New FAA flight paths bombard Pacifica with noise

Mike Moffitt, SFGate.com  |  June 2, 2016

It's 1:15 in the morning. You are deep in REM sleep when the roar of turbine engines jolts you awake.

As you lie there trying to fall back to sleep, a rumble rises in the distance, snowballing into another crescendo of sound that overwhelms your earplugs and double-paned windows. A few minutes later, a third jet soars overhead. Then another and another, a total of six in less than 45 minutes.

Pacifica used to be known for two things: fog and quiet. It's still known for fog.

Fifteen years ago, plane fly-overs were common, but infrequent enough that they didn't bother most residents. Today, a virtual conga line of airplanes parades overhead — 200 to 250 per day.

Nights of sleep deprivation have become the new normal for parts of Pacifica, according to about 30 residents attending a meeting on aircraft noise last month in the city's Council Chambers. Many complained about the racket, some reporting suffering physical and mental problems.

"We've all had problems with sleep," said Park Pacifica resident Janice Weeks, who serves on the city's airport noise advisory board.
Robert Farrow of the city's Fairmont West neighborhood says the planes — as low as 1,200 feet — practically buzz his house every morning at breakfast.

"I could serve coffee to the pilots," he said.

**FAA's upgrade increases efficiency — at a cost**

How did this once sleepy coast-side city turn into ground central for airport noise? For starters, there are simply more planes flying over the Peninsula than ever before.

But what has really had an impact is NextGen, a new air-traffic control system that the Federal Aviation Administration launched in 2014 and has been gradually implemented at airports across the country.

Using satellite-based technology to replace ground-based navigation, the FAA has dramatically increased air-traffic volume, making it possible for airlines to schedule more flights, service more customers, use less fuel, reduce crew and maintenance, and subsequently enjoy heftier profits.

The agency estimates savings of nearly $80 billion to passengers in terms of time saved via shorter flights through 2030. It also sees $400 million in carbon dioxide emission reductions.

A glance at the NextGen page reveals just how proud the FAA is of its new system, which it calls an "experience." But one experience that isn't mentioned is that of the people trying to sleep under the revised, much busier flight paths.

San Francisco International Airport used to direct departing west- and southbound flights out over the ocean, minimizing air time over residential areas. But in March 2015, NextGen changed the northeast takeoff route for these flights.

One of the citizen advisers for the city's aircraft noise group, Ray Ramos, explained that the planes are vectored, or directed to a designated waypoint, earlier than they previously were to save fuel and time. Immediately after takeoff, they make a U-turn that routes them right over Pacifica.

Most of the southern flights are headed to the Los Angeles area — 623 flights per week, more than any other destination by far. A huge increase in China-bound travelers over the last five years accounts for many of the westbound flights. China is SFO's No. 1 international destination with 176 flights per week.

In addition, any "aborts" — landings that are aborted on approach at SFO — are regularly rerouted over Pacifica.

**Surprise! Not all planes from SFO**

To make matters worse, FAA information that came to light for the first time last month revealed that about one of every six planes flying over the city is coming from Oakland International, said Dan Stegnick of the noise advisory group. The Oakland planes fly even lower than SFO jets and
closer to SFO than many of OAK's own flights, even though they are supposed to be giving SFO a wide berth.

Because NextGen's satellite-based navigation is so precise, flight paths can be concentrated over relatively narrow corridors, such as the Pacifica route, which the FAA calls SSTIK.

Previously, planes relied on radio frequencies or beacons, or simply followed directional headings provided by controllers. The result was flight paths scattered over a broad swath of airspace. Many homes got some noise each day, but it was manageable. Now fewer houses are affected, but the ones that are get slammed.
Residents at the meeting all appeared to be in the latter category.

"We moved to Pacifica because it was quiet (and it was) until mid-October. Then it was an invasion," said one.

Some people expressed worries about property values declining, and at least two said they were contemplating leaving. Others asked about imposing a curfew at SFO (not possible under current regulations, according to the city's airplane noise advisers). One wanted to know why the planes can't be forced to take off on a steeper trajectory (older, heavier planes are unable).

A man asked if the jets could be outfitted with mufflers (the technology doesn't exist).

Disrupted sleep seemed to be the No. 1 cause of suffering and stress, with some people saying they were having difficulty working or even just functioning in their daily life.

"My quality of life has gone way down," said a woman.

Health effects of noise

Various studies link aircraft noise to health problems. A European Heart Journal study found that noise from aircraft or street traffic can increase a person's blood pressure even if it does not wake them.

Another study found that Dutch and British children living in homes regularly exposed to aircraft noise showed higher than normal rates of high blood pressure, especially when the noise occurred at night. And a Swedish study of 2,844 European children affected by plane noise found a high incidence of reading deficiencies and memory impairment.

Pacifica isn't the only Bay Area community suffering from noise pollution, of course. It's been a longstanding beef in Brisbane, just north of SFO.

Silicon Valley residents from Redwood City to Los Gatos are complaining about an arrival route to San Francisco called SERFR ONE that beginning on March 5, 2015, moved air traffic three miles inland from a previous route that skirted the coast over Big Sur and less populated areas.

Palo Alto alone saw a tenfold increase in noise complaints, from 587 to more than 5,000 in the first six months of 2015, according to the San Jose Mercury News.

And while SERFR ONE noise is certainly significant, the problem is not as severe as Pacifica's, as planes approaching for landing make a lot less racket as they're not throttling against the wind to gain loft.

Prompted by a surge in noise complaints, the FAA is currently studying changes to flight paths that could give Pacifica and other Peninsula communities some relief, but their final recommendations are not expected for many months if not years.

Some of the suggestions that have been deemed feasible and earmarked for further study are:

- Reduce vectoring, eliminate early turns over land. Focus on leaving aircraft over water as long as possible.
- Push the SSTIK route farther over water.
• Begin a nighttime south departure.
• Adjusting NITE (a nighttime route) air traffic to eliminate early turns over land between 10 p.m. and 7 a.m.

Congresswoman Jackie Speier, whose 14th District includes Pacifica, is co-sponsoring legislation to fund a study on the impact of airplane noise and air pollution on residents’ health.

Several Phoenix neighborhoods have also suffered increased noise due to the new FAA routes. The city sued the FAA last year, claiming the agency refused to make changes even when officials proposed alternatives that they say would have reduced noise and retained 80% of desired fuel and efficiency benefits. The suit charges the FAA has created a negative impact on the Phoenix community without proper due process, notification and consideration.

(Highlights, footnotes and minor edits may have been added by aiREFORM)
This graphic shows the pattern a year later, on Dec. 15, 2015, following revision of FAA flight paths under NextGen. Note that fewer flights are directed over water. By December, an average of 229 planes were flying over Pacifica each
50 million SFO passengers in 2015

Image 4 of 20: To handle a record number of passengers, SFO has had to increase flights. (Photo: Getty Images)

Image 5 of 20: FAA information recently made public revealed that more than 1 of every six planes flying over Pacifica takes off from Oakland International Airport. These planes fly even lower than SFO planes. Instead of disrupting residential neighborhoods, they could be flying over water. (Photo: Getty Images)
What can the FAA do to relieve airport noise pollution in Pacifica and other Bay Area communities? The following three things, say local residents. (Photo: Joe Drivas, Getty Images).
Route more planes over water.

Yes, you’ll lose some fuel savings, but it’s worth it to ease aircraft noise over populated areas, residents say. (Photo: Getty Images)
Fly higher on takeoff over residential areas.

Image 8 of 20: 2. Fly higher over residential areas. Some planes can't, of course, due to their weight and/or age, but many are able. (Photo: Getty Images)
No. 3. Share the noise. Increase flights over Bay Area communities that aren’t getting slammed with aircraft noise. Unfortunately for Pacifica and many San Mateo County cities, few if any of the quieter communities are volunteering to help. (Photo: Getty Images)
The FAA touts the financial benefits of the NextGen navigation system on its website. It doesn’t mention the effects of increased noise pollution caused by concentrating flight paths. (Photo: FAA)
Westbound and southbound planes from SFO take off from runways 19R and 19L and then make an immediate hard turn to the left over the bay. They then loop around and fly directly over Pacifica.
Any "aborts" — landings that are aborted on approach at SFO — are regularly rerouted over Pacifica. (Photo: Danita Delimont, Getty Images)

Image 13 of 20: It's the night flights that cause the most grief to Pacifica residents. The frequent planes, often one right after another, wake people up and make it difficult for them to fall back to sleep. (Photo: Michael H, Getty Images)
A time-lapse photo shows late night departures from SFO. (Photo: Terence Chang, Getty Images)

This is the Photoshopped illustration that the city of Pacifica used with its presentation of the aircraft noise problem. For people living below, the skies sometimes seem this crowded.
The FAA has agreed to study revisions to its NextGen flight paths, but it could be years before any significant action is taken. (Photo: Danita Delimont, Getty Images)
One complaint raised by residents at the Pacifica meeting is that the FAA is using outdated assessments of noise impact that spread noise over a 24-hour cycle. Subsequently the impact of a string of planes every two or three minutes for several hours is diluted. (Photo: Justin Sullivan, Getty Images)

When the city of Phoenix complained to the FAA about NextGen flight paths concentrating aircraft noise over some neighborhoods, the agency refused to make changes. So Phoenix sued. (Photo: Getty Images)