



Federal Aviation
Administration

Interim Response to
Oakland Airport-Community
Noise Management Forum's Recommendations

Executive Summary

The Northern California airspace is very complex, with traffic arriving and departing from several major airports, smaller regional airports and military facilities as well. All arrival and departure procedures within the Northern California airspace are interconnected and interdependent, and were designed to improve safety and efficiency within the National Airspace System (NAS). Longstanding issues with, as well as changes to, instrument approach and departure procedures have generated noise concerns from some San Francisco Bay Area residents.

On March 24, 2017, the Oakland Airport-Community Noise Management Forum (OAK Noise Forum) presented the FAA with a 73-page report containing 34 recommendations and three process questions. The 34 recommendations ask the FAA to identify and adjust specific procedures and/or relocate specific waypoints. The OAK Noise Forum's submittal also asked the FAA for the estimated timeline and methodology for evaluating proposed procedures and the associated noise on underlying communities. Further, on November 21, 2017, U.S. Representative Barbara Lee (CA-13) requested that the FAA provide an interim response to the recommendations.

The FAA has been conducting a detailed analysis and a preliminary feasibility study of the OAK Noise Forum's proposed recommendations. The study is focusing on flight procedures criteria and the flyability of the proposed routes. The FAA also is assessing impacts the proposals could have on operations at surrounding airports and air traffic control procedures that serve those airports. To date, the FAA has determined that three of the forum's requested evaluations are feasible in the short term and can be completed in less than two years. Thirty recommendations are under evaluation, and the FAA determined one recommendation is not cannot be endorsed.

Even if there is no legal requirement to do so, the FAA remains willing to address community noise concerns. As a result, the FAA undertakes its community outreach efforts and considers potential adjustments to address community noise concerns while remaining mindful that all arrival and departure procedures within the Northern California airspace are interconnected, interdependent and designed to improve safety and efficiency within the NAS. To the extent the FAA determines a new requested procedure is initially feasible, flyable, and operationally acceptable from a safety point of view, the proposal constitutes a new federal action and the FAA will conduct its formal environmental and safety reviews, as well as its enhanced community outreach, as appropriate.

This Interim Report does not represent the end of our work. The FAA is committed to continue working collaboratively with communities and members of Congress to address a wide range of noise concerns. However, the FAA's willingness to work collaboratively, including participating in meetings, does not reopen the FAA's August 7, 2014 Environmental Assessment or its August 7, 2014 Final Decision for the Northern California Optimization of Airspace and Procedures in

the Metroplex (NorCal OAPM). The FAA's August 7, 2014 Record of Decision constituted a final order of the Administrator subject to review by the Courts of Appeals of the United States in accordance with the provisions of *49 U.S.C. section 46110*.

In November 2014, the FAA began its phased implementation of the NorCal OAPM—optimized standard arrival and departure instrument procedures serving air traffic flows into and out of the four study airports, San Francisco International Airport (SFO), Oakland International Airport (OAK), Mineta San Jose International Airport (SJC) and Sacramento International Airport (SMF). The NorCal OAPM did not require any ground disturbance or increase in the number of aircraft operations within the Northern California Metroplex area. In total, the General Study Area included 11 entire counties and portions of 12 additional counties. There are 84 procedures included in the NorCal OAPM, including 32 new Area Navigation (RNAV) procedures (18 new RNAV Standard Instrument Departures (SIDs) and 14 new RNAV Standard Terminal Arrivals (STARs). In addition, 28 conventional SIDs, 22 conventional STARs, and two RNAV STARs are carried forward as part of the NorCal OAPM. The FAA began its phased implementation of its 32 new RNAV procedures in November 2014 and concluded April 30, 2015.

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INTRODUCTION

The Port of Oakland, owner and operator of the Oakland International Airport (OAK), has shared the “*Oakland Airport - Community Noise Management Forum (OAK Noise Forum) March 24, 2017 Recommendations*” with the Federal Aviation Administration (FAA). The OAK Noise Forum’s recommendations identify specific procedures: one arrival from the Northeast, one nighttime departure procedure and one departure from San Francisco International Airport (SFO). The OAK Noise Forum’s recommendations also seek the FAA’s help to use new area navigation (RNAV) procedures to move flights away from populated areas.

The OAK Noise Forum identifies its March 2017 recommendations as, “Supplemental Proposals to Revising the Northern California Metroplex for Alameda County/Contra Costa County” (pg.5-45) and includes the following six attachments:

- Attachment A is the “Alameda County/Contra Costa County Proposals Summary Table” (pg. 46-51);
- Attachment B is the July 26, 2016 Oakland City Council air craft noise resolution (pg. 52-55);
- Attachment C is the September 27, 2016 Berkeley City Council aircraft noise resolution (pg. 56-59);
- Attachment D is the March 8, 2017 Alameda City Council aircraft noise resolution (pg. 60 -63);
- Attachment E is Alameda County Supervisor, Nate Miley’s February 28, 2017 letter to FAA (pg. 64-66);
- Attachment F is the City of Oakland’s February 27, 2017 letter to FAA (pg. 67-69);
- Attachment G is the March 6, 2017 San Leandro City Council aircraft noise resolution (pg. 70-72)

The FAA is currently conducting a detailed analysis and a preliminary feasibility study focusing on flight procedure criteria and overall flyability of the OAK Noise Forum’s proposed, new Performance Based Navigation (PBN) procedures, potential procedural modifications including speed/altitude adjustments, airspace changes and possibility of moving existing waypoints. An assessment of impacts to operations at the surrounding airports and associated procedures will be completed. In addition, coordination with the local stakeholders will be conducted.

Our next step will be to consider any amendments and/or new procedures that are determined to be initially feasible, flyable, and operationally acceptable from a safety point of view. As part of this effort, the FAA will conduct the formal environmental and safety reviews, coordinate and seek feedback from existing and/or new community roundtables, members of affected industry, and the National Air Traffic Controllers Association (NATCA) before moving forward with the formal amendment process. Thereafter, the FAA will implement procedures; conduct any required airspace changes and additional negotiated actions, as needed.

National Environmental Policy Act

In addition to its mandate to ensure the safe and efficient use of the NAS, the FAA complies with the requirements of the National Environmental Policy Act (NEPA). Although not specifically detailed within this Interim Response, the FAA's processes and standards for evaluating noise impacts associated with potential proposed amendments to currently published procedures will be followed—consistent with FAA Order 1050.1F (effective July 16, 2015)—before implementing any airspace or procedure changes. Further, even though there may be no legal requirement to do so, the FAA will undertake its enhanced community outreach efforts, as appropriate.

Despite the OAK Noise Forum's characterization of its recommendations as "Supplemental Proposals to Revising the Northern California (NorCal) Metroplex for Alameda/County/Contra Costa County," its March 2017 recommendations, including Attachments A through G, do not reopen the FAA's August 7, 2014 final decision for the NorCal OAPM. This document does not constitute either a final decision of the FAA or a reopening of the FAA's August 7, 2014 final decision for the NorCal OAPM.

Timelines

This interim response provides guidelines for the recommendations presented in the OAK Noise Forum's March 2017 report. These timelines incorporate a number of established Federal processes and sub-processes. To best understand why the FAA determined the presented timelines, some background to these processes is necessary. This section provides that background.

Non-Rule Making:

Non-rule making processes do not result in the amendment to any Code of Federal Regulations (CFR) or amend any other document which is included by reference in a CFR.

- a. **Air Traffic Facility Actions:** These actions provide specific directions for the local air traffic control facility. These actions *could be* a change to a facility's Standard Operating Procedures (SOP), to Letter of Agreements (LOA) between facilities are part of regular Air Traffic Controllers training to increase awareness of certain issues.

The steps are as follows:

- Initial proposal: The Air Traffic Facility proposes an amendment to their SOP, to an LOA with another Air Traffic Facility or training requirements. This initial proposal is vetted within the Air Traffic Facility.
Timelines: few weeks for training proposal.

1 – 8 months for an SOP change.

1 – 18 months for an LOA change.

- The LOA is sent for review and approval.
Timelines: few weeks.

Total time: a few weeks – more than 1 year.

- b. Creation/Amendment of an instrument flight rules procedure: Amending or creating a new instrument flight rule procedure is an example of a non-rule making process.

Given the variables involved with each of the following steps, the timelines provided are only intended on capturing the average time taken for each step. Although not specifically referenced within the following section and even if there is no legal requirement to do so, the FAA remains willing to address community noise concerns. As a result, the FAA undertakes its community outreach efforts and considers potential adjustments to address community noise concerns while remaining mindful that all arrival and departure procedures within the Northern California airspace are interconnected, interdependent and designed to improve safety and efficiency within the National Airspace System (NAS). To the extent the FAA determines a new requested procedure is initially feasible, flyable, and operationally acceptable from a safety point of view, then the FAA will conduct its formal environmental and safety reviews for this new federal action.

The steps in the instrument flight rules procedure processes are as follows:

- Initial Feasibility/Analysis of the procedure. The proponent of the procedure does initial research into the details and justifications for the new/amended procedure. This stage is completed once the proponent places the request and the associated justification into the IFP Information Gateway.

Timeline: 45 days.

- FAA Order 7100.41A: Performance Based Navigation (PBN) processing: This is the required process for all new and amended PBN procedures and/or routes, Area Navigation (RNAV)/Required Navigation Performance (RNP) Standard Instrument Departures (SIDs), RNAV Standard Terminal Arrivals (STARS) and RNAV routes. The FAA Order 7100.41A breaks down the design and implementation process into 5 stages:

- Preliminary Activities: This includes a baseline analysis to identify expected benefits and develop conceptual procedures and/or routes for the proposed project.
- Design Activities: This includes the creation of a working group in order to design a procedure/route that meets the project goals and objectives. An environmental review is included in this stage.
- Development and Operational Preparation: The intent of this stage is to complete all pre-operational items necessary to implement the procedures

- and/or routes. This phase includes training, issuing notifications, automation, updating radar video maps, and processing documents. This phase ends when procedures and/or routes are submitted for publication.
- Implementation: The purpose of the implementation phase is to implement the procedures and/or routes as designed. This phase starts with confirmation by the Full Working Group (“FWG”) that all required pre-implementation activities have been completed and ends when the procedures and/or routes are published and implemented.
 - Post-Implementation Monitoring and Evaluation: The purpose of the post-implementation monitoring and evaluation phase is to ensure that the new or amended procedures and/or routes perform as expected and meet the mission statement finalized during the design activities phase. Post implementation activities include collecting and analyzing data to ensure that safe and beneficial procedures and/or routes have been developed.

Timeline: > 1 year.

- Regional Airspace and Procedure Team (RAPT) review: If approved, the RAPT assigns a priority for the project and a proposed chart date. Due to existing charting requirements, as well as the demand for NextGen procedures, there are currently projected charting dates scheduled through 2024.
Timeline: 30 days.
- Development of proposed chart: This is the actual preparation of the chart/s.
Timeline: 45 days.
- Quality Control Review:
Timeline: Variable.
- Project is coded for Flight Management Systems:
Timeline: 10 days.
- Flight Inspection:
Timeline: 50 days.
- Flight Standards Review: this is only required for some procedural development projects.
Timeline: 21 days.
- Proposed Procedure/s are sent for publication and distribution:
Timeline: 38 to 60 days.

Total time: >1.5 years.

Organization of the Response Tables

The following discussions and analysis summaries of the recommendations are organized by the associated procedure identified by the OAK Noise Forum.

The response tables provide the current status and associated timeline for implementation, if applicable, to all of the recommendations presented in the OAK Noise Forum report, as well as references to where the recommendations may be found. Additionally, the recommendations are categorized in one of three ways:

- i. Under Evaluation
- ii. Feasible and Could Be Undertaken in the Short Term (Less than 2 years)
- iii. Not Endorsed by the FAA

The response tables use the word, “Reference,” to identify the location of the request within the OAK Noise Forum’s March 2017 recommendations.

RESPONSE TABLES

1. HUSSH

Recommendation	1. "The short-term solution would be for Air Traffic Control to assign headings to aircraft departing OAK runway 30 that restore the initial SILENT ground track."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 13

Recommendation	2. "Additionally, the FAA should ensure aircraft remain on their filed route and not turn prior to REBAS intersection and secure a decreased level of night-time noise by issuing an FAA memorandum of understanding with ATC to keep aircraft on the route as published to the REBAS intersection unless safety dictates otherwise."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 13

Recommendation	3. "...evaluate the HUSSH procedure and adjust it to replicate the SILENT SID ground track and require aircraft to fly to REBAS unless safety dictates otherwise and adjust the REBAS intersection offshore to keep aircraft over the water instead of turns over land."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page13

Recommendation	4. "...moving HUSSH waypoint southward as much as feasible to facilitate a sharper left turn by aircraft after departing OAK runway 30"
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page13

Recommendation	5. "...regulate and eliminate turns off of HUSSH prior to REBAS intersection and secure a decreased level of night time noise by creating a memorandum of understanding with ATC to keep aircraft on the route as published to the REBAS intersection for published noise abatement procedures unless safety dictates otherwise."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 13,14

Recommendation	6. "...moving the location of REBAS over the Bay to mitigate noise from concentrated traffic turning eastward over communities in the Point Richmond area."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 14

Recommendation	7. "...adjusting night time hours for noise abatement operations from the current 2200-0700 local time Monday through Saturday, 2200-0800 local time on Sunday to new night time hours of noise abatement procedures of 2100-0800 local time daily, seven days a week for relief as flight curfews are not an option"
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 14

Recommendation	8. "...as OAK departures over Berkeley and Oakland are lower in altitude and markedly louder than SFO departure, implement the adjusted HUSSH procedure all the way to REBAS and then onto the next fix for all northerly OAK departures from Runway 30 so that the HUSSH DP is in effect 24 hours a day for these flights instead of only at night to decrease the noise burden on Oakland, Emeryville, Berkeley, Albany, and Kensington."
Process / Status	Due to safety and efficiency of the National Airspace System (NAS), this cannot be endorsed by the FAA
OAK Noise Forum Reference	Page 14

Recommendation	9. "... the FAA provide modeling or other tools to determine the effects of different REBAS waypoint location options to best mitigate aircraft noise for the Pt. Richmond area and Marin County on the other side of the Bay."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 14

2. WNDSR

Recommendation	1. "...the current WNDSR TWO flight track be eliminated and the FAA consider options to replace this RNAV to another location that allows for geographically shorter flight paths and quiet, fuel efficient optimized descents into OAK."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 17

Recommendation	2. North: "...the FAA consider establishing the preferred alternative of OAK to the east. This alternative proposes the FAA consider an RNAV somewhere within a corridor... generally encompassing the Mendocino VOR to the Santa Rosa VOR to RAGGS fix then airway V494 towards EMBER and the towards SHARR fix and joining the MADWIN SIX arrival for flights arriving from the north. "
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 17

Recommendation	3. East: "Flight originating from the east could use a corridor towards the SAHRR or BANND/TOOOL waypoints for joining the OAKES TWO arrival... Crossover from the PYE navaid routing to the east towards SHARR or BANND/TOOOL waypoints can be accomplished further north in Oakland Center's airspace at their discretion."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 17

Recommendation	4. "... the FAA undertake airspace and noise analyses to identify appropriate adjustments to avoid population and better achieve flight track efficiency and quiet descent procedures into OAK."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 20

Recommendation	5. “This second alternative proposes the FAA consider an OAK arrival RNAV somewhere within a corridor generally encompassing routing towards the Mendocino VOR then towards Santa Rosa VOR then towards the Concord COR crossing the area new the Concord VOR at 10,000 feet and then routing down the California Interstate 680 highway corridor to the Oakland Runway 30 final approach.”
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 20

Recommendation	6. “... the FAA undertake airspace and noise analyses to identify appropriate adjustments to avoid population and better achieve flight track efficiency and quiet descent procedures into OAK.”
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 22

3. OAKLAND 9

Recommendation	1. “...in the short term, the FAA assign headings to aircraft after takeoff that direct aircraft turn left to a heading of 280° until reaching the OAK 4 DME arc, then proceed on the published departure.”
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 24

Recommendation	2. “...aircraft departing on the OAKLAND NINE not be turned eastbound until leaving 5000 feet (as opposed to 3000 feet in the current ATC directed noise mitigation procedures).”
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 24

Recommendation	3. "...the FAA evaluate the OAKLAND NINE (daytime departures) and adjust it so that the ground track is further away from BFI/Alameda."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 24

Recommendation	4. "...the FAA consider creating an RNAV departure that replicates the newly proposed OAKLAND NINE above".
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 24

Recommendation	5. "...the FAA undertake airspace and noise analyses to identify appropriate adjustments and demonstrate that any proposed changes will result in noise reduction and not adversely impact other areas."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 24

4. CNDEL

Recommendation	1. "Consider adjusting CNDEL THREE departure so that the ground track for this departure is further away from BFI/Alameda. This could be accomplished by directing aircraft departing OAK runway 30 to turn left to a heading of 280° until reaching the OAK 4 DME arc."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 26

Recommendation	2. "...the FAA undertake airspace and noise analyses to identify appropriate adjustments and demonstrate that any proposed changes will result in noise reduction and not adversely impact other areas."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 26

5. NIITE

Recommendation	1. "... the FAA restore the requirements of the night time noise abatement flight procedure as charted under SFO QUIET to SFO NIITE. Restore the heavy charted lines from NIITE to REBAS to indicate this is the charted route to fly unless safety dictates otherwise and adjust the REBAS intersection offshore to keep aircraft over water instead of turning over land."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 30

Recommendation	2. "...the FAA consider regulating and eliminating early turns off of the NIITE prior to REBAS intersection and secure a decreased level of night time noise by creating a memorandum of understanding with ATC to keep aircraft on the route as published to the REBAS intersection for published noise abatement procedures unless safety dictates otherwise."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 30

Recommendation	3. "...the FAA consider moving the location of REBAS to over the bay to mitigate noise from concentrated aircraft turning eastward over communities in the Point Richmond area."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 30

Recommendation	4. "...the FAA consider adjusting night time hours for noise abatement operations from the current 2200 – 0700 local time Monday through Saturday, 2200 – 0800 local time on Sunday morning to new night time hours of noise abatement procedures of 2100 – 0800 local time daily, seven days a week for relief as flight curfews are not an option."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 30

Recommendation	5. "... the FAA provide modeling or other tools to determine the effects of different REBAS waypoint location options to best mitigate aircraft noise for the Pt. Richmond area and Marin County on the other side of the Bay."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 30

6. TRUKN

Recommendation	1. “... the FAA consider TRUKN proposals in two sections as detailed above – TRUKN North and TRUKN East. The Forum also requests the FAA consider the WNDSR proposals above as part of overall noise mitigation for TRUKN. As detailed above, moving WNDSR has additional significant advantage in that it frees airspace so that SFO departures can eventually use quieter and more fuel efficient continuous climb procedures.”
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 35

Recommendation	2. North – “...the FAA restore the historical traffic concentrations to the topographically lower areas where it existed prior to NextGen and that the communities grew and developed under. To accomplish this, the Forum request that the FAA move the current GRTFL and DEDHD tracks westward of Highway 13 and eastern Oakland to reestablish and better restore historical patterns of SFO departing traffic in this area.”
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 35

Recommendation	3. East – “...the FAA restore historical traffic concentration to where it existed prior to NextGen and under which communities grew and developed. To accomplish this, the Forum requests the FAA consider adding a track to the area of existing COSMC and HYPEE tracks and adjust to better echo legacy concentrations.”
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 37

Recommendation	4. "... the FAA investigate for both TRUKN North and TRUKN East: Airspace and noise analyses to identify appropriate adjustments to restore historical traffic patterns and conditions."
Process / Status	Feasible and Could Be Undertaken in the Short Term (Less than 2 years)
OAK Noise Forum Reference	Page 38

Recommendation	5. "... the FAA investigate for both TRUKN North and TRUKN East: Analyze if a procedural decrease in altitude over TRUKN exists and whether higher altitudes can be restored."
Process / Status	Feasible and Could Be Undertaken in the Short Term (Less than 2 years)
OAK Noise Forum Reference	Page 38

Recommendation	6. "... the FAA investigate for both TRUKN North and TRUKN East: Model how proposed changes will result in noise reduction."
Process / Status	Feasible and Could Be Undertaken in the Short Term (Less than 2 years)
OAK Noise Forum Reference	Page 38

Recommendation	7. "... the FAA investigate for both TRUKN North and TRUKN East: If FAA automatic navigation procedures become able to assign RNAV tracks automatically to simulate historic dispersed traffic concentrations and legacy noise conditions experienced on the ground along multiple RNAV's, use the TRUKN procures to test this capability."
Process / Status	Under Evaluation
OAK Noise Forum Reference	Page 38

7. “CONCLUSION”

(OAK Noise Forum’s March 2017 Recommendations used the “Conclusion” heading for the following items.)

Recommendation	1. “Specific direction from the FAA for how the process is anticipated to move forward”
Process / Status	This is an FAA Process Question and is answered in the Introduction (Pages 4-7)
OAK Noise Forum Reference	Page 39

Recommendation	2. “An estimated timeline for the process.”
Process / Status	This is an FAA Process Question and is answered in the Introduction (Pages 4-7)
OAK Noise Forum Reference	Page 39

Recommendation	3. “Information on the means the FAA will employ to evaluate approved flight tracks and procedures for noise impacts on the communities over which they will fly.”
Process / Status	This is an FAA Process Question and is answered in the Introduction (Pages 4-7)
OAK Noise Forum Reference	Page 39