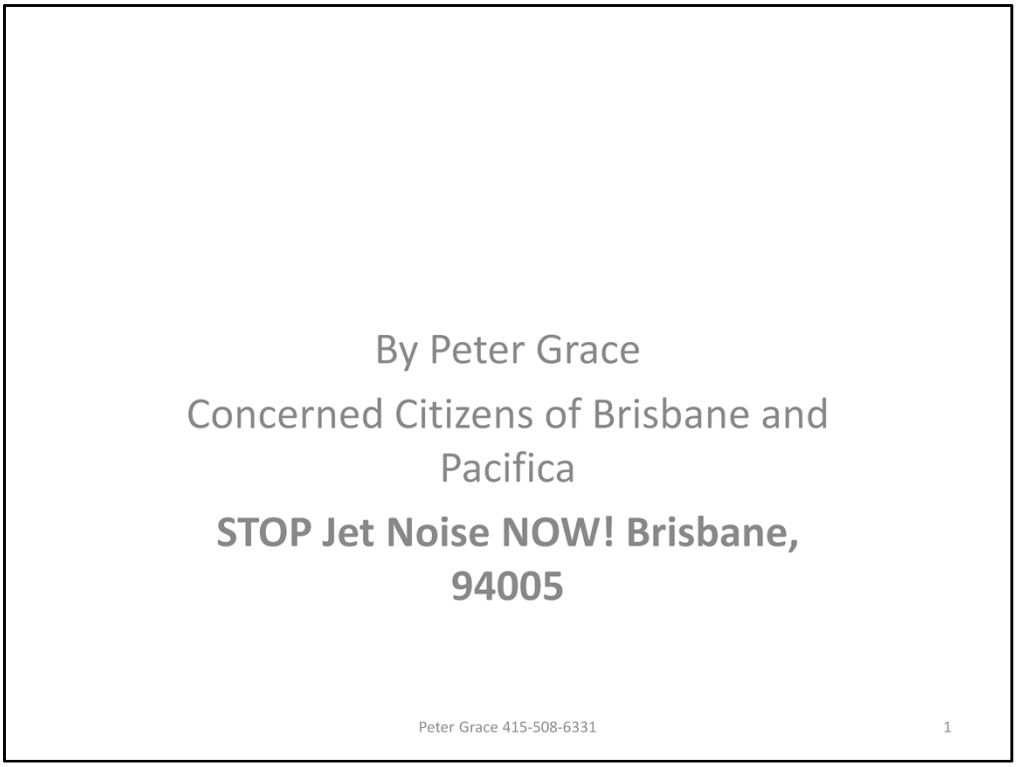


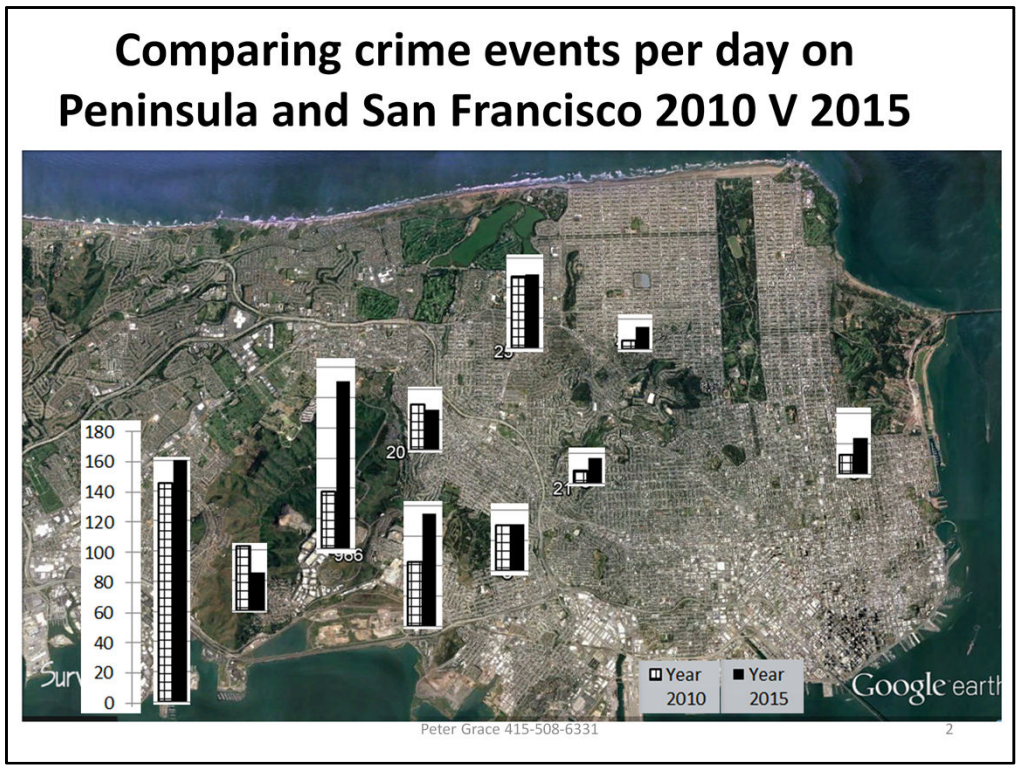
My name is Peter Grace and I live in Brisbane

Progress:
- Reduced noise for all communities
- FAA using Bay to gain altitude to reduce the noise footprint on all the communities on the Peninsula

Ask the Round Table members:
- Are these the type of **Performance metrics** that will help assess FAA progress at reducing noise over the Peninsula Communities?
- Do you want to see reports like this in the Airport Director's report to the Round Table?

Key points for Round Table members to ask FAA to address:
1. NEXTGEN has concentrated and shifted noise on the Peninsula
2. Flights off runway 01L and 01R flying further over the Bay
    - But turning over Peninsula at lower altitude in 2016 than in 2010 and 2011.
        - Why?
3. Rate of ascent of flights from SFO: 2-3,000 feet/minute and from Oakland: 4,000 feet/minute.
        - Why? Same planes
4. Flights need to be higher when crossing the Peninsula to reduce their noise footprint
5. Does distributing flights to reduce flight concentration, mean turning flights lower over existing communities?

6. Need to develop metric for turning early even if it is not the FAA definition of vectoring



This graph compares the crimes per day at various points on the Peninsula and San Francisco between 2010 and 2015.

Orientate you:
- POINT North is to the right and south to the left
- Top is the Pacific Ocean
- Bottom is the Bay
- Land features: Using the freeways 101, 280, Golden Gate Park, San Bruno Mountain and Colma Cemeteries, Hunters Point and Visitacion Valley to the west

POINT Left hand side shows the scale up to 180 crimes per day.
Bottom right hand side shows the year
- Hatched is 2010
- Solid Black is 2015

- POINT Lets look at the bar graph just to the right of the scale. Crimes rose from a little over 140/day to 160/day
- Moving right: numbers dropped 2010 to 2015
- Right again: Rose from just below 40/day in 2010 to 115/day, a 300% increase. As you quickly scan to the right. You will see no other graph that has the same % increase or the number of crimes/day
- POINT Right and below. Also an increase. 174% between 2010 and 2015
- Right again. Much smaller numbers and variation 2010-2015

- I ask you as Member of the Round Table: if you were in charge of reducing crime, where would you put your resources?
    - Put where the numbers are greatest and where the increases are largest?
    - Fair assumption?

- **<u>Let me take you away from your police hat.</u>**

~~Crime~~ Noise events per day on Peninsula and San Francisco monitors 2010 V 2015

Peter Grace 415-508-6331 3

- **<u>Let me take you away from your police hat.</u>**
  - These are noise events/day at various monitors to the north of SFO airport.
  - Noise Data from SFO Noise Office
  - Routine Data collected as normal daily procedures
- Show the effect of the NEXTGEN implementation and increase in overall SFO traffic
- **<u>Key points:</u>**
  - Increase in 2 points due to **<u>concentrating</u>** effect of the flights over the Bay that then turn west over the Peninsula. The SSTIK procedure
    - **<u>And Noise shifting</u>**
  - And flights flying further over Bay before turning which I will describe on the next slide
  - If you were deploying noise monitors, where would you have permanent monitors?
    - **<u>Highest increase and 2nd highest number is a temporary noise monitor</u>**
      - **<u>Need to redeploy monitors to where they are needed</u>**
      - Where from?
        - Look to right
          - Higher number of events due to things that take off from Hayward
            - Police and TV channel news helicopters
            - Low flying Cessna planes (with tourists)
            - => **<u>Ask Hayward to buy the replacement monitor and use the SFO resources to track</u>**

<u>the noise effects from SFO!</u>

- One more point:
- There are several noise monitors that I will refer to later
    - Brisbane Marina
    - Central Brisbane
    - Area of Brisbane called the Ridge

- So I ask you as members of the Round Table whether these Performance Metrics help you understand the noise impact on the Peninsula?
- Would you like to see these types of graphs in the Directors Report?
- Would you like to see them reported at each meeting?

2010-2016 the flights off runway 01L and 01R flew further along the Bay but turned over land at a lower altitude!

Peter Grace 415-508-6331 4

I spoke earlier on how the new NextGen flight path, SSTIK has flights flying further over the Bay before turning west over the Peninsula

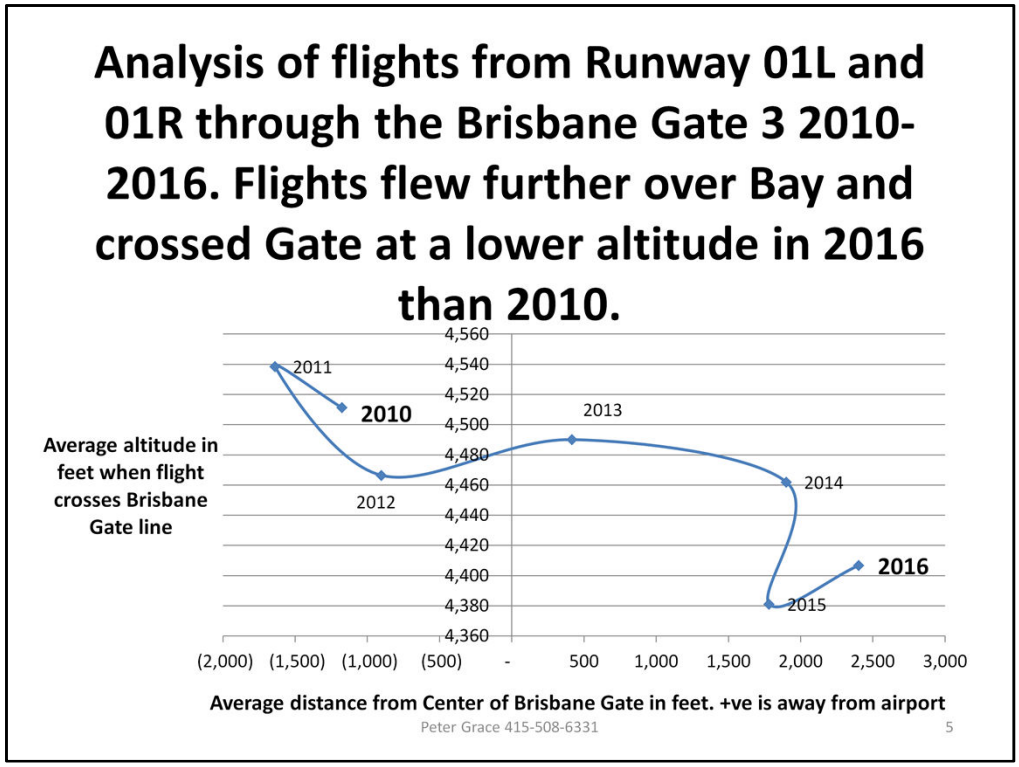
Now lets look at flight track data provided by the SFO Noise Office
The SFO Noise Office formed a line called the Brisbane Gate. And is shown in red.
SFO Noise Office gave us the data on where over 750,000 flights crossed the red line between 2010 and 2015 and at what altitude.

This shows two things:
- Left hand pin is where flights turned on average in 2010
- Right hand pin is where flights turned on average in 2015
- **Flights move 3,500 feet further north**
    - Good
- STOP
- **What is troubling is that the average height has dropped 2010 to 2015 from 4,511 feet to 4,407 feet, a drop of 100 feet**

- The Round Table report suggests that the strategy of reducing noise over the peninsula was to fly further over the Bay to gain altitude before coming over land.
    - This is not happening
        - Why?
        - When we look at the data for the rate of ascent of SSTIK and Oakland south bound flights we see:

- **Oakland's flights average rate of ascent is 4,000+feet/minute and SF 2,000-3,000 feet /minute**
    - Why are the SF flights rate of ascent so much lower than Oakland's?
    - **Why are the SFO flights not using the Bay to gain altitude and reduce their noise footprint on the residents of the Peninsula?**
        - **SAME PLANES (FAA controls rate of ascent through procedures etc.)**
        - Worth measuring?

- I ask my question again?
- As members of the Round Table do these Performance Metrics help you understand the noise impact on the Peninsula?
- Would you like to see these types of Metric in the Directors Report
- Would you like to see them reported at each meeting?



You will have asked me where this flight track data comes from and is it easily collectable?

<u>All Data comes from the SFO Noise Office</u>
<u>Analyzing the noise and track data that is routinely collected</u>

Let me explain the graph axes:

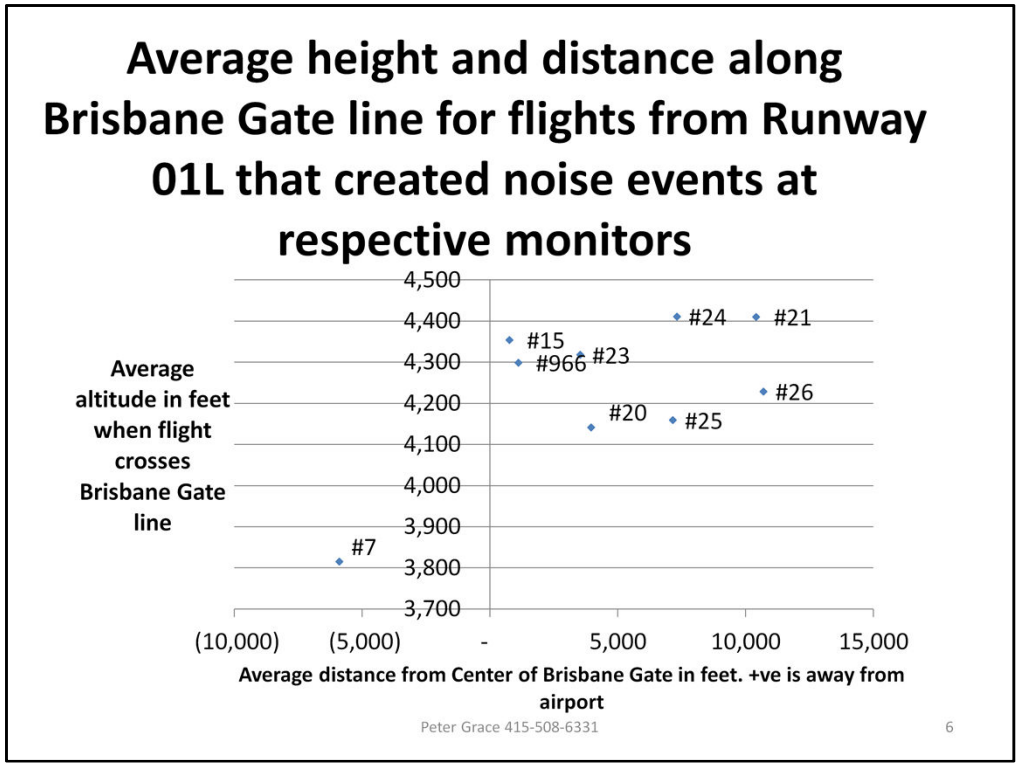
- Horizontal is the distance along the Brisbane Gate line
    - Left is closer to the airport
    - Right is further away from the airport
- Vertical is altitude when crossing this Brisbane Gate line
    - Lowest measure on scale is 4,360 feet and highest 4,560 feet

- What do we see?
    - 2010 to 2011, planes turned closer to the airport and at a higher altitude
    - 2011-2015, planes turned progressively further from the airport and at a lower altitude with the largest drop 2014-2015
    - 2016, flights still flew further over the Bay and a little bit higher

- What do we want to see at the next presentation:
    - Average height of flights to go back to where they were in 2011 immediately and then progressively march higher in each Airport Directors report and Presentation

    - I ask again is this type of Performance metric useful to help understand what is happening and to give the FAA measurable targets?

- One of the continual complaints in Brisbane has been the noise effects of the FAA turning flights early for Safety and other reasons. We want to show you the effect for the period of study in 2015.
- - Looked at where did the flights that created noise events at each monitor, go through the Brisbane gate on average. We measured the height and distance along the Brisbane Gate
- These are events greater than 65dB. We all hear flights lower than 65dB. The 65dB is the tip of the iceberg poking out of the water. There is a lot of noise impact from flights registering less than 65dB.



What we see is a cluster of averages to the right and above 4,100 feet.

You will remember that I asked you earlier to remember the positions of a number of monitors:

- #15 is the Brisbane Marina
- #966 is the temporary noise monitor on the Ridge
- #7 is in central Brisbane

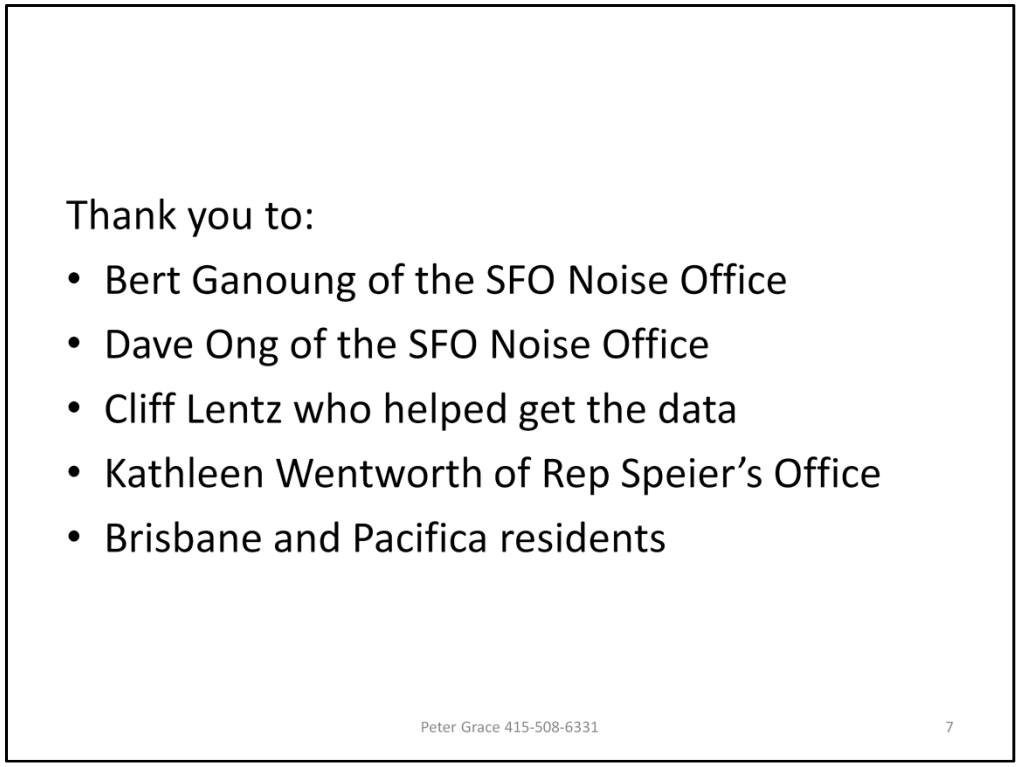
We see one point is around 6,000 feet closer to the airport than the others and significantly lower.
This monitor is the permanent monitor in Brisbane, #7.
This shows the effect of turning early so the plane passes at a lower altitude over Brisbane and continue lower over South San Francisco, Daly City and Pacifica.
We need a metric to assess Vectoring for Safety and other reasons.

We are very please that Tanny McCloud (?) of the FAA TRACOB Office is here to see the direct effect on noise form vectoring

We need to bring the #7 average altitude results higher over Brisbane to the same level as the other monitors and increase the average height for all the other monitors

I ask my question again

- As members of the Round Table do these Performance Metrics help you understand the noise impact on the Peninsula?
- Would you like to see these types of Performance Metrics in the Directors Report
- Would you like to see them reported at each meeting?



I want to thank many people who have helped pull the data from the SFO Noise Office databases and in particular Dave Ong and Bert Ganoung. The Noise Office faces many competing demands and I was one.

I hope that you can see the value of collecting and analyzing the noise and track data from one particular area to use as Performance Metrics to support the FAA's efforts to reduce the noise impact on the communities on the Peninsula. There are many other Gates that the SFO Noise Office uses to tie flight paths and noise events.

I hope that you will ask for similar analyses for your communities and in particular the arrivals such as over Foster City, BDEGA for Southern Hills in Daly City using monitor #20 and departures such as down stream of SSTIK in Pacifica.

Thank you