



Study Session on Status of National and Regional Airplane Noise Initiatives

August 1, 2022

AGENDA

- Update on National Developments on Airport Noise Issues: Peter Kirsch of Kaplan Kirsch Rockwell
- Overview of Ground-Based Augmentation System (GBAS) Technology: James Allerdice, Jr. of Vianair
- Palo Alto Engagement With SFO GBAS Project

UPDATE ON NATIONAL DEVELOPMENTS – AIRPORT NOISE ISSUES

Peter J. Kirsch
August 1, 2022



CITY OF
**PALO
ALTO**



Update on noise policy developments

- FAA's Neighborhood Environmental Survey (2021)
- Congressional activity
- NextGen and flight paths

FAA Neighborhood Environmental Survey (NES)

Motivation:

- Outdated and not-quite-applicable data
- Research outside of the US indicating higher levels of annoyance than FICON curve

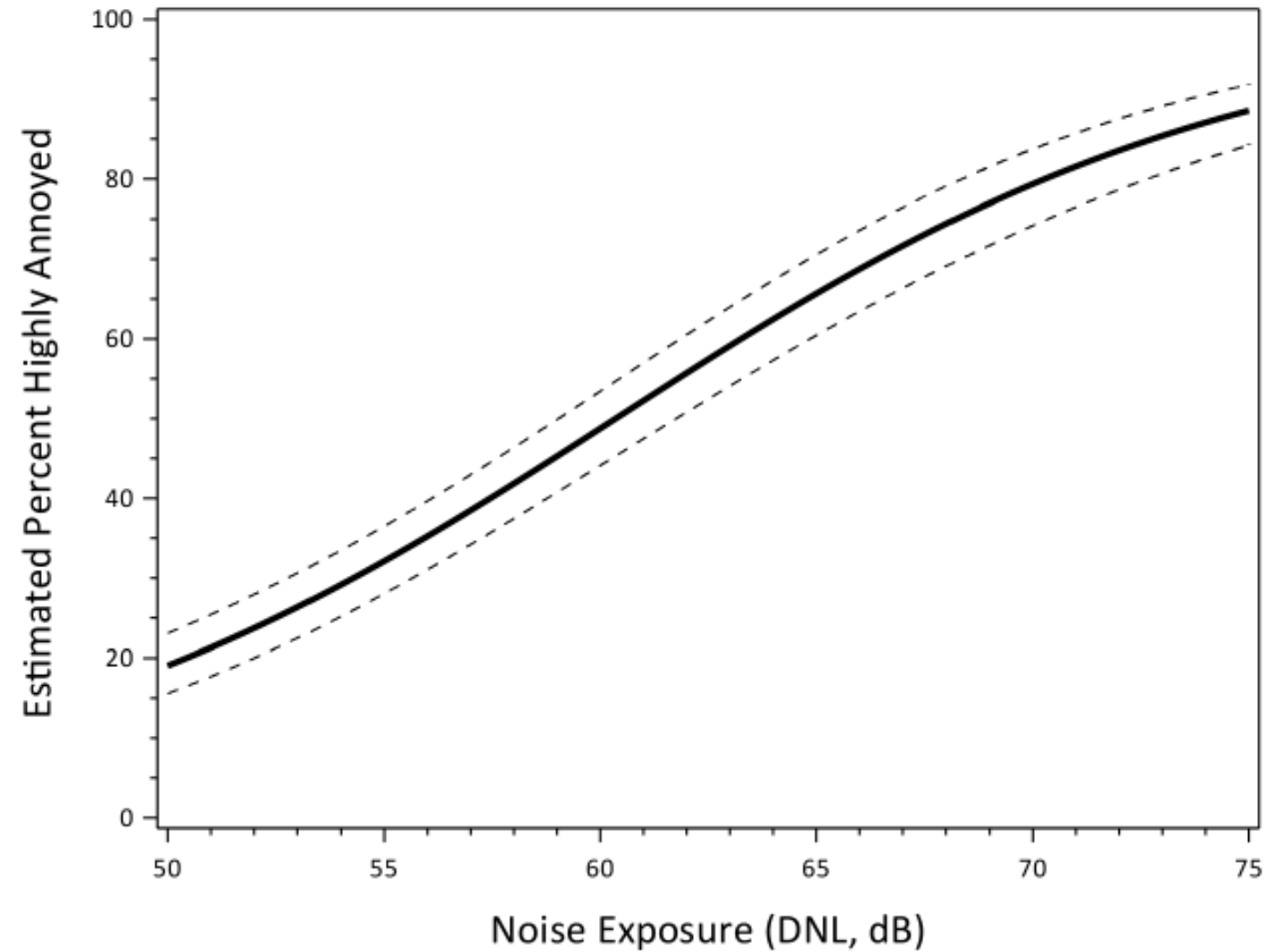
Goal:

- Produce an updated and nationally representative dose-response curve for noise from civil aircraft operations (primarily fixed-wing), relating annoyance to aircraft noise exposure (re DNL)

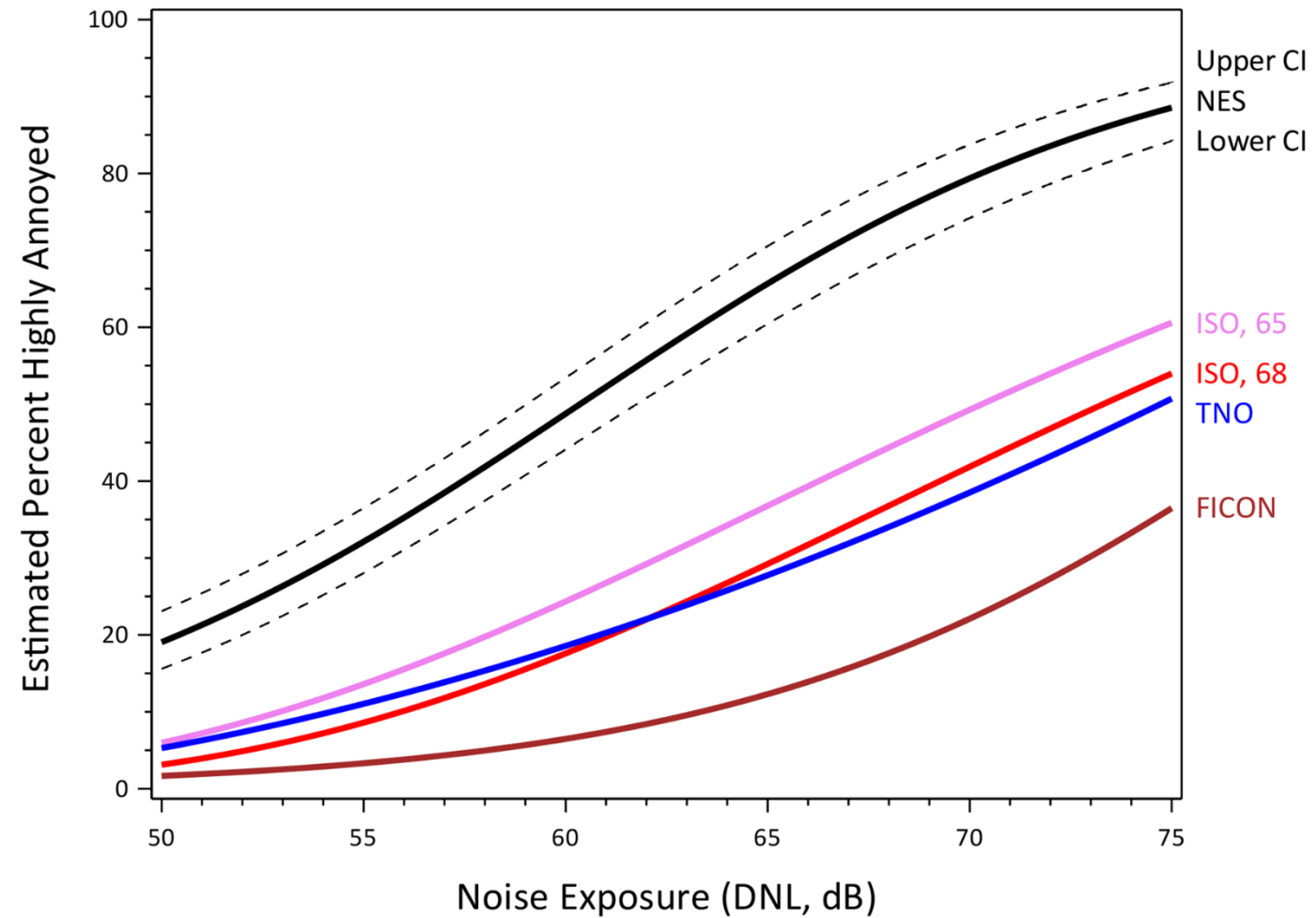




FAA NES: Primary Results



FAA NES: Comparisons to historical data



Implications of the NES

- Part 150/noise mitigation
 - Residential soundproofing
 - Land use planning
 - AIP funding
 - Avigation easements
- NEPA
 - Scope of impact area
 - Method of analysis: DNL v. ??
- Part 161 restrictions
 - Scope of noise problems
- Legal liability
- Managing community expectations



NES: What's next

- FAA received thousands of comments
- Plan to engage across FAA lines of business through Federal Mediation and Conciliation Service (FMCS)
- No timeline or defined regulatory path
- Further studies underway:
 - National Sleep Study (Penn State)
 - Health Effects Study (BU, Harvard, and MIT)





Legislative efforts



Congressional oversight and statutory efforts



Quiet Skies Caucus



STEPHEN LYNCH (MA-8) D



KATHERINE CLARK (MA-5) D



AYANNA PRESSLEY (MA-7) D



SETH MOULTON (MA-6) D



RAJA KRISHNAMOORTHI (IL-8) D



MIKE QUIGLEY (IL-5) D



JANICE SCHAKOWSKY (IL-9) D



SEAN CASTEN (IL-6) D



JAMIE RASKIN (MD-8) D



A. DUTCH RUPPERSBERGER (MD-2) D



GRACE MENG (NY-6) D



TOM SUOZZI (NY-3) D



YVETTE CLARK (NY-9) D



JERROLD NADLER (NY-10) D



KATHLEEN RICE (NY-4) D



GREGORY MEEKS (NY-5) D



HAKEEM JEFFRIES (NY-8) D



ALEXANDRIA OCASIO-CORTEZ (NY-14) D



MONDAIRE JONES (NY-17) D



CAROLYN B. MALONEY (NY-12) D



ADAM SMITH (WA-9) D



PRAMILA JAYAPAL (WA-7) D



RUBEN GALLEGO (AZ-7) D



RAUL GRIJALVA (AZ-3) D



DARREN SOTO (FL-9) D



FREDERICA WILSON (FL-24) D



ADAM SCHIFF (CA-28) D



SCOTT PETERS (CA-52) D



ANNA ESHOO (CA-18) D



GRACE NAPOLITANO (CA-32) D



JACKIE SPEIER (CA-14) D



TED LIEU (CA-33) D



SARA JACOBS (CA-53) D



JIMMY PANETTA (CA-20) D



KAREN BASS (CA-37) D



MICHELLE STEEL (CA-48) R



MAXINE WATERS (CA-43) D



BRAD SHERMAN (CA-30) D



RO KHANNA (CA-17) D



ALAN LOWENTHAL (CA-47) D



RAUL RUIZ (CA-36) D



BARBARA LEE (CA-13) D



JUDY CHU (CA-27) D



EDWARD CASE (HI-1) D



JAMES HIMES (CT-4) D



HANK JOHNSON, JR (GA-4) D



DAVID SCOTT (GA-13) D



DONALD BEYER (VA-8) D



BRIAN FITZPATRICK (PA-1) R



JOE NEGUSE (CO-2) D



JASON CROW (CO-6) D



ILHAN OMAR (MN-5) D



ELEANOR HOLMES NORTON (DC) D

Congress and noise

- District-specific legislation (annual appropriations)
- Unsuccessful Bass, Speier efforts through infrastructure legislation
- Oversight hearings – May 2022
- FAA Reauthorization (2023)
 - Noise metrics and thresholds
 - NextGen implementation
 - Drones and AAM



Other hot Congressional topics

- Metroplex and NextGen (appropriateness of DNL metric generally)
- Thresholds
- Local flexibility on restrictions (revise ANCA, 161)
- Studies, studies, studies
 - Another FICUN (1979); FICON (1991); FICAN (1993)
 - Independent review?
 - Blue ribbon commission?



NextGen and flight paths

- Metroplex implementation completed 11 of 21 areas
- Doing 'tweaks' in those areas
- No new metroplex rollout during pandemic (S. Florida the last)
- Little remaining litigation



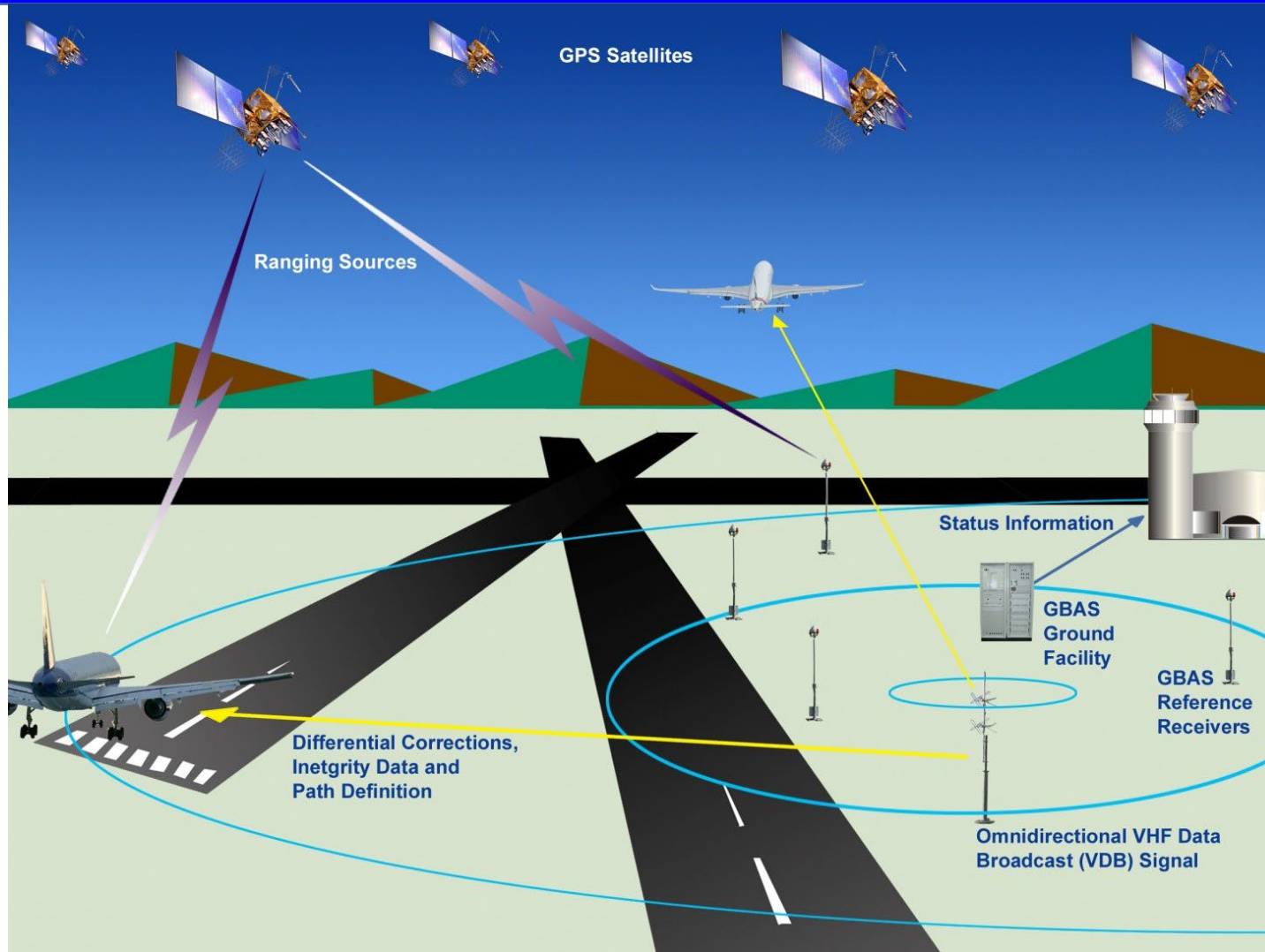


next generation software for the airport of the future

About GBAS (Ground Based Augmentation System)

- GBAS is the equipment, provided by Honeywell in the USA, that provides Local Area Augmentation System (LAAS) service to aircraft in the vicinity of airports
- GBAS is only a slight improvement over RNAV/GPS/RNP approaches and Departures using Wide Area Augmentation System (WAAS) but has the potential to be certified down to CAT II or possibly CAT III approach minimums.
- GBAS is attractive because one system can serve multiple runways as opposed to requiring a separate ILS system for each runway end.
- The “narrow” flight path of aircraft following a GBAS Route is mostly imperceptible to the human eye. RNAV or RNP routes also result in narrow concentrated flight paths over the ground. GBAS routes would not be appreciably narrower from the observer's point of view.

LAAS/GBAS System Concept



Courtesy FAA LAAS Briefing – June 2009

GBAS Departure Concept - IAH



CITY OF PALO ALTO ENGAGEMENT WITH SFO GBAS PROJECT

- SFO stated goals are to reduce noise and emission by enabling:
 - curved or offset approaches that keep aircraft further offshore, and
 - increased glideslope angles that permit aircraft to fly higher over communities before landing.
- Hosted three community meetings with SFO staff: June 2021, August 2021, April 2022
- GBAS status
 - GBAS overlays in place in March 2022
 - GBAS Group 1 Innovative Approaches submitted to FAA in April 2022
 - GBAS Group 2 Innovative Approaches beginning development

CITY OF PALO ALTO ENGAGEMENT WITH SFO GBAS PROJECT

- Palo Alto concerns
 - Lack of representation in SFO Roundtable, and submittal of Group 1 Innovative Approaches prior to receiving Palo Alto input
 - Appropriate noise monitoring of GBAS approaches
 - Engagement in GBAS process to ensure opportunities for noise reduction
- Letter to SFO on May 31, 2022
- SFO response received on June 17, 2022



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FINAL SLIDE

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