San Francisco International Airport

Aircraft Noise Abatement Office

frequently asked questions

WHY DON'T ALL AIRPLANES FLY OVER SAN FRANCISCO BAY?

One of the highest priorities for the Aircraft Noise Abatement program is to use the over water departure and arrival runways as much as is possible. SFO is very successful in achieving this goal: **83% of departures and 99% of arrivals use over water routes.**

However, there are physical limitations to using over water routes all of the time. These include: wind speed and direction, weather, aircraft size, weight and destination. Airplanes must take off and land into the wind, so in certain weather conditions land facing runways are required. Additionally, very heavy, long distance aircraft such as those going to the Far East usually need the longest available runway for departure. At SFO this is Runway 28 Right, which does not face San Francisco Bay.

WOULD THE NEW RUNWAY CONFIGURATIONS INCREASE THE USE OF OVER WATER FLIGHT PATHS?

Yes, the three new alternative runway configurations under consideration would move flights further out into the Bay, and away from residential communities. These new configurations would reduce aircraft noise from departures, arrivals, taxiing, and other ground operations. As a result, significant noise levels around the airport would be reduced for 80 - 90% of people currently affected. For this reason the Airport Community Roundtable, a citizens organization concerned with aircraft noise, has asked the airport to consider alternative runway designs.

WHO TELLS AIRPLANES WHERE TO GO?

The Federal Aviation Administration (FAA) is the sole organization in the US responsible for the movement of aircraft both on the ground and in the air. All air traffic controllers work for the FAA as part of one national airspace system. The FAA is also responsible for designing air travel routes and procedures, including the standards for lateral and vertical separation between aircraft and determining hazards to flight such as mountains or tall buildings. An airport may advocate for certain noise abatement flight tracks to reduce noise, but these must be both approved and assigned by the FAA.

WHY ARE CERTAIN PLANES LOWER THAN OTHERS?

Aircraft altitude is generally determined by distance from the landing or takeoff runway. The closer the aircraft is to the runway, the lower the altitude. Arrivals tend to descend at a fixed angle of 3 degrees, while the angle of ascent for departures is a function of aircraft type, weight, air temperature and wind speed.

HOW DOES THE RESIDENTIAL SOUND INSULATION PROGRAM WORK?

Since 1983, SFO has insulated more than 10,000 homes against aircraft noise. All these homes are located within the area defined as significantly impacted by aircraft noise by the State of California.

The airport has funded this program, contributing $120 million to date. Additionally, SFO has recently committed up to $34 million for insulating approximately 1,500 more homes. A Memorandum of Understanding (MOU) between the airport and the surrounding communities allows each community to administer the program for their respective city. The decision about which specific homes are treated and in which order is left up to the cities participating in the program.

HOW ARE RUNWAYS NUMBERED?

SFO has four runways arranged in two sets of parallels. All runways are designed to face the prevailing wind directions, since aircraft must both land and take off into the wind. Runway ends are named according to their compass heading with the last zero dropped. Thus, at SFO the runways are 01/19 Left and Right (010 and 190 degrees respectively), and 10/28 Left and Right (100 and 280 degrees respectively). As the rules of geometry apply, subtracting one heading from another (190 - 10) leaves 180 degrees or a straight line.

Runway lengths at SFO vary. In some cases a particular aircraft type, usually heavy long-haul international flights, will require the longest available runway for departure. The lengths of runways at SFO are:

• 10L/28R - 11,870’ • 10R/28L - 10,600’ • 01R/19L - 9,500’ • 01L/19 R - 7,000’

WHAT DOES THE NOISE MONITORING SYSTEM DO?

Consisting of 27 noise monitoring sites in communities surrounding the airport, the Noise Monitoring System keeps track of aircraft and community noise levels. Each monitoring site is linked to a central computer processor. The Noise Monitoring System is constantly updated with the latest in technology. The next update is scheduled for completion in 2001. The collected NMS data is used to:

- Record aircraft noise events
- Track noise levels over time
- Assess adherence to noise abatement flight paths
- Link complaints to flights, airlines and aircraft types
- Map complaints
- Validate the accuracy of computer created noise maps
- Create reports
- Produce maps and graphics

how to reach us

The SFO Aircraft Noise Abatement Office is located at:

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Phone:	**650.821.5100**
Fax:	**650.875.8596**
Noise Complaint Line:	**650.876.2219**
Toll Free Noise Complaint Line:	**877.206.8290**
Airport Web Page:	**www.flysfo.com**
Roundtable Web Page:	**www.smcroundtable.com**