San Francisco International Airport

Aircraft Noise Office Action Plan

12.2.2020 Airport Community Roundtable



NAP OBJECTIVES

1. Quieter planes

Advocate for quieter technology of aircraft to ensure that our neighbors share in the benefits.

2. Less Nighttime Noise

Track and notify airlines of noise deviations as well as push for the development and use of new, quieter procedures with the FAA.

3. Quieter Flight Procedures

Develop noise mitigation procedures that benefit communities and provide more incentives for aircraft to follow current procedures.

4. Catch Loudest Flights

Monitor existing flight operations and follow up with the airlines if there are deviations from the Fly Quiet Program.

5. Reduce Environmental Impact

Find new, innovative methods of studying and reducing the airport's emissions impact on surrounding communities.

6. Improve and Expand Noise Data

Revamp how the noise office gathers data to improve data accuracy, noise office efficiency, and ease of reporting for the community.





1. Quieter Planes

Track and Promote the use of quieter aircraft at SFO

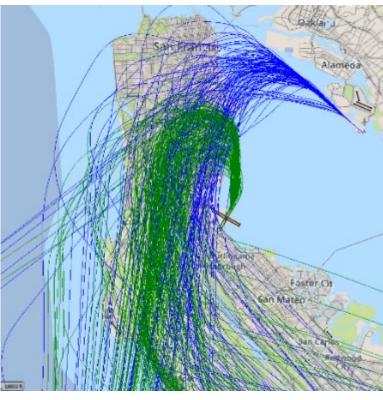
| Strategies | Action Items | Aircraft Effective Perceived Noise in Decibels (EPNdB) Levels |
|--|---|---|
| Collect more accurate, intensive data on aircraft flying into SFO. | Investigate number of A320s in airlines fleets using vortex generators. Investigate fleet's composition of different stage aircraft. | 115 B707-100B 110 STACE 2 ANCEAPT 1977 105 B747-100 STACE 1 AS STACE 1 AS |
| Encourage & promote use of quieter aircraft at SFO. | Create social media campaign to recognize airlines for retrofitting older aircraft and for operating quieter aircraft at SFO. | 95 A300-84-605R 0 8767-200 0 8737-300 0 8757-200 90 A320-214 EMB-171 |
| JFU. | Bolster media coverage for SFO Airport/Community Roundtable Fly Quiet Award Program. | 85 80 1955 1965 1975 1985 1995 Data Source: Federal Aviation Administration Admin |



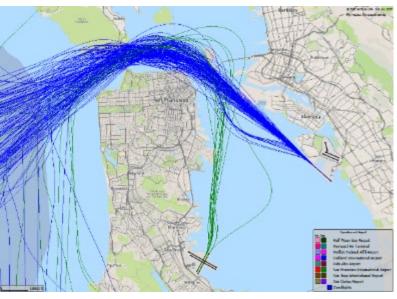
2. Nighttime Noise

Reduce Noise Caused from Nighttime Flights

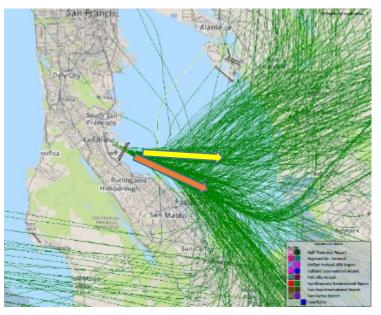
| Strategies | Action Items |
|--|--|
| Identify "heavy" night flights and those outside of procedures. Track last flight in to bring to schedule. | Inform airlines of noise exceedances weekly and have SFO Noise Office follow up with a phone call/meeting with those who deviate from procedure. Create category within FlyQuieter Program that grades airlines on nighttime deviations. |
| Examine new and alternative routes that don't fly over neighborhoods. | NIITE/HUSH and 050 departures to replace SSTIK departures at night. 28R Night Arrivals. BDEGA downwind right at night. Prioritize Specific Procedures on 10L and 10 R departures. Opposite Directions Operations (ODO) discussions 10L/R departures. |



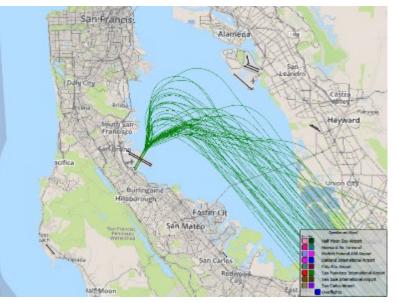
OAK – CNDEL/SFO - SSTIK



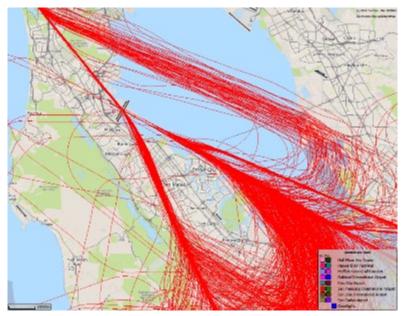
OAK – HUSSH/SFO - NIITE



Opposite Direction Operations



050 Departures

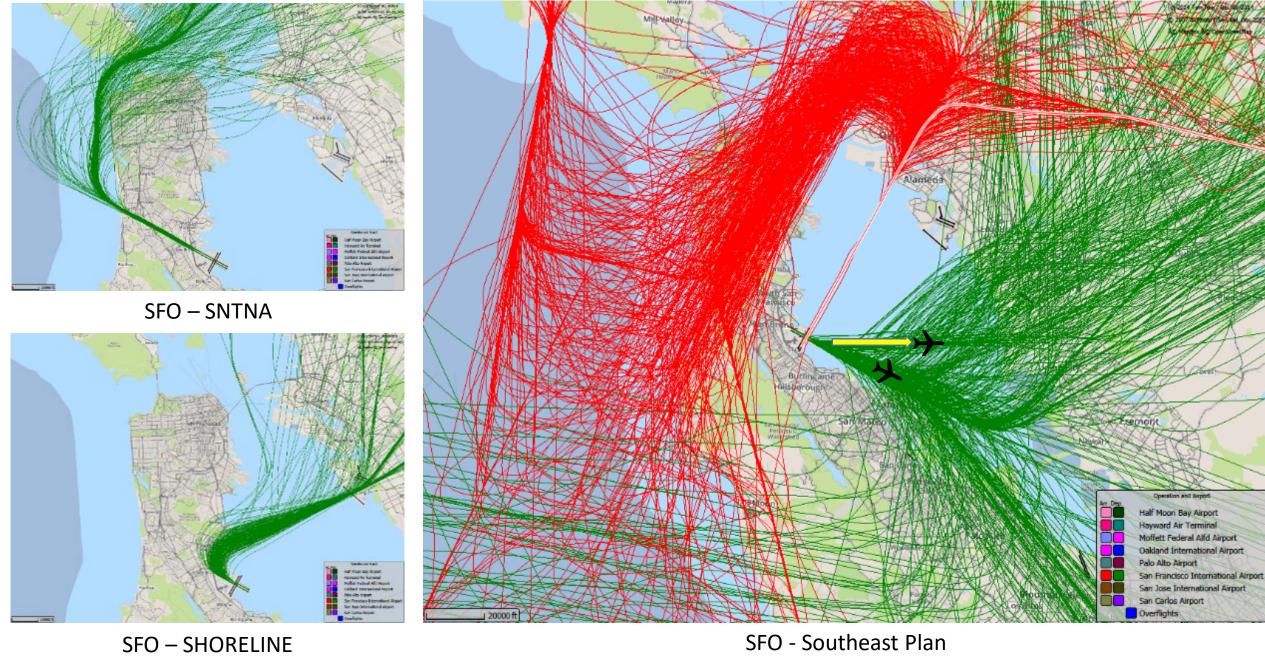


²⁸R Arrivals

3. Quieter Flight Procedures

Keep flights higher and further from residents

| Strategies | Action Items |
|---|--|
| Create new procedures and modify existing ones. | Increase minimum altitude requirement for Gap Departures. New and innovative procedures using GBAS. |
| Keep aircraft from straying off procedures and encourage them to follow noise abatement procedures when safe to do so. | Airfield Signage stating recommended noise abatement procedures. Reduce number of wide turns on Shoreline Departure. Keep aircraft from overflying San Francisco shoreline on SNTANA. Keep Reverse Flow Departures over water longer. |



SFO - Southeast Plan "Reverse Flow"

4. Noisiest Operations

Identify Noisiest Flights then Reduce their Occurrences

| Strategies | Action items |
|---|---|
| Identify Noisiest Flights. | Track noisiest flights at SFO based on NMT data and community reports. |
| Keeping Airlines and FAA Informed and Involved. | Inform airlines of monthly noise complaints with identified flights.Attend A4A (Airlines for America) ITOC (Information Technology Oversight Committee) & SFO Tech discussions quarterly to address airlines.Quarterly meetings with FAA and airlines to go over data trends. |

5. Environmental Impact

Reduce Airport and Aircraft Emissions

| Strategies | Action items |
|---|---|
| Study emerging technologies and practices to reduce emissions. | Watch for emerging technologies and look to other airports for best practices. Investigate using AEDT for emissions reporting. |
| Create a public report on emissions around the airport. | Add emissions reporting to Fly Quieter. Report on use of Biofuel at SFO. |

6. Noise Office Data

Improve and expand methods of gathering both noise data and community reported data

| Strategies | Action items |
|---|---|
| Replace old noise monitoring equipment. | Replacement of permanent noise monitors and portable noise monitors. Evaluating and setting new monitor thresholds where needed. |
| Improve old methods of reporting. | Replace reporting hotline with Integrated Voice Response System (IVR). Tailor new SFO Noise Reporting APP to reporters needs. |
| Add new data. | Roundtable assigned permanent portable monitoring. Portable monitoring for individuals in the community. |

TIMELINE

Short Term (< 1 year)

Finished:

- Replacement of permanent noise monitors
- Establishment of new permanent portable monitoring
- Start individual noise monitoring
- Replaced Hotline with IVR

In Progress:

- Noise App Modifications
- Airfield Signage
- A320 modifications and aircraft stage fleet studies

Mid Term (1-3 years)

- Create category within fly quieter to grade on nighttime procedures
- Social media campaigns to encourage and promote airlines who make efforts to reduce noise
- Prioritization of BDEGA East and 28R for arrivals*
- Implementation of NIITE/HUSH and/or 050 departures*

To start when airport operations are more plentiful:

- Agreements with Airlines to avoid communities
- Keeping airlines informed of noisiest flights and deviations from noise abatement procedures
- Meetings with FAA and Airlines to go over noise concerns

Long Term (3-5 years)

- Increase GAP altitude requirements*
- Innovative GBAS procedures*
- Seek Rule Modification for SFO ODO*
- Efforts to reduce emissions

*Depends on FAA approval of feasibility

Thank you

