



February 5, 2018

TO: Roundtable Members and Interested Parties

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SUBJECT: Summary of the second Technical Working Group (TWG) Meeting on Monday, January 29, 2018

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The 1<sup>st</sup> Technical Working Group (TWG) meeting was held August 15, 2017 and focused on reviewing the Federal Aviation Administration's (FAA) Phase 2 Initiative Document<sup>1</sup> and compared the Roundtable's recommendations to the FAA responses that were dated November 2016.

The purpose of the second TWG meeting was to begin reviewing and analyzing the FAA's Update on Phase 2 Initiative Document<sup>2</sup> to: 1) determine how the Roundtable should go about monitoring those measures the FAA will implement and 2) determine if there are any opportunities to work with the FAA on items they found not feasible.

The FAA Update on Phase 2 Initiative Document was released in November 2017 and is an update to the interim Phase 2 Initiative Document released in July 2017. The update provides details on 203 items, which consists of the original 104 recommendations and their associated sub-recommendations.

Below is the agenda for the second TWG meeting. It is expected that future TWG meetings will follow a similar agenda until the TWG has completed their review and analysis of all FAA responses, which will be conducted in a series of TWG meetings in the coming months.

1. Introductions
2. Brief Overview of the Framework for the Review/Analysis Process
3. Review/Analyze Topic 1 – Nighttime Operations
4. Review Recommended Future Technical Working Group Meeting Topics
5. Summarize Action Items
6. Discuss and Set Next Technical Working Group Meeting Date(s)
7. Public Comments on Items NOT on the Agenda
8. Adjourn

The following section provides a summary of the TWG discussions for the first topic area, "Nighttime Aircraft Operations".

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<sup>1</sup> FAA Initiative to Address Noise Concerns of Santa Cruz/Santa Clara/San Mateo/San Francisco Counties, Phase Two, Compiled at the Requests of Representatives Farr (Panetta), Eshoo and Speier, July 2017

<sup>2</sup> FAA Initiative to Address Noise Concerns of Santa Cruz/Santa Clara/San Mateo/San Francisco Counties, Update on Phase Two, Compiled at the Requests of Representatives Farr (Panetta), Eshoo and Speier, November 2017

## Nighttime Aircraft Operations

Nighttime aircraft operations are generally most concerning to communities near airports and these operations contribute to the aircraft noise exposure due to the 10 decibel penalty added to the noise levels from 10 pm to 7 am in calculating the Community Noise Equivalent Level (CNEL) used for land use compatibility assessments in California. This section provides brief descriptions of the recommended nighttime measures, the FAA responses provided to date and the recommendations resulting from the TWG review grouped into the three areas: recommendations the FAA has or will address, recommendations requiring further analysis/information for the FAA to address and recommendations the FAA determined they would not address.

### Recommendations the FAA Has or Will Address

The following recommended measures include those that the FAA either has or will address through changes to their ongoing implementation of the Northern California Metroplex:

#### 1. North Arrivals Assigned to Historical BDEGA East Downwind

**FAA's Update on Phase 2 Initiative Document Reference:** Page 24 – Item 7, Page 45 – Item 45, Page 46 – Item 50, Page 47 – Item 52

**Summary of Recommendations:** Maximize use of procedures that route aircraft over the Bay when arriving from the north, such as the BDEGA East Downwind, to avoid over flying noise sensitive communities during nighttime hours.

**Summary of FAA Responses:** The FAA will utilize the BDEGA East Downwind procedure to the extent operationally feasible. It was noted that the FAA stated that this recommendation conflicts with the recommendation that Runway 01 nighttime departures be issued the 050° heading and the recommendation that southerly arrivals be routed to an east of the Bay approach.

**Summary of TWG Discussion:** The use of this procedure can be monitored within the San Francisco International Airport's (SFO) Noise and Operations Monitoring System (NOMS). Begin monitoring the percentage use of the BDEGA East Downwind for all aircraft arrivals from the north during the nighttime hours of 10 p.m. to 7 a.m. The number of arrivals and departures during each nighttime hour can also be monitored to determine the hours in which the FAA should be able to route all arrivals from the north over the Bay. After a few months of monitoring is completed, the TWG can establish goals for the FAA to achieve.

#### 2. Single Stream of Traffic to Runway 28R

**FAA's Update on Phase 2 Initiative Document Reference:** Page 26 – Item 14, Page 37 – Item 15, Page 45 – Item 44

**Summary of Recommendations:** Air Traffic Control (ATC) should make every effort, wind/weather permitting) to coordinate arrivals to create a single stream of traffic to land only on Runway 28R at nighttime.

**Summary of FAA Responses:** The FAA will utilize to the extent of operationally feasible. Runway 28R is listed within NCT's Standard Operating Procedure (SOP) as the preferred arrival runway.

**Summary of TWG Discussion:** Runway use is already being monitored and reported by SFO's Aircraft Noise Abatement Office (ANAO). The TWG can utilize these reports and additional information from the NOMS to monitor nighttime arrivals to both 28R and 28L. After a few months of monitoring is completed, the TWG can establish goals for the FAA to achieve.

#### 3. NIITE/HUSSH South Transition (GOBBS) Over Bay

**FAA's Update on Phase 2 Initiative Document Reference:** Page 63 – Item 32

**Summary of Recommendations:** Maximize use of the NIITE procedure with a goal of 100% utilization from midnight to 6 a.m. and infrequent as possible during the other nighttime hours of 10 p.m. to midnight and 6 a.m. to 7 a.m.

**Summary of FAA Responses:** The FAA stated that the requirement to remain on NIITE/HUSSH procedures as much as operationally feasible was added to NCT's SOP in February 2017.

**Summary of TWG Discussion:** The use and whether aircraft stay on this procedure at nighttime can be monitored by creating one or more gates and flight density maps within SFO's NOMS. After a few months of monitoring is completed, the TWG can establish goals for the FAA to achieve.

#### 4. 050 Degree Heading from Runway 01

**FAA's Update on Phase 2 Initiative Document Reference:** Page 28 – Item 24, Page 39 – Item 22, Page 40 – Items 26 and 28, Page 44 – Item 42, Page 65 – Item 44

**Summary of Recommendations:** Utilize the 050° heading from Runway 01 without increasing the number of departures utilizing Runway 01.

**Summary of FAA Responses:** The FAA will utilize to the extent of operationally feasible. The use is listed within NCT's Standard Operating Procedure (SOP). It was noted that the FAA stated that this recommendation conflicts with the BDEGA East Downwind procedure recommendation.

**Summary of TWG Discussion:** A percentage and/or priority may need to be established between this procedure and the BDEGA East Downwind procedure. The use of this procedure can be monitored by creating one or more gates within SFO's NOMS. After a few months of monitoring is completed, the TWG can establish goals for the FAA to achieve.

#### 5. Preferential Runways for Night Departures

**FAA's Update on Phase 2 Initiative Document Reference:** Page 29 – Item 26, Page 41 – Item 30, Page 66 – Item 45, Page 67 – Items 50-52

**Summary of Recommendations:** Utilize SFO's long-standing preferential runways for departures during the nighttime: Runway 10 then Runway 28 and then Runway 01.

**Summary of FAA Responses:** The FAA stated that while Runway 10 remains the preferred departure runway, the FAA stated that opposite direction operations makes the use highly restrictive. Runway 28 remains the second preferred and Runway 01 the third preferred departure runway.

**Summary of TWG Discussion:** This is currently being monitored by SFO and contained as an element within their Fly Quiet program. The TWG can utilize these reports and additional information from the NOMS to monitor the runways utilized for nighttime departures.

#### 6. Use Bay for 100% Arrivals from North and West

**FAA's Update on Phase 2 Initiative Document Reference:** Page 34 – Item 3, Page 62 – Item 29

**Summary of Recommendations:** Maximize use of procedures that utilize the Bay for 100% of the arrivals from the north and west.

**Summary of FAA Responses:** The FAA will utilize the BDEGA East Downwind procedure to the extent operationally feasible. It was noted that the FAA stated that this recommendation conflicts with the recommendation that Runway 01 nighttime departures be issued the 050° heading and the recommendation that southerly arrivals be routed to an east of the Bay approach.

**Summary of TWG Discussion:** This can be lumped together with "North Arrivals Assigned to Historical BDEGA (East Downwind)". There was a suggestion to have supplemental noise monitoring done as part of tracking flights utilizing the BDEGA East Downwind procedure from the north and west. SFO may have permanent noise monitors terminals in the area that are already collecting this data and that can be utilized for monitoring.

#### 7. Use GAP Departure for Runway 28 Departures

**FAA's Update on Phase 2 Initiative Document Reference:** Page 41 – Item #32

**Summary of Recommendations:** When Runway 28 must be utilized for nighttime departures, maximum use of the GAP procedure that does not have a top altitude restriction.

**Summary of FAA Responses:** The FAA stated that this procedure, which does not have a published 3,000-foot altitude restriction, is used as much as possible. It was noted that the FAA stated that when traffic dictates, these aircraft must be stopped at 3,000 feet as well.

**Summary of TWG Discussion:** This is currently being monitored by SFO and contained as an element within their Fly Quiet program. The TWG can utilize these reports and additional information from the NOMS to monitor the use during the nighttime. When feasible and operationally safe, it was suggested that aircraft should not be stopped at 3,000 feet in altitude.

### Recommendations Requiring Further Analysis/Information for the FAA to Address

The following recommended measures include those that the FAA responded that additional analysis, investigations and/or information is required to proceed with changes to their ongoing implementation of the Northern California Metroplex:

#### 8. NIITE/HUSSH South Transition (GOBBS) Over Bay

**FAA's Update on Phase 2 Initiative Document Reference:** Page 27 – Items 19-20, Page 30 – Item 33, Page 38 – Item 19, Page 43 – Items 39-40, Page 48 – Item 56, Page 35 – Item 9

**Summary of Recommendations:** Maximize use of procedures that route aircraft over the Bay when departing to southerly destinations.

**Summary of FAA Responses:** The FAA stated that this recommendation is feasible, but will not move forward until issues of congestion, noise shifting and flying distance have been addressed with the airline stakeholders and the affected communities by the Select Committee and/or SFO Roundtable.

**Summary of TWG Discussion:** This recommendation is intended at night when aircraft operations are much less frequent, thus congestion is not an issue. The recommendation shifts aircraft operations from land to the Bay and Pacific Ocean, thus noise shifting is not an issue. The FAA stated this recommended measure would add 32 miles to the flying distance for which the TWG suggests this small-added distance compared to the total flight distance is minimal and worth it to provide nighttime noise relief to the communities. The TWG believes that the FAA can be fully compliant with this recommendation during most of the nighttime hours other than the shoulder hours, e.g., 10 p.m. to 11 p.m. and 5 a.m. to 6 a.m.

**Action Item for Roundtable Meeting on February 7, 2018:** The Roundtable should draft a letter from the Roundtable to the FAA and Congressional Representatives reinforcing the recommendation was intended for nighttime operations when traffic volumes are low and accommodate the suggested procedure out to GOBBS; and request the FAA implement the change immediately during the nighttime hours of 10 p.m. to 7 a.m. or at least during most of the nighttime hours when traffic volumes are low.

### Recommendations the FAA Determined They Will Not Address

The following recommended measures include those that the FAA rejected and stated changes to their ongoing implementation of the Northern California Metroplex will not occur:

#### 9. South Arrivals Route to Terminate East of Bay to Runway 28R

**FAA's Update on Phase 2 Initiative Document Reference:** Page 25 – Item 9, Page 47 – Item 51

**Summary of Recommendations:** Determine if arrivals from the south (such as on the SERFR) could file a route which would terminate east of the Bay for an approach to Runway 28R.

**Summary of FAA Responses:** The FAA explanation for this recommendation appears to be focused on daytime hours only where airspace is very complicated, especially in the San Jose International Airport (SJC) area.

**Summary of TWG Discussion:** It was suggested that clarification be made to the FAA to consider this recommendation for nighttime hours, especially since SJC has a nighttime curfew and thus there would be less airspace traffic during this period.

## 10. Higher Altitudes

**FAA's Update on Phase 2 Initiative Document Reference:** Page 25 – Item 10, Page 45 – Item 46, Page 44 – Item 41

**Summary of Recommendations:** Every effort should be made to keep aircraft at a higher altitude during nighttime hours, especially whenever aircraft fly over residential areas.

**Summary of FAA Responses:** The FAA stated that aircraft that fly near MENLO with the intention of landing on Runway 28 are subject to the same descent requirements of those that cross MENLO. For safety and to fly a stabilized approach, aircraft must be descended in order to join the final approach course at or below the glideslope.

**Summary of TWG Discussion:** It was noted that GBAS might improve this (especially at the MENLO waypoint).

**The TWG did not finish the discussion of the “Nighttime Aircraft Operations” topic and will continue the discussion with the following areas at the next TWG meeting:**

## 11. Runway 10 Departures to Use NIITE

**FAA's Update on Phase 2 Initiative Document Reference:** Page 27 – Item 21, Page 28 – Item 23

**Summary of Recommendations:** TBD

**Summary of FAA Responses:** TBD

**Summary of TWG Discussion:** TBD

## 12. QUIET Departure to GOBBS

**FAA's Update on Phase 2 Initiative Document Reference:** Page 28 – Item 22

**Summary of Recommendations:** TBD

**Summary of FAA Responses:** TBD

**Summary of TWG Discussion:** TBD

## 13. Raise 3,000' Altitude Straight Out Departure Limit

**FAA's Update on Phase 2 Initiative Document Reference:** Page 28 – Item 25, Page 44 – Item 43

**Summary of Recommendations:** TBD

**Summary of FAA Responses:** TBD

**Summary of TWG Discussion:** TBD

## 14. Use Decommissioned DUMBARTON Procedure

**FAA's Update on Phase 2 Initiative Document Reference:** Page 29 – Item 27

**Summary of Recommendations:** TBD

**Summary of FAA Responses:** TBD

**Summary of TWG Discussion:** TBD

The following is a list of recommended future meeting topics, in priority order, that were agreed upon to be discussed at upcoming TWG meetings.

## Recommended Future TWG Meeting Topics

- Near Bay Daytime Operations – Runway 1 Departures Only
  - STTIK/CNDEL
  - GOBBS, WAMMY, PORTE
  - 050 Degree Heading
  - Backblast Noise
  - SEPDY
  - TRUKN
- Near Bay Daytime Operations – Runway 28 Arrivals Only
  - BDEGA
  - DYAMD
  - MENLO
  - Utilize Runway 28R
  - Dual Offset Approaches
  - Reduced Climb Airspeed
  - Vectoring
- Near Bay Daytime Operations – Runway 28 Departures Only
  - GAP
  - GNNRR
  - 3,000' Altitude Restriction
  - OFFSHORE
- Near Bay Daytime Operations – Runway 10 Departures Only
  - 330 Degree Heading – Up the Bay
  - Create New Departure Procedure
  - NIITE
- Santa Cruz and Other Communities Operations
  - SERFR
- Pilot Outreach Program
- Upgraded Radar Display Equipment
- Land Use and Terrain Height Data to Assist NCT
- Noise Modeling or Other Tools