of them when commenting on NextGen implementation issues and in the submittal of proposed solutions.*
- *The FAA also needs to define what they mean with respect to the term "noise shifting" and how this is taken into account in their aircraft route planning and how it will be used going forward.*

4. Support expanding opportunity for community engagement/review and eliminating Categorical Exclusions (CATEX) when implementing Performance Based Navigation (PBN)

This is a N.O.I.S.E. (National Organization to Ensure a Sound-Controlled Environment) legislative priority because PBN has the potential to bring significant changes to flight tracks. Although N.O.I.S.E. supports NextGen and its goal of modernizing the air traffic control system, it also contends that the community

impacts of aviation noise should be considered as a crucial part of the calculation that determines the overall benefits of the proposed changes. Hence, the community impacts of aviation noise should be considered a crucial part of the calculation that determines the potential benefits of any proposed airspace utilization changes in addition to improved capacity and fuel savings. Changes should not be solely based on improved capacity and fuel savings. With the increased concentration of overflights due to the narrowing of flight paths and the decrease in separation between aircraft enabled by PBN, air traffic changes have become even more closely tied to impacts on the ground. The Forum supports N.O.I.S.E. on this issue and encourages the FAA to engage with affected communities to ensure that the impact and concerns of these communities are heard and incorporated into the final design of new airspace as much as fuel savings and efficiency of airspace. This would allow communities under a new or concentrated flight path guaranteed participation and due process during the implementation of PBN.

As a part of efforts to ensure adequate community engagement, the Forum supports N.O.I.S.E. in believing that both regulatory and legislative Categorical Exclusions or "CATEXs" in current NEPA regulation are not appropriate for the implementation of significant changes to our airspace system. The Forum supports N.O.I.S.E. in backing efforts by the FAA and Congress to develop, implement and maintain a more robust community impacts process, in addition to or outside of the traditional NEPA process. This process should insure that ground impacts are considered and community concerns are not only heard, but also incorporated into PBN and traditional track changes that will change noise exposure, even if it does not reach the current FAA threshold of "measurable impacts"

Status: N.O.I.S.E. continues to lobby for measures that will ensure adequate community engagement and require the FAA to conduct adequate environmental review to ensure that community concerns are adequately represented in discussions and the FAA decision making process.

5. Support FAA investigation and review of DNL and expanding the range of noise metrics to take into account the increased concentration of overflights due to narrowing of flight paths and decreased aircraft separation enabled by PBN procedures to ensure that these noise impacts are appropriately measured

The Forum adopts this initiative on the part of N.O.I.S.E. because to be able to fully understand and address the impacts of aviation noise, it is first necessary to establish suitable metrics to measure such impacts. N.O.I.S.E. advocates that the FAA consider alternative metrics to supplement or even replace DNL (CNEL in California). The Forum concurs with N.O.I.S.E. that lowering the DNL level may allow for further mitigation for impacted communities, however; this alone will not address impacts that are caused by concentrated flight paths as characterized by PBN procedures. As DNL is an average and humans do not perceive noise in averages but rather as individual events, the supports N.O.I.S.E. in its belief that it is time to investigate alternative metrics for assessing noise impacts such as:

- The psychological impact of concentrated, extended noise
- The physiological impact of infrequent, significant noise spikes during nighttime hours
- Impact of less audible low frequency noise and vibration
- The length of each period of frequent, regular noise spikes "rush hours" due to over-flights
- The number of rush hours per day
- The average dB of a rush hour's noise—not day-night average
- The intensity of spikes above the average dB of a rush hour's noise
- The intensity and number of spikes above the average, for non-rush hours from 10 p.m. to 7 a.m.

Investigating more appropriate metrics to measure aviation noise impacts is crucial and will supplement efforts to greater engage the community and to understand their concerns regarding impacts.

Status: N.O.I.S.E. is lobbying the FAA to develop a more appropriate metric to measure aviation noise impacts, which would allow for greater understanding of community concerns.

6. Support N.O.I.S.E. legislative priority for lowering of the FAA DNL standard from 65 decibels and to pursue a change in FAA Order 5010.1F (Environmental Impacts: Policies and Procedures) to consider what defines a significant noise impact for areas outside the 65 DNL contour.

Status: Even though most airports around the country have mitigated their noise impacts for areas within their DNL/CNEL 65 dB and above noise contours, there still remain a large number of communities where additional mitigation below the 65dB threshold would be beneficial. For 2020 the Forum should support N.O.I.S.E in this initiative.

7. Support a FAA headquarters initiative to continue research into NextGen air traffic control, including OPD procedures, R-NAV/RNP GPS-based approach/departure procedures, the application of flight management systems to noise abatement procedures, and to assist airports and ATC with implementing CDA/OPD and R-NAV noise abatement procedures in the vicinity of airports to reduce aircraft approach noise and reduce emissions.

Status: This is an on-going Forum Initiative that was expanded to include GPS, R-NAV/RNP, FMS and other satellite-based systems.

8. Monitor progress and evolution of FAA rule-making for civilian use of unmanned aerial vehicles (drones).

More and more local government agencies are opting for the use of unmanned aerial surveillance vehicles. These aircraft are flown remotely and are not subject to 14 CFR Part 36 noise limits or altitude restrictions. It is in the interest of Forum communities to monitor the development and application of this technology in the event that regulatory actions may be required. Work to define the noise related issues that are appropriate to the purpose and role of the Forum (allowing, as always, for the safety of aircraft in flight and for people and property on the ground, and public privacy concerns).

Status: For *2020* ask for presentation on current FAA regulatory actions on civilian use of drones and advocate with news organizations for the use of drones for covering news/traffic in lieu of helicopters for noise control and cost savings (if allowed under FAA guidelines).

9. Continue to work through North Field and South Field Research Groups to encourage voluntary noise compliance efforts on the part of aircraft operators at Oakland International Airport.

Status: This is an ongoing initiative whereby the Forum will continue to support the efforts and research needs of the NFRG and SFRG.

10. Continue to send member representatives to the FAA NORCAL TRACON and other FAA ATC facilities to familiarize them with FAA air traffic control procedures and provide first hand community input to FAA staff.

Status: This is an ongoing initiative and is subject to available funding and member interest.

11. Establish a Forum position on proposed FAA blocking of aircraft registration information.

Status: There is on-going debate between aircraft operators and the FAA over federal policy on blocked aircraft registration. The FAA was requiring a Certified Security Concern be provided to the FAA before being added to the nation's list of blocked aircraft. The Certified Security Concern requirement has now been dropped which makes it easier for flights to be conducted in US airspace and their identification not be disclosed to the public. This could have an impact on the monitoring and compliance of OAK operations, as more and more aircraft choose to operate as a "black" (unidentified) flight. Have the Forum's community noise consultant advise the Forum on the current status of the FAA's Blocked Flight Policy for the purpose of having the Forum adopt a position in favor of or in opposition to the FAA policy. Submit comments to FAA if policy is still undergoing review. For 2020 request Port to authorize HMMH to research current status and report back to Forum.

12. Undertake and Prepare Part 161 Status Report

Provide updated status reports on the Burbank (BUR) and Los Angeles World Airports (LAWA) Part 161 studies, including Los Angeles International (LAX) and Van Nuys (VNY) Airports.

Status: This initiative is monitored and reported on at the Forum's quarterly meetings. For 2020 the Forum will request a consolidated summary report on the status of current and completed Part 161 studies around the country, to include the sponsoring airport, filing date, proposed noise rule(s), procedure, cost, FAA findings, and staff/consultant opinion.

13. Continue to send Forum representatives to appropriate congressional meetings/hearings, industry conferences, and symposiums on aviation noise and air quality issues to support and actively seek measures in line with stated Forum legislative and regulatory goals, and to advance regulatory reform of key issues.

Status: This is an ongoing initiative and is subject to available funding.

14. Request additional funding from Port to pursue above initiatives.

Status: Forum to submit formal proposal(s) to Port, as may be necessary.

15. Seek legislative modification or relief from ANCA and FAR Part 161 limitations.

Status: This concern needs to be reiterated to Congress and the FAA. The Forum will continue to work with elected representatives and national and regional airport noise coalitions to advance this position. Forum will monitor the actions of other airport community groups and seek to be part of a broader, national coalition.

16. Continue to lobby for the mandatory phase-out of Stage III hush-kitted aircraft from the air carrier and air cargo fleets.

Status: This is an on-going Forum initiative. Forum should request report on status of Stage III hush-kitted air carrier and air cargo aircraft operating at OAK.

17. Formalize the Forum's coalition building and outreach efforts with other regional/national noise forums.

Status: This is an on-going initiative. Plan and organize a joint meeting with key members of SFO Roundtable, *Santa Clara/Santa Cruz Counties Roundtable and the* OAK Forum. Develop an agenda around issues that could foster collaboration between the *three* noise committees. If successful, the prospect of an annual joint meeting should be pursued.

B. Studies. The following study topics are included in the Work Plan in order of their relative priorities:

1. Undertake a "data intelligence" study of noise data to determine if there are more incidents than as reported in noise complaints.

2. Study news helicopter operational activity and noise impacts on local communities, and possible noise abatement recommendations including the use of drones in lieu of helicopters. Include local TV news organizations in process.

3. Continue to study the progress toward developing a National Stage 5 noise limit and the phase-out of aircraft not meeting Stage 4 limits.

4. Request NFG/SFG initiate study of aircraft noise and overflights in the Hayward/Castro Valley/San Lorenzo corridor.

5. Monitor and support NASA aeronautics and other aviation industry research programs having the potential to produce important advances and improvements in environmental impacts (esp. noise and air quality), performance, efficiency, and safety of engines, airframes, and other components of aircraft construction.

6. Continue to study the potential benefit of Optimal Profile Descent (OPD) procedures to provide noise reduction in the approach corridor to OAK. Review OPD procedures for potential benefits and/or impacts.

7. Study potential for Optimized Ascent procedures as noise abatement measure.

8. Agendize a special presentation on helicopter operations and issues, and have representative(s) of news helicopter organizations make presentation(s) to the Forum.

9. Study effects of NextGen and other satellite-based aircraft advanced flight tracking capabilities using and their potential for significant noise reduction.

10. Study and recommend specific actions to be taken with re: ALUC adoption of CNEL 65dB noise limit and recommend noise easements for any new residential development near OAK with noise levels above CNEL 65dB and encourage communities to adopt same requirement.

C. Presentations. The following informational presentations are included in the Work Plan:

1. Noise 101 Program.
2. RAPC presentation on status of Regional Airport System Plans.

3. Ongoing updates of the Burbank, Van Nuys, and other Part 161 processes.
4. Status report on NextGen ATC program implementation.
5. Provide for ongoing updates and recommendations from the South Field and North Field Research Groups, and conduct further studies/programs as identified (for example rolling takeoffs, etc.).
6. The ALUC Planning Process and the State of California Land Use Planning Handbook.
7. Physical and physiological effects of noise on people.
8. Synthetic fuels development updates.
9. Port Air Quality and Environmental program updates.
10. Monitor AB 32 and other climate change initiatives.
11. Tours of the FAA's Oakland Air Traffic Control Tower for Forum members and advisors.

D. Completed Studies and Presentations. The following major studies and presentations have been completed and are deleted or suspended from the current Work Plan. They may be recalled for updating at the Forum's pleasure:

- Implement a Noise Abatement Award Program (last program held in July 2013/Reconsider for 2020).
- RNP Noise Analysis.
- Review and evaluate noise abatement procedures, and develop new or revised procedures.
- Investigate the feasibility of operating restrictions or curfews, including restrictions on low overflights, and nighttime operations by large aircraft.
- Run-ups and airport policy.
- FAA air traffic control procedures and airspace use.
- FAR Part 36 and Stage 3 aircraft noise standards.
- The California Airport Noise Standards.
- North Field operations.
- Bay Area airport development plans (OAK, SFO & SJC).
- New, quieter jet engine technologies.
- Existing airport and airline noise abatement procedures.
- OAK flight activities by time of day.
- Feedback on noise complaints (Hotline).
- Characteristics of noise.
- Runway reconfiguration study.
- Curfews Presentation.
- "Silent 7" type departure to the south.
- General aviation preferential.
- Continuous Descent Approach.
- Crosswind Runway Analysis.
- VFR operations noise analysis.
- Runway 29 Rolling Takeoff Procedure.
- Runway 29 arrivals over Silverlock neighborhood in Fremont.
- Runway 29 ILS arrival over Hayward.
- Runway 29 departure turns below 3000 feet over Alameda.
- SALAD 1 departure procedures.
- Quiet Aircraft Technology Developed for the Boeing 787 and Emerging New Technologies;

- New Light Jets and Their Potential Effect on Aircraft Noise and Airport Operations, Including Small Aircraft Transportation, SAT.
- Reports on OAK Airport Master Plan Progress.
- Runway 11 Nighttime Right Turn Departure Procedure.
- North Field corporate jet operations and compliance issues.
- Review nighttime FedEx operational anomalies.
- Review corporate jet noise procedures/noise transfer impacts.
- Investigate helicopter noise issues.
- Status of Port LEED projects.
- Operations by lighter-than-air craft (blimps/zeppelins).
- Phase 1 study of temperature inversion effect on GRE noise.
- SWA presentation on new B-737 Max acquisitions and related technology.
- Runway 27 Preferential Runway Study (completed in 2012 with no action recommended).

E. Link to N.O.I.S.E. Legislative Priorities

N.O.I.S.E. assists and advises communities in working with Congress to address the issue of excessive aviation noise. Many of these issues may be addressed through changes in federal law. Over the years, N.O.I.S.E. has maintained an active set of Legislative Priorities and has represented local communities through participation in FAA and other advisory and policy panels. The following is a link to N.O.I.S.E.'s current list of legislative priorities for *2019*. Link to *2019* legislative priorities: *http://www.aviation-noise.org/legadvocacy*

Work Plan approved on ~~April 17, 2020. *Revised July 17, 2020*~~ *July 15, 2020*

OAKLAND AIRPORT-COMMUNITY NOISE MANAGEMENT FORUM

FORUM STRUCTURE

BACKGROUND

Over a several month period in 1997-98, an Airport-Community organizing committee met to establish a new noise abatement committee for Oakland International Airport ("Airport"). Communities that participated in the organizational process included Alameda, San Leandro, Hayward, Oakland, Berkeley, Union City, and the County of Alameda. Committee participation was based on Airport flight patterns, on-going citizen concerns and expressed interest. ~~In June 2000 and January 2001 the Forum was expanded to include representatives from West Contra Costa County and Marin County.~~

NAME OF THE ORGANIZATION

The official name of the organization is the "Oakland Airport-Community Noise Management Forum," or "Forum" for short.

PURPOSE

The Oakland-Airport-Community Noise Management Forum is an advisory group to the Port of Oakland Executive Director. The purpose of the Forum is to provide a public Forum to discuss, analyze and make recommendations to the Port of Oakland Executive Director about noise-and air quality-related issues at Oakland International Airport. The Forum will provide a mechanism to facilitate cooperation and maintain open lines of communication between the Airport and local communities, and to include a broad representation from the affected communities, Airport users, FAA, and Port.

RESPONSIBILITIES OF FORUM MEMBERS

1. Attend Forum meetings and support its function. Forum members will be expected to attend each of the four quarterly Forum meetings, and other special meetings that the Fo- rum may require for the conduct of its business.

2. Create a Work Plan for the Forum that may include special studies, projects, and issues to be addressed. The Port will work with the Forum to implement the Work Plan and make budgetary recommendations. The Port will review and approve additional projects that may be added during the year that would require significant staff time or hiring a consult- ant to perform.

POLICIES

1. No noise transference from one community to another.

2. Work Plan must be within Forum's area of responsibility.

OPERATING PROCEDURES

Meeting Time & Location. Regular meetings are held quarterly *in January, April, July and October* on the third Wednesday of the month, at 6:30 p.m. in the Port of Oakland Board Room, 530 Water Street, 2nd floor, Oakland, CA.

Agendas. The Facilitator and the Airport Noise Management Office prepare meeting agendas. Items for the agenda must be submitted at least three weeks before the next regularly scheduled meeting.

A request for an item to be placed on the agenda must be made through the Forum Facilitator. If the Facilitator has any questions concerning whether or not an item should be placed on the agenda, he or she should contact the co-chairs. The co-chairs may (1) concur that the item should be placed on the agenda and direct the facilitator accordingly, (2) not concur, in which case the Facilitator will poll the Forum members individually (a simple majority of the members will be required to have an item placed on the agenda), or (3) the co-chairs may opt not to have the item posted to the agenda. In this latter case the requestor may make a direct appeal to the Forum at a regularly scheduled meeting to have the item placed on the next Forum agenda. A simple majority of Forum members present and voting will be required to have the item placed on the agenda. Items deemed by the Facilitator to be of a critical or emergency nature are exempt from this requirement.

Agendas and minutes are mailed out in accordance with Oakland's Sunshine Ordinance which requires that information be made available 10 days before the meeting. As an advisory group to the Executive Director of the Port, the Forum is not subject to the Brown Act or Sunshine Ordinance: however, every effort is made to follow the noticing requirements of the Sunshine Ordinance.

Meeting Procedures. The Forum will follow Roberts Rules of Order.

Under New Business and Member Comments, Forum members will have an opportunity to bring up non-agenda items. These items may be discussed at that time or tabled for further discussion or action at the next meeting.

Public comment periods will be at the beginning of each meeting and at the end of each agenda item. The opening Public comment period is for non-agenda items. No action may be taken on non-agenda items, but the Forum may direct the Facilitator to place the item on the agenda of the next meeting for discussion and/or action.

Speaker cards may be required at the discretion of the Forum Facilitator. They can be filled out during the meeting and turned in to the Facilitator after the individual has finished speaking. The time limit per speaker is two minutes. An individual may speak only one time during each comment period.

Work Plan. The Work Plan will be reviewed once a year. Items can be added to or deleted from the Work Plan at any time during the year, provided that the proposed action is approved by a majority of the members present and voting. Requests to have an item added to the Work Plan

should be made by a Forum member jurisdiction. Work Plan items considered to be of an "emergency" nature may be added at any time with the approval of the Executive Director of the Port of Oakland.

New Member Orientation. The October Forum meeting is set as the time for an informal orientation for new Forum members. The orientation will take place prior to the regular meeting.

Election of Officers. The Forum may elect two representatives to serve as co-chairs of the Forum, one elected official and one community representative. The term of office is for one year, and the co-chairs can be reelected individually or collectively. The election of the co-chairs shall take place at the Forum's July meeting.

Working Groups. The South Field Group and North Field Group are working groups of the Forum. Their meetings are public meetings and anyone may participate as an observer at either group. Reports of the two working groups shall be made at each Forum meeting to keep mem- bers informed of the groups' activities.

Because it is important for the groups' memberships to remain consistent in order to effectively address air traffic issues and to monitor noise abatement procedures, the cities of Alameda and San Leandro shall have permanent member status with 2 citizen representatives and city staff representatives from each city. The cities shall appoint their representatives to the working groups. Other permanent representatives include the FAA, pilots, airlines and Port staff. As is- sues evolve that concern other communities that the Forum thinks should be addressed by the North or South Field Groups, a representative from that community may be appointed to the ap- propriate working group to study the issue. The working groups set their agendas and are open to suggested topics from the Forum.

Conferences. The Forum may, providing that funds are available, elect to send representatives to symposia or conferences that are related to the Forum's Purpose. Authorization for attendance is subject to a vote of the Forum. If attendance is authorized, the Forum may reimburse the attendee(s) for all reasonable expenses, including conference registration, travel, lodging and subsistence. Attendees must submit a request for expense reimbursement (with original receipts attached) to the Forum Facilitator for processing.

The Forum will determine how many and who may be authorized to attend the conference. Priority will be given to the Co-chairs, followed by individual Forum members, followed by members of the North/South Field Working Groups. Individual Forum members are free to attend any conferences of their choosing at their own expense.

MEMBERSHIP

The following ~~ten~~ *seven* public agencies are members of the Forum:

- Cities of Alameda, Berkeley, Hayward, Oakland, ~~Piedmont~~, *and* San Leandro. ~~and Union City~~
- ~~Counties~~ *County* of Alameda. ~~and Marin~~
- Port of Oakland

The Forum is comprised of one citizen and one elected official from each member jurisdiction and one representative from the Port. Each member jurisdiction has one vote (see below). The Airport will request non-voting participation in the Forum by representatives from Airport operators, industry associations, and the FAA and Airport staff.

Membership Criteria. The following factors should be considered in determining eligibility for Forum membership: (1) a community's location relative to the Airport's arrival and departure corridors; (2) the community's proximity to the Airport; and (3) citizen complaints. Member agencies must sign a letter of understanding relative to Forum participation that is filed with the Port of Oakland. Any city in Alameda County who wishes to become a member of the Forum in the future may do so with the approval of the existing Forum members if it agrees to abide by the Forum's Letter of understanding.

FORUM MEMBERS AND PARTICIPATION

Voting. One vote for each member city and county, and the Port of Oakland on issues requiring formal changes of policy or amendment of the Forum's structure. The authority to vote is vested in each elected representative. In the event an elected representative is absent, the authority to vote must be assigned by the elected representative to that representative's designated alternate. Without such authorization the member city or county will forfeit its right to vote at that meet- ing. On consensual or advisory, matters each representative present shall have one vote.

Members:

1 elected official representative from each participating city and county.
1 citizen from each participating city and county, who is selected by each jurisdiction.
1 Port of Oakland representative; the Director of Aviation

Designated Alternates:

Elected official representatives may either provide the Facilitator with the name of his or her permanent alternate (or alternates) for voting in the case of the repre- sentative's absence, or provide the Facilitator with written authorization designating an alternate at the time of the meeting. Non-elected citizen representatives may also designate a permanent or temporary alternate. Alternates for the non- elected representative are subject to the approval of the community that appointed the citizen representative.

Quorum:

A quorum will consist of ~~six (6)~~ *three (3)* member agencies plus the Port of Oakland. Without a quorum the Forum may not take any formal action on agenda items, but may continue the meeting as a committee-of-the-whole for informational purposes.

Participants: *(selected by the Airport or aviation organizations)*

Airside Operations Manager
North Field Manager
Airport Noise Officer
OAK Passenger Airline representative
OAK Cargo Airline representative
North Field business operator
General Aviation pilot
Air Transport Association representative

Advisors:
FAA Tower
FAA TRACON
FAA Flight Standards

Term of Membership. Recommended 2-year term. Representatives can be re-appointed and are selected by the sponsoring entity.

FUNDING

Each jurisdiction (city or county) will contribute $1,000 annually towards the costs of the Forum. The Port of Oakland will contribute the rest.

Annual budget

Up to $50,000 for administrative costs, including Facilitator
Up to $50,000 for technical studies

ADMINISTRATIVE RESPONSIBILITIES

Co-Chairpersons

Serve as official spokespersons for the Forum and to act as points-of-contact for coordinating with elected officials and other agencies and organizations.

Facilitator:

Chairs Forum meetings
Coordinates activities of the Forum (with assistance from the Noise Office)
Produces and distributes a meeting summary
Schedules special meetings
Prepares agendas
Mails notices to media, Forum members and interested citizens

Noise Office:

Provides technical information and support
Assists with implementation of Work Plan
Furnishes reports as needed

Oakland Airport-Community Noise Management Forum

Meeting Notice

Date: Wednesday, July 15, 2020

TIME: 6:30-8:30 P.M.

Place: VIRTUAL MEETING (Online Only)

[See page 2 for instructions on how to access and/or participate in the virtual meeting]

For information contact Mike McClintock, Forum Facilitator at (415) 203-9097 or glomike65@aol.com

Agenda

1. INTRODUCTIONS (ROLL CALL)– FACILITATOR

2. ANNOUNCEMENTS – FACILITATOR
   A. INTRODUCING CRAIG SIMON, ACTING ASSISTANT DIRECTOR OF AVIATION
   B. ACCEPTANCE OF 4TH QTR. 2019 NOISE ABATEMENT REPORT (RECEIVE AND FILE)
   C. ACCEPTANCE OF 1ST QTR. 2020 NOISE ABATEMENT REPORT (RECEIVE AND FILE)
   D. ROLLING THREE YEAR REPORT
   E. PROPOSED SAN LORENZO 1 (SLZ1) VISUAL APPROACH

3. APPROVAL OF MINUTES --FACILITATOR
   A. JANUARY 15, 2020

4. ELECTION OF OFFICERS--FACILITATOR

5. NEXTGEN RELATED NOISE CONCERNS
   A. SUBCOMMITTEE REPORT—PETER MARCUZZO, NEXTGEN SUBCOMMITTEE CHAIR
   B. FAA NOISE FORUM MEETINGS UPDATE— MATT P. DAVIS
   C. FAA REGIONAL ADMINISTRATOR'S UPDATE—RAQUEL GIRVIN
      1. WNDSR APPROACH
      2. HUSSH DEPARTURE

6. PUBLIC COMMENT [THIS IS AN OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO SPEAK ON ISSUES NOT ON THE AGENDA, BUT RELEVANT TO AIRPORT NOISE/AIR QUALITY AT OAKLAND INTERNATIONAL AIRPORT]
   TWO MINUTE TIME LIMIT PER SPEAKER]

PLEASE SEE INSTRUCTIONS ON NEXT PAGE FOR PUBLIC COMMENT DURING VIDEOCONFERENCE MEETING

7. FORUM WORK PLAN 2020 --FACILITATOR

8. FORUM STRUCTURE UPDATE--FACILITATOR

9. TECHNICAL WORKING GROUPS REPORT – MATT P. DAVIS
   A. NORTH FIELD/SOUTH FIELD RESEARCH GROUP ACTION ITEMS

10. NOISE OFFICE REPORT – MATT P. DAVIS/JESSE RICHARDSON
    A. UPDATE ON ACTION ITEMS FROM JANUARY 15, 2020 MEETING
    B. VIEWPOINT UPDATE

11. SUPERSONIC AIRCRAFT NOISE--HMMH

12. NOISE NEWS AND UPDATE – CHRISTIAN VALDES

13. CONFIRM NEXT SCHEDULED MEETING DATE - (OCTOBER 21, 2020)

14. NEW BUSINESS/ADJOURNMENT

MEETING NOTICE (CONTINUED)
OAKLAND AIRPORT-COMMUNITY NOISE MANAGEMENT FORUM
WEDNESDAY, JULY 15, 2020
6:30-8:30 P.M.
THIS WILL BE A VIRTUAL MEETING (Online or Telephone Access Only)

You will need to have Zoom access to join or view the meeting

1. Here is the link to register to participate in the meeting: https://portoakland.zoom.us/j/95626390978

2. Webinar ID: *956 2639 0978.*

3. To join the meeting by telephone: US: +1 669 900 9128 or +1 253 215 8782 or +1 346 248 7799 or +1 646 558 8656 or +1 301 715 8592 or +1 312 626 6799

4. *If asked for a participant ID or code, press #. Instructions on how to join a meeting by phone are available at: https://support.zoom.us/hc/en-us/articles/201362663 - Joining-a-meeting-by-phone.*

Instructions for Public Comment/Questions during Covid19 videoconference meeting

1. Members of the general public will have two options for addressing the Forum during the virtual meeting:
   a. By submitting written questions by email to the Forum facilitator in advance of the meeting, and
   b. Verbal comments will be accepted on all agenda items at appropriate times during the meeting via Zoom.

2. **Written Comments** (please follow the directions carefully):
   a. Email your written questions or comments to glomike65@aol.com before 5:00 p.m., Weds., July 15.
   b. Your email should include the specific agenda item on which you wish to comment.
   c. Members of the public are limited to one comment per agenda item.
   d. The length of the emailed comment should be commensurate with the two minutes allowed for public comment--typically 250-300 words.
   e. If your email comment/question is received before 5:00 p.m. on Tues., July 14, it will be forwarded to the Forum members. The facilitator will make every effort to read all emails received up to and until 5:00 p.m. on Wednesday, July 15, but cannot guarantee such emails will be read during the meeting. However, all emails will be included in the administrative record.

3. **Verbal Comments** (please read the following instructions carefully)
   a. The Zoom client will ask you to enter both an email address and a name. It is requested that you identify yourself by name as this will be visible online and will be used to notify you when it is your turn to speak.
   b. When the facilitator calls the agenda item on which you wish to speak, click on the "Raise Hand" icon (typically at the bottom of your screen). After the Forum has discussed the agenda item, the public will be called upon to speak. When called, please limit your remarks to the two-minute time limit or less. Instructions on how to "Raise Your Hand" is available at: https://support.zoom.us/hc/en-us/articles/205566129 - Raise-Hand-In-Webinar.
   c. To comment by phone, please call on one of the phone numbers listed above. You will be prompted to "Raise Your Hand" by pressing "*9" to request to speak when Public Comment is being taken on eligible Agenda Items. During your turn you will be unmuted and provided the opportunity to speak. After the allotted time, you will then be re-muted. Instructions of how to raise your hand by phone are available at: https://support.zoom.us/hc/en-us/articles/201362663 - Joining-a-meeting-by-phone.

4. **For more information please contact:**

   Mr. Jesse Richardson, Jr.,
   Airport Noise Abatement and Environmental Affairs Supervisor
   Oakland International Airport
   jrichardson@portoakland.com
   (510) 563-3349

OAKLAND AIRPORT-COMMUNITY NOISE MANAGEMENT FORUM
2020 Membership Roster

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Revised June 24, 2020

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July 5, 2020

From

Mike McClintok

To

SCSC Roundtable

Message

OAK Supplemental Noise Reports--FYI

All:

Attached FYI are the Quarterly Noise Reports for the 4th Quarter 2019 and 1st Quarter 2020.

Mike McClintock
Forum Facilitator

Attachment Name

20200705_M_McClintock_OAK Supplemental Noise Reports--FYI

Reports – OAK Noise Forum – 2020 – Quarter 1 – Summary – Noise Forum Report
Reports – OAK Noise Forum – 2019 – Quarter 4 – Summary – Noise Forum Report
https://scscroundtable.org/oak-noise-forum/

July 7, 2020

From

Mike McClintok

To

SCSC Roundtable

Message

OAK Forum Agenda Item 11-- Supersonic Aircraft Noise Presentation by HMMH

Forum members and all concerned:

Adam Scholten of HMMH has asked that the following information be forwarded to Forum Members and interested parties concerning this agenda item:

On April 13, 2020, the FAA issued a Notice of Proposed Rulemaking (NPRM) for noise certification standards of supersonic aircraft in the Federal Register. HMMH will be covering the NPRM regarding supersonic aircraft noise certification as part of its presentation at the Forum's July 15 meeting. Mary Ellen Eagan, President, CEO and Chairman of the Board of Directors of HMMH, will present the supersonic aircraft noise certification information.

This action proposes to add new supersonic airplanes to the applicability of noise certification regulations, and proposes landing and takeoff noise standards for a certain class of new supersonic airplanes. There is renewed interest in the development of supersonic aircraft, and the proposed regulations would facilitate the continued development of airplanes by specifying the noise limits for the designs, providing the means to certificate the airplanes for subsonic operation in the United States. [NB: the proposed rulemaking is not for supersonic operations].

However, the public comment period for the proposed rule ends on July 13 (next Monday) which is two days before HMMH would be presenting to the Forum.

Given there may be interest from some of the Forum members and/or the Port to have the opportunity to comment on the proposed standards, HMMH wanted to make you aware of the July 13 closing date for public comments so you can reach out to the Forum prior to the July 15 meeting. We know other community groups, airports, and citizens have made comments on the standards and understand the Port and or Forum may wish to do so as well.

For reference, the NPRM for the supersonic aircraft noise certification standards in the Federal Register, including a summary of the proposed rule, can be found at:

https://www.federalregister.gov/documents/2020/04/13/2020-07039/noise-certification-of-supersonic-airplanes

Within the Federal Register announcement, comments can be filed digitally, and comments submitted to date can be reviewed. As of this morning, 74 comments have been filed through the Federal Register website regarding the NPRM from a variety of community groups, manufacturers, citizens, airport roundtables, and airport operators.

Please let us know if you have any questions or if we can be of assistance in providing comments on the NPRM for the Port or the Forum.

Best Regards,

Adam

Adam R. Scholten
Senior Consultant

July 10, 2020

From

Mike McClintok

To

SCSC Roundtable

Message

Fwd: ALERT -- House Passes Infrastructure Bill with Noise Provisions

FYI. Here is the latest legislation info from N.O.I.S.E.
MM

ALERT -- House Passes Infrastructure Bill with Noise Provisions
Dear N.O.I.S.E. Members,

Congress has now begun to move beyond their main focus of passing COVID-relief bills and has started to pass legislation related to transportation, water resources, and federal budget bills.Last week, the U.S. House passed a $1.5 trillion infrastructure bill, the Moving Forward Act, (H.R. 2). The legislation is unlikely to become law in its current form. Instead, it will serve as an opening offer in negotiations with the Senate and White House over fiscal 2021 transportation spending. Senate leaders and the White House do not support the House bill.

The current surface transportation authorization expires September 30. Without a replacement bill that has bipartisan support, the House and Senate will likely need to extend the existing legislation in order to have more time for negotiations.

We wanted to highlight the sections in this legislation that relate to aviation noise and will continue to monitor and report on developments. N.O.I.S.E. will continue to engage with Congress to advocate for federal legislation that will provide effective tools for the FAA, airports, communities and stakeholders to address the impacts of aviation noise.

Aviation and Noise Highlights in House Bill:

The bill increases funding to deliver critical projects for Airport and Airspace Capacity by authorizing $4.0 billion from the Airport and Airway Trust Fund for the FAA Airport Improvement Program (AIP) account for fiscal years 2021 through 2025.
In addition to increasing AIP's annual authorization level, the Moving Forward Act provides supplemental funding for 5 years based on enplanements. This includes an additional $3 billion in fiscal year (FY) 2021, $3.2 billion in FY22, $3.5 billion in FY23, $3.7 billion in FY24, and $4 billion in FY25. This additional funding will be given in grants for airport projects that increase climate resiliency, reduce greenhouse gas emissions, and mitigate airplane noise.
It increases the Resiliency Passenger Facility Charge (PFC) Cap. In addition to increasing the PFC cap, it also indexes it to inflation, which would allow for increased investment in airports that are at or over capacity with travelers in terminals and increasingly congested with airplanes on runways and taxiways. This revenue would help to fund critical landside development projects that are ineligible for AIP funding, help airports prepare for anticipated passenger growth and demand, and ready airport infrastructure for the future impacts of climate change and natural disasters.
The final bill the House voted for also included an amendment by Congressman Rouda (D-CA) to establish a program to be known as the "Aviation Industry Assistance for Cleaner and Quieter Skies Voucher Program", under which the Secretary of Transportation will issue electronic vouchers to air carriers to offset the purchase or cost of new aircraft that reduce airplane emissions and noise. Congressman Rouda hopes that transitioning commercial fleets to newer, quieter, less-polluting aircraft is our greatest chance for long-term relief from the daily impacts to quality of life and this program will help to expedite that process.
Again, we will keep you updated on developments with this and other pertinent legislative and regulatory policies as the Federal Government continues to deal with the COVID-19 crisis and its impact on air travel and the nation as a whole. We will be closely monitoring travel advisories and meeting recommendations and update N.O.I.S.E. members on plans for our November conference as soon as possible.

Emily Tranter

National Coordinator
National Organization to Insure a Sound-Controlled Environment (N.O.I.S.E.)
Visit the N.O.I.S.E Website

July 10, 2020

From

Tom Pyke

To

SCSC Roundtable

Message

FW: Information for SCSC Roundtable re: SST, QSC, etc.

Hi all:

Attached is the letter from Reps Khanna, Eshoo and Panetta to the FAA in support of the SCSC letter re: proposed SST rules (which is also attached). Thanks to all three offices for working together on that. Please convey to the Roundtable through your normal channels.

The Quiet Skies Caucus (QSC) has not yet scheduled its next meeting with FAA Administrator Dickson, and our congressional offices will keep you posted. I have reminded our DC staff that it would be helpful to have this Caucus meeting after the next SCSC Roundtable meeting on July 22, so that any resulting recommendations/requests can be conveyed to the Caucus.

Note that the previous June 25 QSC staffers' meeting focused primarily on the Alternatives to DNL (noise metrics) report released by FAA in April (also attached for ready reference). I am in the process of getting some related notes on that.

Sorry for any delays, but as you know our offices our quite engaged on multiple fronts. Our casework seems to rise with each wave of controversy flowing from Washington.

Best, Tom

Attachment Name

20200710_T_Pyke_Information fo SCSC Roundtable re SST-QSC-etc

Congress of the United States
Washington, DC 20515

July 10th, 2020

Hon. Stephen M. Dickson
Administrator
Federal Aviation Administration
800 Independence Avenue SW
Washington, DC 20591

To Administrator Dickson:

We write to emphasize the comments submitted by the Santa Clara/Santa Cruz Counties Airport/Community Roundtable (SCSC Roundtable) on the Notice of Proposed Rulemaking on Noise Certification of Supersonic Airplanes. We have attached those comments to this letter. The roundtable is comprised of local leaders from our Congressional Districts and represents 2.2 million people. It works to foster collaboration to alleviate airplane noise for our constituents. The roundtable has made reasonable and substantive requests for the final rule.

First, at subsonic speeds, new supersonic airplanes should be required to meet the same noise certification level as current new manufactured subsonic airplanes. As you know, all designed aircraft certified starting in 2018 must meet U.S. Stage 5 noise standards. Newly designed supersonic aircraft should be no exception while traveling at subsonic speeds.

Second, automatic noise abatement systems should be required to remain activated at altitudes below 18,000 feet and demonstrate greater noise reduction than if they were not in use. Automatic noise reduction systems, such as Variable Noise Reduction System (VNRS) or Programmed Lapse Rate (PLR) system, promise to reduce airplane noise. Supersonic aircraft should ensure that these systems remain activated when not in Class A airspace, except if shutoff is required for safety. The FAA's certification process should also demonstrate that these systems relatively decrease airplane noise.

The Control and Abatement of Aircraft Noise and Sonic Boom Act of 1968 requires the FAA to protect the public from unnecessary aircraft noise and sonic boom. Airplane noise is a top issue for our constituents. We regularly hear from our constituents about the impact that airplane noise has on their well-being. With that in mind, we urge you to give the comments of the SCSC Roundtable full and fair consideration as you develop the final rule for Noise Certification of Supersonic Airplanes.

Sincerely,

Ro Khanna
Member of Congress

Anna G. Eshoo
Member of Congress

Jimmy Panetta
Member of Congress

Federal Aviation Administration

Report to Congress

FAA Reauthorization Act of 2018 (Pub. L. 115-254) Section 188 and Sec 173

April 14, 2020

Table of Contents

1. Introduction

Since its inception, the Federal Aviation Administration (FAA) has worked to better understand, quantify, and address noise concerns from aircraft. As part of this effort, various noise metrics have been developed over several decades of research to inform federal policies. As will be discussed in this report, no single metric can cover all situations due to the dynamic acoustical and operational characteristics of aviation noise. The appropriate use of noise modeling and noise measurement will also be reviewed and the context in which each are applicable are discussed.

Congress directed an evaluation of alternative metrics in Senate Appropriations Report 116-109 (pg. 42) for fiscal year 2019 and the FAA Reauthorization Act of 2018 (Pub. L. 115-254) requested the FAA to provide this report in response to **Sec. 188:** ***Study regarding day-night average sound levels. Within 1 year the Administrator shall evaluate alternative metrics to current average day-night level standard, such as use of actual noise sampling to address community airplane noise concerns.***

While not directed to include in a report, the information contained in this document also fulfills the FAA's response to **Sec. 173:** ***Alternative airplane noise metric evaluation. Within 1 year complete the ongoing evaluation of alternative metrics to the current Day Night Level (DNL) 65 standard.***

2. Purpose of Noise Metrics for Environmental Regulation and Policy

This section introduces the topic of noise and the FAA's use of noise metrics for environmental regulation and policy. "Noise" is defined as unwanted sound. The term "noise metric" refers to a type of noise measurement or noise descriptor. Sound itself is a complex phenomenon, which varies in level over time as well as frequency content.[1] Therefore, many noise metrics exist in order to capture and include the various aspects of sound; no single noise metric can cover all situations. The FAA uses noise metrics for two primary purposes:

1. To assess community noise exposure through requirements under the National Environmental Policy Act (NEPA) and other related noise programs like 14 CFR Part 150.
2. To assess aircraft certification through 14 CFR Part 36.

The noise metrics used for each of these purposes are different as they address different characteristics of noise as will be described below.

2.1 Community Noise Exposure

Community responses to noise vary from person to person, even if noise levels do not change. However, changes in noise exposure affect individual and community responses, and substantial increases in man-made noise can have a negative impact. Consequently, it is

[1] Frequency content refers to the timbre of a sound, often comprised of a collection of pitches, or frequencies.

important to understand which characteristics of noise cause a negative response and how exposure to noise with those characteristics affects people's lives.

In order to reflect human response to sound equitably across communities, a meaningful metric or set of metrics should:

- Have a highly reliable relationship between noise exposure and people's response to noise.
- Consistently be applied uniformly in communities surrounding airports.
- Account for noise level, duration, and time of occurrence.

The Day-Night Average Sound Level (DNL) incorporates all of these elements and is the metric FAA uses to inform environmental decision making for noise.

As stated in the previous section, "noise" is unwanted sound in a community. However, individual expectations regarding noise may vary based on different factors, including whether the community is in a quiet rural area or a bustling downtown city. For example, a new, potentially intrusive noise may generally be more noticeable in a quiet rural area compared to an urban environment, even though the overall noise levels can be higher in an urban environment. Thus, the ambient (or background) sound level affects how people perceive new noise sources. "Ambient" sound is defined as the existing acoustic environment to which a potential intrusive sound is being compared. Figure 1[2] shows typical existing ambient sound levels (i.e., Day-Night Average Sound Level [DNL]; see Section 3 for a discussion of DNL) ranging from a "small town residential area" to a "downtown city."

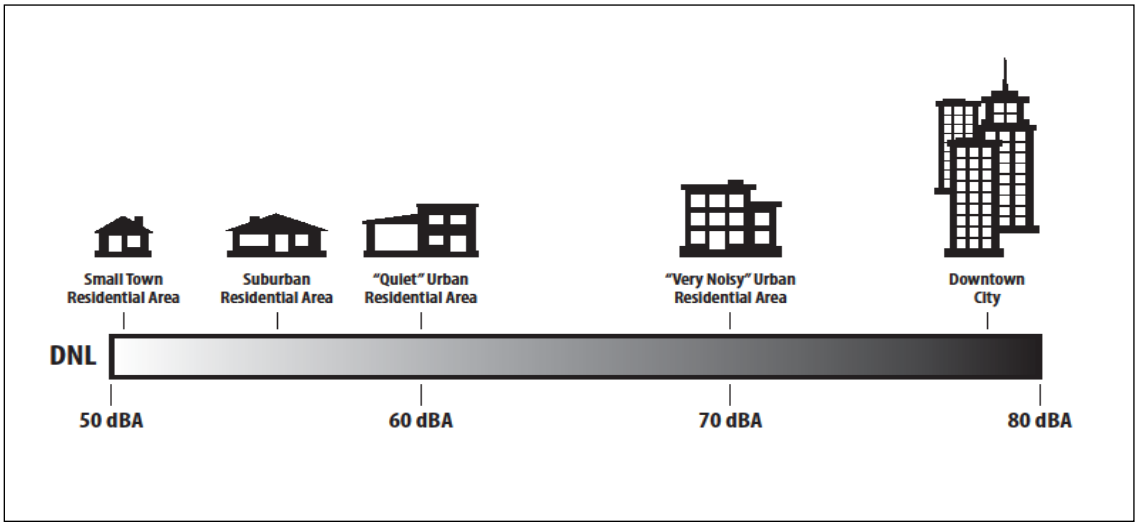

Figure 1. Typical Day-Night Average Sound Levels

Common community noise sources include sources inside and outside of buildings. For example, a person indoors can experience the noise from vacuum cleaners, air conditioners, televisions, etc. Example sources of outdoor noise entering a house include lawn mowers, vehicular traffic, railroads, and aircraft. A new, potentially intrusive noise source can range from acceptable to unacceptable depending on a number of factors, including the following:

[2] U.S. Environmental Protection Agency. 1974. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.

- Magnitude of the noise level relative to ambient sound levels.
- Character of the noise.
- Number, time of day, and elapsed time of noise events.

For these reasons, a metric responsive to cumulative noise exposure over the full range of aircraft operational conditions is most appropriate to assess community noise exposure.

2.2 Aircraft Certification

The purpose of the noise certification process is to ensure that the latest available safe and airworthy noise reduction technology is incorporated into new aircraft designs, thereby minimizing aircraft noise levels experienced by communities.

The Federal Aviation Administration applies noise certification standards to regulate the maximum noise level that an individual civil aircraft can emit. The United States aircraft noise standards are defined in the Code of Federal Regulations Title 14 Part 36 – Noise Standards: Aircraft Type and Airworthiness Certification (14 CFR Part 36). Rigorous noise measurement procedures are used in the aircraft certification process. For aircraft certification, single aircraft event metrics are most appropriate for finding compliance. In the case of U.S. large airplane and helicopter regulations, the increased designation by “stage” for such applicable standards are an indication of noise stringency increases that lower the maximum allowable noise levels.

As noise reduction technology matures, the FAA works with the international community to determine if a new stringent noise standard is appropriate. If so, the international community, through the International Civil Aviation Organization’s Committee on Aviation Environmental Protection, embarks on a comprehensive analysis to determine a new noise standard.

The FAA publishes certificated noise levels in the advisory circular, “Noise Levels for U.S Certificated and Foreign Aircraft.” This advisory circular provides noise level data for aircraft certificated under 14 CFR Part 36 and categorizes aircraft into their appropriate “stages.” Any aircraft that is certified for airworthiness in the U.S. must comply with noise standard requirements to receive a type certificate.

3. Noise Metrics Acoustic Background and History

3.1 Background on Acoustical Frequency Weighting

Many metrics used to predict or describe noise effects corresponding to the human response to noise rely on A-weighting to express the spectral (frequency) content of noise as a single-valued number. First identified in the 1933 Fletcher-Munson curves,[3] the A-weighting network intentionally focuses on frequencies in the mid-range and is less influenced by both low and high frequency sounds. A-weighted noise levels correspond better to human response to noise[4] than do other weightings.

[3] Fletcher, H. and W.A. Munson. 1933. Loudness, Its Definition, Measurement and Calculation. Journal of the Acoustical Society of America. Volume V. October.
[4] Federal Railroad Administration. 2012. High-Speed Ground Transportation Noise and Vibration Impact Assessment. U.S. Department of Transportation. Office of Railroad Policy and Development. DOT/FRA/ORD-12/15. September.

The A-weighting network was originally developed for sounds of relatively low level. Additional B- and C-weighting networks were developed for application to sounds of increasing absolute level. The B-weighting network had little use in noise analyses, however, and was eventually dropped from the sound level meter standard. Figure 2[5] shows the frequency response characteristics of A- and C-weighting.

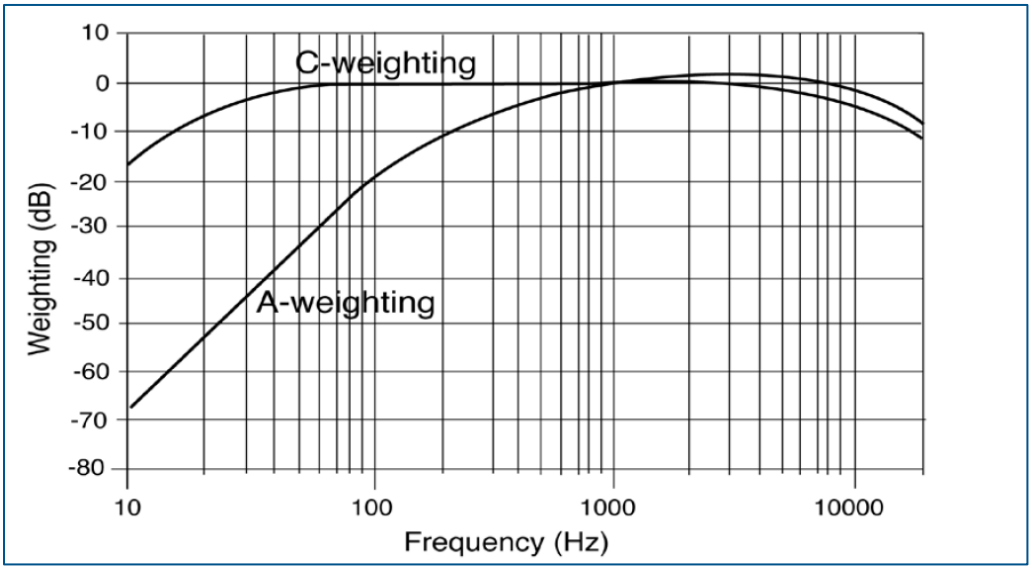

Figure 2. Frequency Response Characteristics of A- and C-Weighting.

The rationale for favoring A-weighted noise metrics can be traced to the very first community noise survey,[6] and for the convenience of manufacturing analog sound level meters. Modern digital sound level meters can easily measure sound with various weightings and/or at individual frequencies.

In some cases, no weighting is used, which is referred to as a "linear" decibel value, and simply denoted dB.

C-weighting (dBC) is currently used for certain applications, such as loud, impulsive noise or noise sources with substantial low frequency content (e.g., sonic booms, commercial space launches, or artillery ranges). C-weighting has essentially little to no weighting between 31.5 hertz (Hz) and 8 kilohertz (kHz), and thus is similar to a "linear" decibel (dB) value.

Measurement of sound includes both frequency and temporal characteristics. Various frequency weightings, such as A-weighting as previously discussed, allow sound measurements with different frequency or spectral content to be represented by a single number.

The time varying nature of sound levels can be characterized by cumulative and single event metrics. Maximum sound level over a given time interval (L_{max}) can be measured as well, but depending on how much levels vary, the L_{max} may not be representative of longer-duration measurements.

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[5] ANSI S1.4 -1983 "Specification of Sound Level Meters."
[6] Fletcher, H., A.H. Beyer, and A.B. Duel. 1930. "Noise Measurement," in City Noise, Report of the Noise Abatement Commission, Department of Health, City of New York.

3.2 History of Modern Noise Metrics

The framework of modern noise metrics (including DNL) can be traced back to the Composite Noise Rating (CNR) of the 1950s.[7,8,9] The CNR began in a form where aircraft noise spectra[10] were compared to reference spectra at various levels. The CNR included adjustments for time of day, ambient conditions, and other factors. By the 1960s, the CNR had evolved into the Noise Exposure Forecast (NEF)[11] which accounted for multiple noise events. These early noise metrics were later replaced due to the acknowledgement of the need to account for noise level, duration, the number of noise events, and time of day.

The effort to develop a noise metric to evaluate noise in the vicinity of an airport began in California in 1969 with the adoption of Public Utilities Code Section 21669:

> *The department [of Aeronautics] shall adopt noise standards governing the operations of aircraft and aircraft engines for airports operating under a valid permit issued by the department to an extent not prohibited by federal law. The standard shall be based upon the level of noise acceptable to a reasonable person residing in the vicinity of the airport.*

In 1970, the California Aeronautics Board adopted the community noise equivalent level (CNEL) as the measurement of an airport's "noise footprint."[12]

In 1972, Congress passed the Noise Pollution and Abatement Act (commonly referred to as the Noise Control Act), which directed the U.S. Environmental Protection Agency (EPA) to coordinate the programs of all federal agencies relating to noise research and noise control and to publish information on the levels of environmental noise necessary to protect the public health and welfare with an adequate margin of safety;[13] however, the authority to manage aviation noise was retained by the FAA. In 1974, EPA, in its "Levels"[14] document, recommended DNL (also expressed as L_{dn}) as the best metric to describe the effects of environmental noise in a simple, uniform and appropriate way. DNL replaced or supplemented earlier noise metrics, including CNEL, for federal purposes.

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[7] Rosenblith, W.A., K.N. Stevens, and the staff of Bolt, Beranek, and Newman. 1953. Handbook of Acoustic Noise Control, Vol. 2, Noise and Man. USAF Report WADC TR-52-204.
[8] Stevens, K.N., W.A. Rosenblith, and R.H. Bolt. 1953. Neighborhood Reaction to Noise: A Survey and Correlation of Case Histories (A). *J. Acoust. Soc. Am.* Vol 25(833).
[9] Stevens, K.N., and A.C. Pietrasanta. 1957. Procedures for Estimating Noise Exposure and Resulting Community Reactions from Air Base Operations. USAF Report WADC TN 57-10.
[10] "Spectra" refers to a frequency spectrum which typically includes the magnitude of individual frequencies from 31.5 hertz to 20 kilohertz. Hertz is equivalent to cycles/second.
[11] Bishop, D., and M.A. Simpson. 1970. Noise Exposure Forecast Contours for 1967, 1970 and 1975 Operations at Selected Airports. DOT/FAA Office of Noise Abatement, FA68WA-1900. September. BBN Report No. 1863.
[12] CNEL is still in use in California; FAA recognizes it as an alternative metric and has allowed California airports to present annual noise exposure in terms of CNEL, rather than DNL, for consistency with state protocols.
[13] Congress discontinued funding for the EPA Noise Office in 1981.
[14] U.S. Environmental Protection Agency Office of Noise Abatement and Control, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (Mar. 1974).

In 1979, Congress passed the Aviation Safety and Noise Abatement Act (ASNA), which required the FAA to establish:

(a) A single system of measuring noise, for which there is a highly reliable relationship between projected noise exposure and surveyed reactions of people to noise, to be uniformly applied in measuring noise at airports and the areas surrounding such airports; and

(b) A single system for determining the exposure of individuals to noise which results from the operations of an airport and which includes, but is not limited to, noise intensity, duration, and time of occurrence.[15]

Taking into consideration existing information on noise metrics, in 1981, in accordance with ASNA, the FAA adopted DNL as its standard metric. The FAA uses the DNL metric for purposes of determining an individual's cumulative noise exposure and for land use compatibility under 14 CFR part 150. The FAA also uses DNL for assessing the significance of predicted noise impacts under NEPA.

4. Noise Metrics Overview

This section provides background on the range of noise metrics most commonly used for evaluations of transportation noise or for other related purposes. Sections 5 and 6 will then introduce where these metrics are in active use by the FAA or other agencies for regulatory purposes.

4.1 Cumulative Metrics

Cumulative noise metrics consider both the sound level and the duration, and are useful in quantifying long-term community noise exposure. Depending on the situation, different length of time periods, such as hourly, daily or annual can be considered by cumulative metrics.

The following are examples of cumulative noise metrics.

Level Equivalent (L_{eq})

The Level Equivalent (L_{eq}) is the equivalent continuous sound level in decibels, equivalent to the total sound energy measured over a stated period of time. L_{eq} is essentially the average sound level during the measurement interval and takes into account the cumulative effect of multiple noise events.

Day-Night Average Sound Level (DNL)

The DNL noise metric captures all the acoustic energy within a 24-hour period, adding a 10 dB penalty between the hours of 10:00 p.m. and 7:00 a.m. to account for people's increased sensitivity to noise at night. Night-time ambient sound levels are often approximately 10 dB lower than daytime sound levels, so the 10 dB adjustment can also be thought of as

[15] 49 U.S.C. § 47502(1)(A)(B), (2), (3).

compensating for this drop-in sound level. DNL is usually expressed in terms of A-weighted sound levels, but other frequency weightings can be used, such as C-weighting (i.e., CDNL).

DNL represents an average day of hourly weighted Leq noise levels as shown in the schematic below.

DNL is also most often considered commutatively over an Average Annual Day and provides a consolidated summary of the annual noise exposure. The American National Standards Institute (ANSI) comments[16] on the appropriateness of the annual average DNL with respect to long-term community noise exposure: “Ordinarily, land-uses are long-term, continuing nature, and the yearly day-night average sound level is appropriate for these land uses. For other land uses, compatibility is to be assessed by the average sound level during the time interval of interest for the land use involved.”

Community Noise Equivalent Level (CNEL)

The Community Noise Equivalent Level (CNEL) metric, used in California[17], is similar to the DNL metric, but in addition to the 10 dBA nighttime penalty, it also adds a 4.77 dBA penalty for sound levels occurring during the evening hours (7:00 p.m. to 10:00 p.m.).

4.2 Single Event Metrics

Single event metrics focus attention on the noise attributes of individual noise events such as an aircraft flyover.

Sound Exposure Level (SEL)

The SEL metric captures all the acoustic energy of a noise event and normalizes it as if the event occurred in one second. The SEL takes into account both sound level and duration, and therefore allows direct comparison between two different noise events with different durations and/or sound level. The SEL (in conjunction with number of daytime and nighttime noise events) also can be used to calculate DNL.

Maximum Sound Level (L_{max})

Maximum sound level (L_{max}) is the maximum sound level measured within a desired measurement interval.

[16] “Sound Level Descriptors for Determination of Compatible Land Use” (ANSI S12.40-1990).
[17] CNEL may be used in lieu of DNL for assessment of FAA actions in California.

4.3 Operational-Acoustic Metrics

"Operational-Acoustic" refers to metrics such as Number-above (NA), Time-above (TA), and Time-audible. These types of metrics include non-acoustic information, such as number of aircraft or time elapsed exceeding a certain noise level threshold. This type of metric is a linear measure (as opposed to logarithmic), which in some situations can aid in providing supplemental noise information to the public. Contours (isopleths) of these of Operational-Acoustic metrics can be superimposed on maps showing noise level contours from acoustic metrics, such as DNL.

Number-above (NA)

The NA metric combines single event noise level information with aircraft movement data. NA contours commonly show the number of aircraft above a given noise level threshold over a specified time period (e.g., 70 dBA and 24 hours).

Time-above (TA)

The TA noise metric measures the total time, or percentage of time, that the A-weighted aircraft noise level exceeds an indicated level. TA correlates linearly with the number of flight operations and is also sensitive to changes in fleet mix.

Time-audible

The Time-audible metric quantifies the duration at which noise from a transient noise source occurs at a noise level greater than the existing ambient noise level. The noise source must also be detectable by a human observer with normal hearing, who is actively listening.

This metric is highly dependent upon an accurate representation of ambient sound levels, both temporally and geo-spatially. For example, a listener's particular location and time at that location would need accurate and reliable ambient sound level data for comparison with accurate aircraft noise levels. For these reasons, the Time-audible metric can be difficult to represent accurately in areas with dynamic or variable ambient noise levels.

For typical vehicle noise levels, this metric is most applicable for projects within or involving noise sensitive areas at very low and constant ambient noise levels, such as national parks. Low and constant ambient noise levels are desired because this metric is most sensitive where the source noise is distinguishable from the ambient noise.

4.4 Low Acoustic Frequency Noise Metrics

Pounds Per Square Foot (PSF): A direct measure of the peak overpressure from an acoustical event. Most often considered for high intensity noise events where structural concerns are relevant.

C-weighted SEL (CSEL) and C-Weighted DNL (CDNL): Analogous to SEL and DNL, but incorporates a C-weighting to be more responsive to lower acoustic frequency noise. CSEL is the recommended[18] metric for evaluating human response to sonic booms.

[18] National Research Council. 1981. Assessment of Community Response to High-Energy Impulsive Noises. Report of CHABA Working Group 84, W. J. Galloway, Chairman.

5. Noise Metrics in use by FAA

As introduced in section 3.2, the DNL noise metric was adopted by FAA to meet the requirements established by ASNA and codified in 14 CFR Part 150. DNL is also used by the FAA in making determinations for Federal Actions it assesses under NEPA as specified under FAA Order 1050.1F. The DNL metric is an example of a cumulative A-weighted[19] noise metric and represents the exposure level over a complete 24-hour period. DNL accounts for the noise level of each individual aircraft event, the number of times those events occur, and the time of day/night in which they occur. DNL includes a 10 decibel[20] (dB) noise penalty added to noise events occurring from 10:00 p.m. to 7:00 a.m. to reflect the increased human sensitivity to noise and lower ambient sound levels at night. To ensure that all of the variable operational conditions over the course of a year are considered, FAA considers the Average Annual Day when calculating DNL[21]. Average Annual Day DNL is used to assess noise from all fixed wing and rotorcraft aircraft in both the vicinity of airports and in the extended airspace.

In addition to regulation of aircraft operations, the FAA's Office of Commercial Space Transportation issues licenses to operate non-federal launch sites and to operate launch vehicles. Commercial space launch vehicles typically produce two different types of noise: launch noise (from rocket engines) and sonic booms (generated during supersonic flight). Launch noise can be assessed using several different noise metrics. The DNL metric has been used for commercial space projects for public disclosure and because the FAA uses the DNL metric when determining significance under NEPA, but its suitability is uncertain primarily because of the relatively small number of noise events (i.e., launches per year). CSEL and CDNL may also be considered in some cases for commercial space noise evaluations.

While DNL is used for all FAA noise-based decision-making purposes, the FAA encourages the use of other supplemental metrics as a communication tool to highlight unique situations where applicable. Section 8 will discuss the use of noise metrics for supplemental purposes.

6. Noise Metrics in use by U.S. and State Government (outside FAA)

Federal and state agencies other than the FAA employ similar noise metrics to evaluate a project's noise impacts. For example, the U.S. Department of Housing and Urban Development (HUD), Surface Transportation Board (STB), and U.S. Department of Defense (DOD) also employ the DNL metric to determine Land Use Policy according to Federal Land Use Policy guidelines. The Federal Highway Administration (FHWA) primarily uses the L_{eq} metric while the Federal Railroad Administration (FRA) and Federal Transit Administration (FTA) use both L_{eq} and DNL metrics. Daytime L_{eq} metrics are typically used for activities with little or no nighttime activity, while DNL is used to account for daytime and nighttime activity.

[19] A-weighted metrics weight the acoustic frequency of noise to approximate that of human hearing.
[20] The decibel (dB) is a logarithmic relationship of sound pressure levels, which is designed to collapse a large range of pressure values into a more manageable range. A 10-dB increase is perceived as a doubling of loudness, while a 3-dB increase is perceived as just noticeable to most people.
[21] Average Annual Day DNL may also be noted as Yearly DNL or YDNL

It is important to draw a distinction between a particular noise metric and any accompanying noise threshold values (in decibels) used to inform project or policy determinations. Determinations of threshold values depend on multiple technical and policy considerations that, while related to the choice of noise metric, require separate consideration.

The following examples illustrate how different agencies and departments apply various noise metrics.

6.1 Level Equivalent (L_{eq}) Metric

FHWA uses the loudest one-hour L_{eq}[22] to assess impacts associated with highway noise. FHWA's impact criteria for residential receptors has been 67 dBA (L_{eq}) (or 70 dBA L_{10}) at exterior use areas since 1976. In many cases, highway noise levels peaking in the range of 66 dBA (L_{eq}) often are in the range of 65 DNL if measured over a 24-hour period.

FHWA employs both "absolute" and "relative" noise impact criteria. "Absolute" refers to the 67 dBA (L_{eq}) threshold for noise-sensitive outdoor use areas, including those of residences. "Relative" noise criteria refer to a potential increase in noise level due to a highway project. FHWA allows individual states to determine their own "relative" noise criteria which can vary between 5 and 15 dBA above ambient sound levels, defined as a "substantial increase." Impacts can occur under one, the other, or both; at which point the highway agency must consider abatement for those impacts.

6.2 DNL and L_{eq} Metrics

Originating from FTA guidance[23], The FTA and FRA[24] essentially use the same noise metrics and procedures, including consideration of existing ambient noise levels and project noise levels for environmental noise impact analysis as shown in Figure 3.

For FTA, these procedures include how to calculate light rail transit noise levels for various trains using consistent configurations and distances from the rail line. Transit bus projects also often include highway elements and may require FHWA noise procedures to be used, in conjunction with FTA noise procedures. The FTA noise manual provides guidance on choosing the correct procedures for such multi-modal projects.

For FRA, existing and project noise levels are expressed in terms of dBA, delineated by times of use. Specifically, the manual requires: "L_{dn} is used for land use where nighttime sensitivity is a

[22] Federal Highway Administration. 23 CFR Part 772: Procedures for Abatement of Highway Traffic Noise and Construction Noise -- Final rule. Federal Register Vol. 75, No. 133, 1 July 2010.
[23] Federal Transit Administration. 2018. Transit Noise and Vibration Impact Assessment. FTA Report No. 0123. September.
[24] FRA follows FTA guidance for assessments of rail vehicles operating below 90mph. For rail vehicles operating above 90mph further guidance is provided in: Federal Railroad Administration. 2012. High-Speed Ground Transportation Noise and Vibration Impact Assessment. U.S. Department of Transportation. Office of Railroad Policy and Development. DOT/FRA/ORD-12/15. September.

factor; L_{eq} during the hour of maximum transit noise exposure is used for land use involving only daytime activities."

Figure 3 is applicable to both L_{eq} and DNL. Figure 3 shows that the "allowable project noise level" decreases with decreasing existing ambient noise levels. It is interesting to note that a project noise level of DNL 65 dBA covers a wide range of typical ambient noise level conditions as an impact threshold.

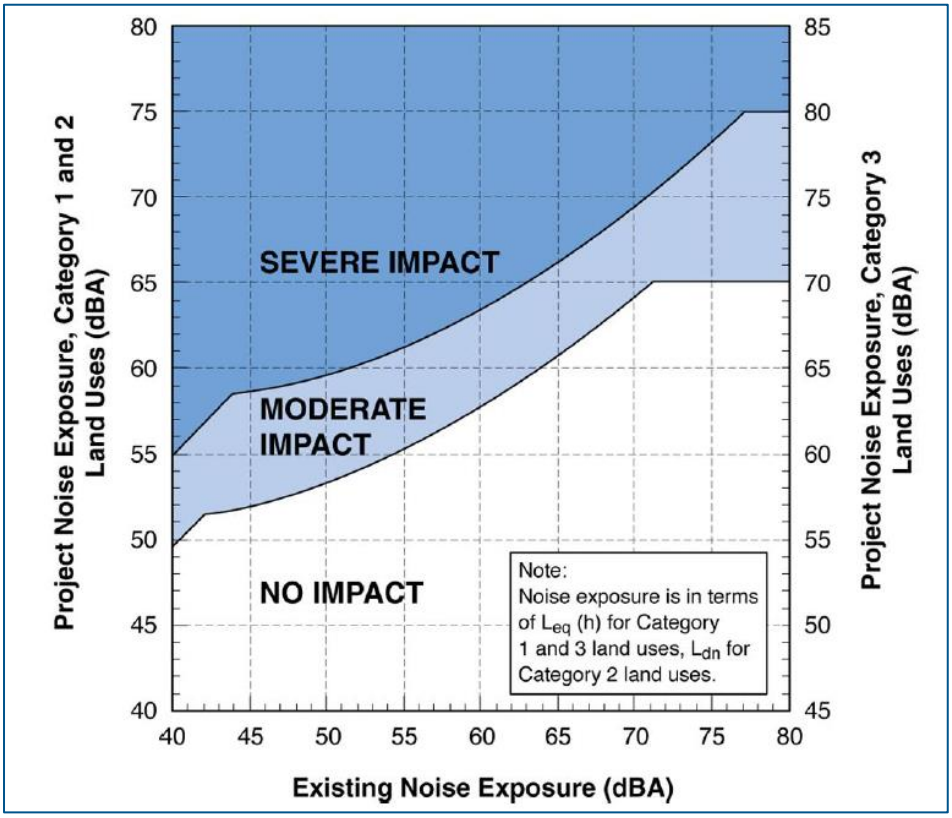

Figure 3. Federal Railroad Administration Noise Metrics/Criteria

6.3 30-Day Average DNL Metric

As an example of long-term versus mid- and short-term noise exposure, the FTA uses a 30-Day Average DNL for certain construction projects warranting a detailed construction noise analysis[25]. Construction projects usually have noise metrics and thresholds which consider the temporary nature of construction projects.

[25] Specific procedures for assessing construction noise impacts are provided in 2018 FTA Report No. 0123

6.4 DNL Metric

Based on Federal land use guidelines[26] and similar to the way in which FAA assesses compatible land use[27], HUD[28] considers an environmental noise level of less than DNL 65 dB as acceptable, a noise level between DNL 65 and 75 dBA normally unacceptable, and a noise level above DNL 75 dB unacceptable. HUD also employs a building interior standard of DNL 45 dB. HUD noise analysis considers the effects of highways, railroads, airports, and military installations for all of its property related expenditures, including loans, planning assistance, and support of new construction. Common use of Federal land use guidelines, including the DNL noise metric, provides HUD with a consistent defensible method for considering aircraft noise in its decision making. Where aircraft noise is a consideration, use of a noise metric other than that considered by FAA, would add complexity and could negatively impact the process for granting home loans and property development.

The DOD primarily uses the DNL metric for environmental noise analysis with caveats: "Although local conditions regarding the need for housing may require residential use in these zones, residential use is discouraged in DNL 65-69 dBA and strongly discouraged in DNL 70-74 dBA. The absence of viable alternative development options should be determined, and an evaluation should be conducted locally prior to local approvals indicating that a demonstrated community need for the residential use would not be met if development were prohibited in these zones."[29] Existing residential development is considered as pre-existing, incompatible land use.

The DOD promotes long-term compatible land use in the vicinity of military installations via the Air Installations Compatibility Use Zones (AICUZ) program. DOD employs detailed land use compatibility recommendations based on Standard Land Use Coding Manual (SLUCM) land use codes and DNL or CNEL noise areas on and around air installations.

AICUZ studies use the A-weighted DNL noise descriptor except in California, where the CNEL descriptor is used. Supplemental noise metrics may also be used to augment the DNL or CNEL analysis as noted by the Federal Interagency Committee on Urban Noise (FICUN). Since land use compatibility guidelines are based on yearly average noise levels, aircraft noise contours should be developed based on average annual day operations.

As a minimum, contours for DNL 65, 70, 75, 80, and 85 dBA are plotted on maps for Air Force, Navy, and Marine Corps air installations as part of AICUZ studies. The Army applies Operational Noise Management Program DNL designations of 60–65, 65–75, and greater than 75 dBA at its air installations. Contours below DNL 65 dB are not required but may be provided if local conditions warrant discussion of lower aircraft noise levels, such as in rural and desert areas, or where significant noise complaints have been received from areas outside DNL 65 contours.

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[26] Federal Interagency Committee on Urban Noise. 1980. Guidelines for Considering Noise In Land Use Planning and Control. June.
[27] 14 CFR Part 150.
[28] 24 CFR Part 51.
[29] Department of Defense Instruction 4165.57 (August 31, 2018).

Supplemental noise metrics may be used to augment DNL and CNEL noise analyses to provide additional information to describe the noise environment in the vicinity of air installations.

The STB regulates and decides disputes involving railroad rates, railroad mergers or line sales, and certain other transportation matters. The STB environmental review regulations for noise analysis[30] have the following criteria:

- An increase in noise exposure as measured by a DNL of 3 dBA or more.
- An increase to a noise level of DNL 65 dBA or greater.

If the estimated noise level increase at a location exceeds either of these criteria, STB estimates the number of affected receptors (e.g., schools, libraries, residences, retirement communities, nursing homes) and quantifies the noise increase. The two components (3 dBA increase, DNL 65 dBA) of the STB criteria are implemented separately to determine an upper bound of the area of potential noise impact. However, noise research indicates that both criteria components must be met to cause an adverse noise impact.[31,32] That is, noise levels would have to be greater than or equal to DNL 65 dBA and increase by 3 dBA or more for an adverse noise impact to occur.

6.5 Comparable International Noise Metrics (LAeq 16h, Lden)

Airports in the United Kingdom use similar cumulative noise metrics as used in the United States, such as the LAeq,16hr and L_{den} metrics.

6.5.1 LAeq,16hr

This noise metric is the A-weighted equivalent continuous noise level, assessed over an average daytime / evening period (7:00 a.m. to 11:00 p.m.) in the summer months. This metric was selected as a result of the United Kingdom Aircraft Noise Index Study[33] social survey which measured human response to aircraft noise expressed by a sample of people living at different places around five English and one Scottish airport. This study found that a ten-decibel nighttime noise penalty was not warranted for these particular airport communities.

6.5.2 L_{den}

In 2002, the European Commission published Directive 2002/49/EC, establishing a common environmental noise indicator for the European Union.[34] The L_{den} is the A-weighted equivalent continuous noise level, evaluated over an annual average 24-hour period, with a 10-dB penalty added to the levels at night (11:00 p.m. to 7:00 a.m.) and a 5 dB penalty added to the levels in the evening (7:00 p.m. to 11:00 p.m.) to reflect people's increased sensitivity to noise during these periods.

[30] 49 CFR 1105.7e(6).
[31] Coate, D. 1999. Annoyance Due to Locomotive Warning Horns. Transportation Research Board, Transportation Noise and Vibration Subcommittee A1FO4. San Diego, CA. August 1-4.
[32] Surface Transportation Board. 1998. Draft Environmental Assessment for Canadian National and Illinois Central Acquisition, Finance Docket No. 33556.
[33] Survey of noise attitudes 2014: Aircraft CAP 1506, 2017
[34] Survey of noise attitudes 2014: Aircraft CAP 1506, 2017

7. Role of Noise Measurements vs. Noise Modeling

Aircraft noise measurements and noise models have different attributes and roles.

Noise measurements are used for the aircraft certification process, as described in Section 2.2. Noise measurements are also an integral part of the data required for noise modeling; where carefully controlled measured aircraft (source) noise levels by aircraft type and model form the basis of the noise information utilized by aviation noise models. In contrast to these carefully controlled noise measurements, noise measurement data collected in dynamic "real world" situations from noise monitors in the vicinity of an airport can include various sources of error (as will be discussed later in this section).

Noise modeling refers to the use of computational models to generate noise results at single locations, or over a grid of locations. Modeled noise contours at various noise levels, usually in units of decibels, can also be plotted to show regions of equal noise exposure. Noise measurements provide the aircraft source noise data for the various aircraft types and are used by the FAA Aviation Environmental Design Tool (AEDT)[35] for its noise calculations. These data are also validated against noise certification data to ensure accuracy. The FAA uses AEDT to dynamically model aircraft performance in space and time to predict fuel burn, air emissions, and noise levels. This type of modeling allows the input of detailed airport runway configurations, aircraft fleet mix and operations, flight corridors, and a detailed layout of land use and communities adjacent to the airport. Noise modeling allows the overlay of noise contours or single location noise values on detailed land use and community mapping. Noise modeling is used to assess a wide variety of proposed federal actions, such as those resulting from airfield changes or changes in airspace management. Many other federal and international agencies that are responsible for noise impact assessment also employ noise modeling techniques.

Due to the need to generate detailed noise results over large areas, noise modeling is the only practical way to accurately and reliably determine geospatial noise effects in the surrounding community when analyzing proposals related to aviation noise. The many challenges and limitations to using noise measurements for evaluating airport vicinity noise are summarized below:

- Non-aircraft sound can have a large influence on noise monitoring data, which can be difficult to separate from aircraft noise during data post-processing.
- Long-term (e.g., year-long) noise monitoring requires regular maintenance and calibration of the individual noise monitors on a continuous, year-round basis, which has considerable costs.
- To ensure the same accuracy and fidelity of data generated by noise models, an extremely large number of noise monitoring locations is required. (e.g. tens of thousands of noise monitors, collecting year-round data in the vicinity of an airport would be needed to match the fidelity and accuracy of noise modeling).
- Noise monitoring data is not capable of analyzing either "what if" scenarios or proposed future action airport and air space scenarios.

[35] Data is managed by the European Organization for the Safety of Air Navigation (EUROCONTROL) through the Aircraft Noise and Performance (ANP) database

Airport vicinity noise measurements are therefore not appropriate for assessing environmental project determinations or for considering single project validation of noise modeling results. While these limitations make it unsuitable for "real world" noise measurements to consistently inform environmental decision making, the FAA does review noise measurement data when provided as part of an environmental report. In cases where data from modern, well maintained noise monitoring systems are provided, a close agreement between measured and modeled results is typically found, which further validates noise modeling accuracy.

The different roles of aviation noise measurements and modeling are also understood in the international aviation community. For example, the European Civil Aviation Conference states that "the measurement of long-term sound exposures from aircraft is not normally possible as it would require acceptable weather conditions and 100% functional instrumentation and data collection for the entire time period of interest—normally up to 12 continuous months. (And to generate even rudimentary contours this would have to be done at a very large number of locations.)"[36] The United Kingdom's Civil Aviation Authority states that provided "sufficient noise measurements are collected from a large enough number of locations and that the data is normalised appropriately, it is relatively straightforward to produce validated noise estimates. There are, however, a number of difficulties and limitations with such simplistic models. Data from a large number of measurement sites would be extremely expensive and time consuming to collect and process for a major airport, especially if aircraft noise contours were required on a regular basis. Further, such models do not provide a capability to assess the effects on the contours of changes to aircraft flight profiles, for forecasting or 'what if' analyses."[37]

Other domestic federal state and local agencies, including all federal domestic transportation agencies also employ modeling for noise level predictions when conducting noise measurements would be impractical.

While airport noise monitoring is not generally used for predictive purposes, a noise monitoring program is often a useful tool to inform the airport and neighbors about current aircraft activity and corresponding noise levels in the community. This type of noise monitoring may be accomplished via a permanent noise monitoring system; however, these systems can be quite sophisticated and require numerous permanent noise monitoring stations distributed throughout the community adjacent to the airport.

8. Role of Supplemental Metrics

As discussed in Section 3, FAA's environmental decision-making for noise must use a metric that considers the magnitude, duration, and frequency of the noise events under study. The DNL noise metric uniquely meets these requirements. However, in specific situations, additional information focused on a more targeted type of noise exposure may require the use of supplemental noise metrics.

[36] European Civil Aviation Conference. 2016. CEAC Doc 29 4th Edition Report on Standard Method of Computing Noise Contours around Civil Airports Volume 1.
[37] D.P. Rhodes, and J.B. Ollerhead. 2001. Aircraft Noise Model Validation. Environmental Research and Consultancy Department, Civil Aviation Authority, Internoise.

Individually, supplemental metrics may not fully consider the magnitude, duration, and frequency of the noise events, but may be used to support further disclosure and aid in the public understanding of community noise exposure.[38] Supplemental noise analyses are often useful to describe aircraft noise exposure from unique operational situations or for noise sensitive locations to assist in the public's understanding.

For example:

- Single event metrics like SEL and Lmax or Leq-type metrics associated with specific time periods may be useful in categorizing the noise associated to short-term activities or from individual flights, but do not fully consider the number of flights or account for the operational variations over a longer-term period.
- Operational-Acoustic metrics like NA and TA provide an alternative way to consider noise exposures over longer time periods while emphasizing details about aircraft operational characteristics, but do not fully consider the cumulative intensity of aircraft noise.
- For typical vehicle noise levels, time audible provides a comparison of aviation noise to the underlying ambient noise levels, but is only a practical consideration where ambient noise occurs at relatively low constant levels.

There is no single supplemental metric that is preferable in all situations and the selection of an appropriate supplemental metric depends on the circumstances of each analysis. However, where warranted, consideration of established supplemental metrics is encouraged.

In addition to the established supplemental metrics discussed above, ongoing research activities sponsored by the FAA and the broader research community are working to develop a greater understanding of other noise-related impact criteria. New supplemental metrics based on this research could then be developed.

Examples of these potential supplemental metrics include:

- N75 (Speech Interference): Considers speech interference (i.e., disruption) between a speaker and listener at a normal conversation distance.
- % Awakening (Sleep Disruption): Based on a standard ANSI[39] developed to predict sleep disturbance in terms of the metric "percent awakenings" or numbers of people awakened.
- L_{eq} (8) (Learning): Based on a standard ANSI has developed[40] to consider the effects of noise on classroom learning.

[38] For example, the FAA's 2005 Environmental Impact Statement for the Modernization of Chicago O'Hare International Airport provided supplemental noise metrics (SEL, Lmax, and TA).
[39] ANSI/ASA S12.9-2008. 2008. Part 6 Quantities and Procedures for Description and Measurement of Environmental Sound—Part 6: Methods for Estimation of Awakenings Associated with Outdoor Noise Events Heard in Homes.
[40] ANSI S12.60-2002. 2002. American National Standard Acoustical Performance Criteria, Design Requirements, and Guidelines for Schools.

- L_{max}(c) (Rattle): Considers the effects from low frequency aircraft operations[41,42] including the potential to induce "rattle" to structures.[43]

9. Summary

In summary, no single noise metric can cover all situations. However, the DNL metric, and similar versions such as L_{den}, are being used world-wide to assess aircraft noise effects on communities. In 1992, the Federal Interagency Committee on Noise (FICON) report[44] concluded that DNL is the recommended metric and should continue to be used as the primary metric for aircraft noise exposure. The successor to FICON, the Federal Interagency Committee on Aviation Noise (FICAN) has also reaffirmed this recommendation in their 2018 report[45].

In accordance with ASNA, the FAA adopted DNL as its standard metric. The FAA uses the DNL metric for purposes of determining an individual's cumulative noise exposure, for land use compatibility under 14 CFR part 150, and for assessing the significance of predicted noise impacts under NEPA. Federal and state agencies other than the FAA, as well as international agencies, employ similar noise metrics to evaluate a project's noise impacts.

Table 1 compares the various noise metrics discussed in this report, specifically in terms of ASNA requirements for a metric to account for noise level, time of day, and number of events.

Table 1. Noise Metrics

	Noise Level	Time of Day	Number of Events
L_{eq}	✓		✓
DNL	✓	✓	✓
LAeq(hr) (e.g. 16hr, 8hr)	✓	✓	✓
L_{den}	✓	✓	✓
CNEL	✓	✓	✓
SEL and CSEL	✓		
L_{max}	✓		
PSF[a]	✓		
NA[b]	✓		✓
TA[c]	✓		
Time Audible[d]	✓		

[a] PSF, or pounds per square foot, is functionally a measure of "noise level" instead of decibels. PSF is typically used as a measure of the peak overpressure of a sonic boom.
[b] NA is the number of noise events above a certain noise level threshold.

[41] Federal Aviation Administration. 2004. Nonmilitary Helicopter Urban Noise Study.
[42] Schomer, P., and R.D. Neathammer. 1985. The Role of Vibration and Rattle in Human Response to Helicopter Noise. U.S. Army Corps of Engineers. Technical Report N-85/14. September.
[43] Hubbard, H.H. 1982. Noise Induced House Vibrations and Human Perception. Noise Control Engineering Journal. Vol. 19., No. 2.
[44] Federal Agency Review of Selected Airport Noise Analysis Issues (FICON), 1992
[45] FICAN Research Review of Selected Aviation Noise Issues (FICAN), 2018

[c] TA is the time of noise events exceeding a certain noise level threshold.
[d] Time Audible is the amount of time noise events exceed ambient sound levels. This could be interpreted as taking into account the number of noise events.

Noise modeling is the only practical way to predict geospatial noise effects in a surrounding community when analyzing proposals related to aviation noise. Noise modeling is also necessary for a wide variety of other proposed federal actions, such as those resulting from airfield changes or changes in airspace management. The assessment of these actions requires the review of future case proposals and can therefore only be considered through predictive modeling.

Finally, while the DNL metric is FAA's decision-making metric, other supplementary metrics can be used to support further disclosure and aid in the public understanding of community noise effects.

July 11, 2020

From

Roger Heyder

To

SCSC Roundtable

Message

Please Implement BSR Reversion NOW

Dear Roundtables and Congressional Representatives,

The FAA committed to return to the BSR flight path from the NextGen SERFR flight path in November of 2016. Nearly 4 years on, that has still not happened. The 'new' flight path has supposedly been designed by the FAA, and checked by the FAA for safety. It has simply NOT been implemented.

The decision to revert back to BSR was decided by over a 6 month process, with thousands of public comments across 3 affected counties. The Select Committee for South Bay Arrivals, empowered by 3 local Congress Members and supported by the FAA, voted in a super-majority for the reversion. The FAA agreed. Clearly an extraordinary amount of public comment and participation resulted in that decision.

PLEASE FINALLY FLIP THE SWITCH, and execute the BSR reversion. Residents here have been waiting for far too long. The reduced air traffic during Covid presents an ideal opportunity to implement the new flight path, and then any necessary adjustments can be made.

When will the BSR Overlay will be listed on the IFP Gateway, and when exactly is the expected implementation date? We see no need for additional community outreach beyond FAA's normal procedure, as the BSR Overlay was extensively vetted during the Select Committee process.

Best Regards,

Roger Heyder
Quiet Skies Los Altos

July 13, 2020

From

Sky Posse

To

SCSC Roundtable

Message

Noise Certification of Supersonic Airplanes

Please see attached comment, and urge SCSC members to also read the various comments submitted by MidPeninsula residents to the docket,

https://www.federalregister.gov/documents/2020/04/13/2020-07039/noise-certification-of-supersonic-airplanes

Thank you,

Sky Posse Palo Alto

Attachment Name

20200713_S_Posse_Noise Certification of Supersonic Airplanes

Sky Posse Palo Alto

2225 East Bayshore Avenue, Suite 200, Palo Alto, CA 94303

July 10, 2020

US Department of Transportation
1200 New Jersey Avenue, SE, RoomW12-140
West Building Ground Floor
Washington, DC 20590-0001

Subject: Sky Posse Palo Alto Comments to the Notice of proposed rulemaking (NPRM) FAA-2020-0316 on Noise Certification of Supersonic Airplanes

On behalf of thousands of citizens from MidPeninsula cities in the Bay Area, and across the country, we are alarmed that Congress asked DOT/FAA to take up domestic noise certification of supersonic transport. Furthermore, this docket is deceptive, asking for input on noise certification of SST with a stated intent *"to make commercial space transportation regulations more efficient and effective, **while maintaining public safety,**"* Using the term safety is a known DOT/FAA tactic to evade noise concerns and provide regulatory supports to promote aviation interests, in this case regulatory supports for a business jet market segment. An investigation on SST certification would be welcome, similar to the recently published Inspector General Timeline analysis of the MAX 8 certification.

If the subject was noise and public safety, the docket would more robustly reflect noise concerns. In the six years of our involvement with all levels of government and FAA about aviation noise, our observation is that DOT and FAA do not have the capability to consider noise safety for the American public. Creating the appearance of having processes or appropriate noise policies with this notice contributes to the confusion.

For the record:

1. Unlike noise standards used by aviation agencies in the rest of the world, the US stands out with aviation policy that does not attempt to address what metrics and threshold criteria are consistent with protecting public health with an adequate margin of safety. DOT/FAA noise policy is litigation risk based and budget based.
2. With the current sole metric DNL and threshold of 65 DNL that the FAA employs to consider noise, the system is rigged to filter out most of what is experienced on the ground. Congress has asked the FAA to review these standards, and until this is adequately addressed, FAA's noise practices and policies are, at best, controversial.
3. The Airport Noise and Capacity Act of 1990 took away local control of aviation noise (such as the ability for local governments to set night-time flight limits) with provisions to ensure progressively quieter aircraft. Should SST abuse ANCA, introducing new or

different impacts that the FAA cannot project or mitigate, local noise control should prevail for SST, including the choice for cities to ban operations.

With lax to non-existent protections, the US embarking on SST is the equivalent of fast-tracking a vaccine with zero protocols to assess public health safety.

In recent Covid-related communications, the FAA's Administrator suggested that the FAA is not in the health care business. FAA and DOT are in fact bystanders, evading and avoiding all responsibility for public health impacts from airspace operations. We suggest that it's time for the FAA to relinquish the privilege of setting aviation noise policies and certification of SST.

New protection agencies and methods to address noise impacts are needed.

Please suspend SST plans until the American public can count on responsible agencies to help DOT and FAA address noise pollution. The costs to citizens, and to vulnerable populations in particular, from excessive and unacceptable noise far outweigh the potential benefits from a niche jet market business.

Sky Posse Palo Alto

Copy:

Congresswoman Anna Eshoo
Senator Kamala Harris
Senator Diane Feinstein
FAA Administrator Stephen Dickson
Supervisor Joe Simitian
Governor Gavin Newsom
Palo Alto City Council
SCSC Roundtable

July 13, 2020

From

Mike McClintok

To

SCSC Roundtable

Message

Re: NPRM for the supersonic aircraft noise

Jesse:
An excellent letter. I will forward it the Forum and other interested parties.
Mike
-----Original Message-----

Forum members and all concerned:

Adam Scholten of HMMH has asked that the following information be forwarded to Forum Members and interested parties concerning this agenda item:

On April 13, 2020, the FAA issued a Notice of Proposed Rulemaking (NPRM) for noise certification standards of supersonic aircraft in the Federal Register. HMMH will be covering the NPRM regarding supersonic aircraft noise certification as part of its presentation at the Forum's July 15 meeting. Mary Ellen Eagan,

President, CEO and Chairman of the Board of Directors of HMMH, will present the supersonic aircraft noise certification information.

This action proposes to add new supersonic airplanes to the applicability of noise certification regulations, and proposes landing and takeoff noise standards for a certain class of new supersonic airplanes. There is renewed interest in the development of supersonic aircraft, and the proposed regulations would facilitate the continued development of airplanes by specifying the noise limits for the designs, providing the means to certificate the airplanes for subsonic operation in the United States. [NB: the proposed rulemaking is not for supersonic operations].

However, the public comment period for the proposed rule ends on July 13 (next Monday) which is two days before HMMH would be presenting to the Forum.

Given there may be interest from some of the Forum members and/or the Port to have the opportunity to comment on the proposed standards, HMMH wanted to make you aware of the July 13 closing date for public comments so you can reach out to the Forum prior to the July 15 meeting. We know other community groups, airports, and citizens have made comments on the standards and understand the Port and or Forum may wish to do so as well.

For reference, the certification standards in the Federal Register, including a summary of the proposed rule, can be found at: https://www.federalregister.gov/documents/2020/04/13/2020-07039/noise-certification-of-supersonic-airplanes

Within the Federal Register announcement, comments can be filed digitally, and comments submitted to date can be reviewed. As of this morning, 74 comments have been filed through the Federal Register website regarding the NPRM from a variety of community groups, manufacturers, citizens, airport roundtables, and airport operators.

Please let us know if you have any questions or if we can be of assistance in providing comments on the NPRM for the Port or the Forum.

Best Regards,

Adam
Adam R. Scholten

July 15, 2020

From

Tony Sloss

To

Mary-Lynne Bernald

Message

BSR Overlay update

Mary-Lynne and Steven,

Thank you for making inquiries in April to the FAA Regional Administrator Rachel Girven about an FAA update on their work progress for the BSR overlay. Did you ever hear back from her on this? Should we expect an FAA update on the BSR overlay at the July 22 SCSC Roundtable meeting? We have many constituents who look forward to an update (and tangible progress) from the FAA. Than you for your continued efforts on behalf of the SC/SC communities.

Tony Sloss, Analyst

Supervisor John Leopold

July 15, 2020

From

Steve Alverson

To

Raquel Girvin

Message

BSR Overlay update

Dear Regional Administrator Girvin,

The SCSC Roundtable is finalizing the agenda for next week's July 22, 2020 regular meeting. Chairperson Bernald would like to know if we should include a time slot for you or your designee to brief the Roundtable and community on the FAA's progress to date on developing the BSR Overlay. Community interest in receiving an update from the FAA on its progress on developing the BSR Overlay remains very high.

So that we may finalize and post the agenda to meet the requirements of the Brown Act, Chair Bernald would appreciate a response to this email from you or your designee by noon PDT on Friday, July 17, 2020. Thank you.

Regards,

Steve
Steven R. Alverson
Senior Vice President

July 15, 2020

From
Darlene Yaplee
To
SCSC Roundtable
Message

Recall of letter to Congressional Representatives

SCSC RT,

I was surprised and disappointed to see the recall of the letter regarding “Upcoming Quiet Skies Caucus Meeting with FAA Administrator Dickson” dated June 12th to Congressional Representatives Eshoo, Panetta, and Khanna.

In FAA Administrator Dickson's response letter to the Quiet Skies Caucus (QSC), he has offered two meetings/year with the QSC staff members. The first meeting was in late June and included an important discussion on the alternative metrics report that the FAA published in April 2020. Opportunities to provide input to QSC members in preparation of their meeting with the FAA should not be missed even when deadlines are tight and there is limited advance notification. Communities nationwide prepared their Congressional Representatives for the meeting.

In our particular case, the outcome of agenda item #4 - “Review Agenda Items for the Legislative Committee" in its June 10, 2020 public meeting was the Legislative Committee tasking its Chair to draft a letter to our Congressional staff and review the draft with the Roundtable Chair. The RT Chair, I believe, can use her discretion to send the letter on behalf of the Roundtable.

The Legislative Committee meeting packet included items directly related to the FAA’s alternative metrics report: ID2 (page 4) Develop a proactive list of items the Legislative Committee would like the Congressional Reps to consider, ID2 (page 5) FAA reauthorization bill and ID6 (page 5) Consider actions to proactively address legislation.

In the Work Plan 3.4.2 Legislative Committee as a standing committee, it states “At the direction of the Roundtable, and on exception by the direction of the Chair, the committee will advocate for changes in legislation and policies, state, and federal level…including how the FAA defines and calculates aircraft impacts on the ground."

I therefore have one question:

How can the Roundtable address sending time-sensitive letters (in context of the approved work plan) given that the full Roundtable may meet every 2 or 3 months at best?

Given the last SCSC RT meeting and the comments by Chantene Koplow, Legal Counsel I hope the Roundtable can define the governance for timely letters given the actions by FAA.

Regards,

Darlene Yaplee

July 15, 2020

From

John Miller

To

SCSC Roundtable

Message

New submission from Contact us

Mary-Lynne Bernald, Chair

Hello Ms. Bernald,

I have been patiently waiting since 2015 for something to be done about airplane noise over my home of 30 years in the Santa Cruz mountains. I was most pleased when the FAA indicated it would return the approach path back to where it was before 2015. Unfortunately, the FAA appears to delay fulfilling its obligations to the point that it is difficult to track the status of their efforts.

Can you tell me when your organization expects to receive a clear indication from the FAA about when it intends to fulfill is promises to the community regarding airplane noise.,

I look forward to your response. Thank you very much.

John Miller

July 15, 2020

From

Faviola Garcia

To

SCSC Roundtable

Message

Requesting an Update on the FAA's BSR Overlay Development Work

Steve, we will try to give you an answer by Friday.

Thank you,

Favi

Faviola Garcia
Supervisory Senior Advisor
Federal Aviation Administration
Office of the Regional Administrator

July 16, 2020

From

Tami Mulcahy

To

SCSC Roundtable

Message

New submission from Contact us

Today I set aside time to muse on the jet noise issue in advance of the upcoming SCSC roundtable meeting. There is relative quiet in the skies. Yet, there are times when planes come right after another, a reminder of what was and should never again be!

The question is, where in all the current events is the bandwidth to get the progress ball rolling. I do not minimize the need for roundtable framework and procedure. But, progress to me is impactful action that safeguards our skies for the future.

The FAA upgraded their noise criteria and opened the door to alternative metrics. Hooray!! But, as I stated in my prior email, send in May 2020, we should define where we want the bar to be and establish our own Best Practices.

That email is pasted below as the roundtable online email does not allow a PDF attachment. It is meant as a working document, taking a bird's eye view to establish logical progression.

In short:

Our sky is a puzzle. No piece can be viewed in a vacuum.
Moving noise is different from moving planes.
Establish Best Practices for noise.
Have our consultant put fresh eyes on a regional plan!
Expedite key priorities based on Best Practices
Priorities in tandem are:
Full length of the Bay approach for southern arrivals
Return SERFR to historic path
Thank you,

Tami Mulcahy

Dear Congresspersons Anna Eshoo, Ro Khanna and Jimmy Panetta, SCSC Roundtable and County Supervisor Joe Simitian,

A silver lining in this pandemic is that Santa Clara and Santa Cruz County communities are savoring quieter skies. The time to fix the roof is when the sun is shining.

The Select Committee recommendations were a framework to alleviate noise conditions across the SCSC counties. The plan included fixing the parameters of SERFR to allow a responsible return to the BSR path. However, interdependent recommendations were deemed infeasible. With everything in our sky inter-related, how do we bridge the disconnects and expedite a regional plan?

To start, no piece of the puzzle should be looked at in a vacuum. For the past 3 ½ years, the FAA, conferring with the airline industry, has worked in piecemeal fashion behind closed doors. The public is left to wonder what criteria and whose best interest is driving decisions and, have we lost sight of the big picture.

In contrast, Heathrow turned their problems around in three years. The design principle of no concentrated corridors guided a preplanning design team model in which the public was engaged proactively. We already have the SC framework. Now we need a seat at the pre-design table to expedite the process.

• Assemble a team (ATC, airports, noise specialists, air space designers, one SCSC member from each county and/or our consultant). Put fresh eyes to the regional plan, iron out the details based on criteria, pick priorities and proceed methodically.

Solutions are constrained by the congressional mandate to not move noise. The irony is the FAA has used this mandate to not consider changes and yet, has used the unacceptable standard of 65 DNL FONSI to justify moving planes anywhere. Moving noise is a separate issue from moving planes. It is the parameters that create noise that must not be replicated over another community.

From SFO to the coast, we are non-airport communities living in a geographic Disneyland. The fallout of our popularity and economic engine is understood. However, currently the FAA designs for safety in the face of efficiency. What is the design for safety in the face of noise abatement? How far apart are the two? And what solution set would appear if the FAA had to meet stringent noise criteria?

The FAA Report to Congress on Alternative Metrics is welcome news. Still, there is work to be done and public trust is eroded. It is in the public's best interest to establish blue ribbon Best Practices as a comparative model to the FAA.

• Assemble a noise team now to proactively define best practices. Criteria should respect ambient noise levels, look at frequency, concentration, altitudes and consider balance – higher altitudes/increase numbers, lower altitude/decrease numbers.

• Absent of noise and frequency data, regional design can proceed directionally to meet the Best Practices.

Regarding SERFR change to a new BSR: To get this done, the FAA must address the negative parameters of SERFR. Best Practices must inform design.

• Capacity limits - the lower the altitude, the lower the frequency.

• Frequency: Restrict all south-east arrivals (Houston, Austin, Palm Springs, Miami, Phoenix, etc).

• Frequency: Establish and maximize a full length of the bay approach for southern arrivals, especially for night and weekend flights, allowing for high altitude descent.

Much depends on the extent to which traffic can move from SERFR/BSR to a full length of the bay approach. Roughly 50% of flights are currently vectored off SERFR/BSR. Removing these noisy vectors would benefit to the entire Peninsula region. However, even with these vectors removed, those living under the new BSR will still have concentrated high frequency traffic.

• Meet or exceed Best Practices or find a second path for remaining 50% of traffic on BSR.

The latest BSR design is slightly different from the original path. It includes a segment from EDDY over Shoup Park in Los Altos to SIDBY, just south of MENLO waypoint. The pros and cons need to be vetted and viewed as part of the big picture.

Other:

• The Woodside VOR at 8000' is not a solution if it means diverting flights south to already impacted communities. Oceanics should vector over the ocean and proceed to the airport no further south of Stanford.

• Vet how the above affects BDEGA east west flights

Let's get this done. More time means more changeover of elected leaders and more time spent getting people up to speed.

Thank you for reading and being a part of this challenging journey.

Tami Mulcahy

Los Altos

July 16, 2020

From

Rosmarie Herschbach

To

SCSC Roundtable

Message

Jet Noise Problem

Dear Evan Wasserman and Members of the Round Table:

First of all I want to thank you again, for all you do helping me and many other people with the awful jet noise.

The jet noise has been really worse. Jets from 6 airports fly day and night over my property, neighbors and surrounding area; therefore, I am not able to sleep at night and I lost my peace and quiet. I am stressed out from the noise and lack of sleep.

I surely hope that my noise problem is discussed by the Round Table next meeting on July 22, 2020.

I would like to participate in the public meetings by phone. I would like the log information for the next meeting. Also please e mail me the agenda package. Thank you so much for everything.

Sincerely,

Rosmarie Herschbach
742 San Miguel Canyon Rd.
Royal Oaks, Ca. 95076
Monterey County

July 16, 2020

From

Vicki Miller

To

SCSC Roundtable

Message

Response to June 12, 2020 letter – Quiet Skies Caucus Meeting

Attached, please find our response to the letter of June 12 to the Quiet Skies Caucus members Eshoo, Khanna and Panetta.

Regards,

Vicki Miller

Attachment Name

20200716_V_Miller_Response to June 12, 2020 letter – Quiet Skies Caucus Meeting

www.sossantacruz.org

July 16, 2020

Regarding: June 12, 2020 letter – Quiet Skies Caucus Meeting

Members of the Roundtable,

It was with regret that we read the third paragraph of the letter from the Chair of your Legislative Committee directed to the Congressional Representatives Eshoo, Khanna and Panetta stating that the Roundtable supports dispersion. Seeing this topic resurface seems to be counter-productive and a reopening of the decisions reached by the Select Committee.

We found it disturbing that there was no public discussion surrounding this issue, and no vote was taken, to inform the statement "Since flight paths were dispersed prior to the implementation of Nextgen, we support adding dispersion back into flight paths … ".

The Roundtable should be following their mandate and should be pushing much harder to expedite the Select Committee recommendations, not refocusing on the agenda of a minority of Roundtable members; without public discussion, because "there has been little movement by the FAA on the recommendations of the SC …"

Prior to backing these statements, and making this request of our legislators, the letter's authors should have first received direction from the public to support dispersion, become instructed and educated as to the meaning of dispersion and the impact it could have on the Select Committee's recommendations. Only then, the Roundtable should have decided if this was an issue that they could or should support.

Respectfully,

Vicki Miller, Co-Chair
Save Our Skies Santa Cruz County

P O Box 1071 Soquel, CA 95073 email: saveourskyssantacruz@gmail.com

July 17, 2020

From

Steve Alverson

To

Favi Garcia

Message

Requesting an Update on the FAA's BSR Overlay Development Work

Favi,

I'm just checking back on the FAA's response to this email. We need to finalize the SCSC Roundtable agenda packet shortly so we can post it. Any update on an FAA update on the BSR Overlay development work at Wednesday's Roundtable meeting? Thanks!

Regards,

Steve

Steven R. Alverson
Senior Vice President
ESA | Environmental Science Associates

July 17, 2020

From

Steve Alverson

To

Favi Garcia

Message

Requesting an Update on the FAA's BSR Overlay Development Work

Thanks Favi. I just spoke with Sky and understand that he will give a quick update during the member discussion portion of the agenda (i.e., no presentation slides).

Regards,

Steve

Steven R. Alverson
Senior Vice President
ESA | Environmental Science Associates

July 17, 2020

From

John Miller

To

SCSC Roundtable

Message

New submission from Contact us

Dear Mr. Miller,

Thank you for your July 15, 2020 inquiry regarding the Federal Aviation Administration's (FAA) effort to develop a flight path overlay for the Big Sur arrival procedure (BSR Overlay) in response to the November 2016 Select Committee on South Bay Arrivals recommendation. Specifically, you asked when the Roundtable expects to receive a briefing from the FAA on its BSR Overlay development effort.

The FAA has indicated that it will provide a brief update at the next regular SCSC Roundtable meeting on July 22, 2020, which will be conducted virtually. You may participate in the meeting using the guidance found on the "Meetings" tab on the SCSC Roundtable website.

Regards,

SCSC Roundtable Staff

July 17, 2020

From

SCSC Roundtable

To

Roger Heyder

Message

Please Implement BSR Reversion NOW

Dear Mr. Heyder,

Thank you for your July 11, 2020 inquiry regarding the Federal Aviation Administration's (FAA) effort to develop a flight path overlay for the Big Sur arrival procedure (BSR Overlay) in response to the November 2016 Select Committee on South Bay Arrivals recommendation. FAA's last briefing to the SCSC Roundtable on this topic occurred on July 2019. At that time, the FAA had indicated that it had met with National Airspace System users and San Francisco International Airport staff to discuss its initial concepts for the BSR Overlay. The Roundtable has had no update from the FAA since that time, but expects a representative of the FAA to attend the next regular SCSC Roundtable meeting on July 22, 2020, which will be conducted virtually. You may participate in the meeting using the guidance found on the "Meetings" tab on the SCSC Roundtable website.

In terms of the timing of the implementation of the BSR Overlay, the FAA has indicated in July 2019 that it is required to prepare an Environmental Assessment during which there will be a public outreach process, which is typically a multiyear effort.

We hope you have the opportunity to join next week's regular SCSC Roundtable meeting to hear the latest from the FAA on its BSR Overlay development efforts.

Regards,

SCSC Roundtable Staff

July 17, 2020

From

SCSC Roundtable

To

Rosmarie Herschbach

Message

Jet Noise Problem

Dear Ms. Herschbach,

Thank you for your July 16, 2020 inquiry regarding jet noise over your residence and your interest in participating telephonically in the upcoming SCSC Roundtable meeting on July 22, 2020, which will be conducted virtually. You may participate in the meeting telephonically using the telephone number and access code provided below. Unfortunately, we are unable to email you the agenda packet due to its size, however, you may download it using directions found by clicking on the "Meetings" tab on the SCSC Roundtable website.

Phone Number: +1 669 900 6833 or +1 253 215 8782

Access Code: 885 2078 0728

We hope you have the opportunity to join next week's regular SCSC Roundtable meeting to hear the latest from the FAA on its BSR Overlay development efforts.

Regards,

SCSC Roundtable Staff