

# Vashon Island Fair Skies

The background of the slide is a map of Vashon Island, Washington. A large, semi-transparent red circle with a diagonal slash through it, resembling a prohibition sign, is centered over the island. Four white commercial airplane icons are positioned along a red line that represents a flight path, starting from the top left and moving towards the bottom right. The map shows the island's coastline, surrounding water, and some land features.

The noise impact of the  
FAA's NextGen program on  
the Vashon Island Community

July 27<sup>th</sup>, 2019

David Goebel

and new ways to fight it

<http://www.VIFS.org>

# TOPICS

- For the benefit of those who didn't attend previous meetings, we'll quickly cover some fundamentals of Air Traffic Control & NextGen.
  - Airport flow mostly a function of surface winds.
  - Conventional RADAR STAR vs. the new NextGen RNAV/RNPs.
  - Why this change was done, what was intended vs. what actually happened.
- “The Button” by Airnoise.io
- The Ominous Increase in Cross-Over Flights
- The Petition to the Port Of Seattle for Noise Monitors.
  - Why noise monitors as a first step and not revert the path/procedure change?
  - Why the Port and not the FAA?
  - What's the current status?
- News from other communities around the county.
- What can you do to help?

but first....and again....the “Schultz Curve”

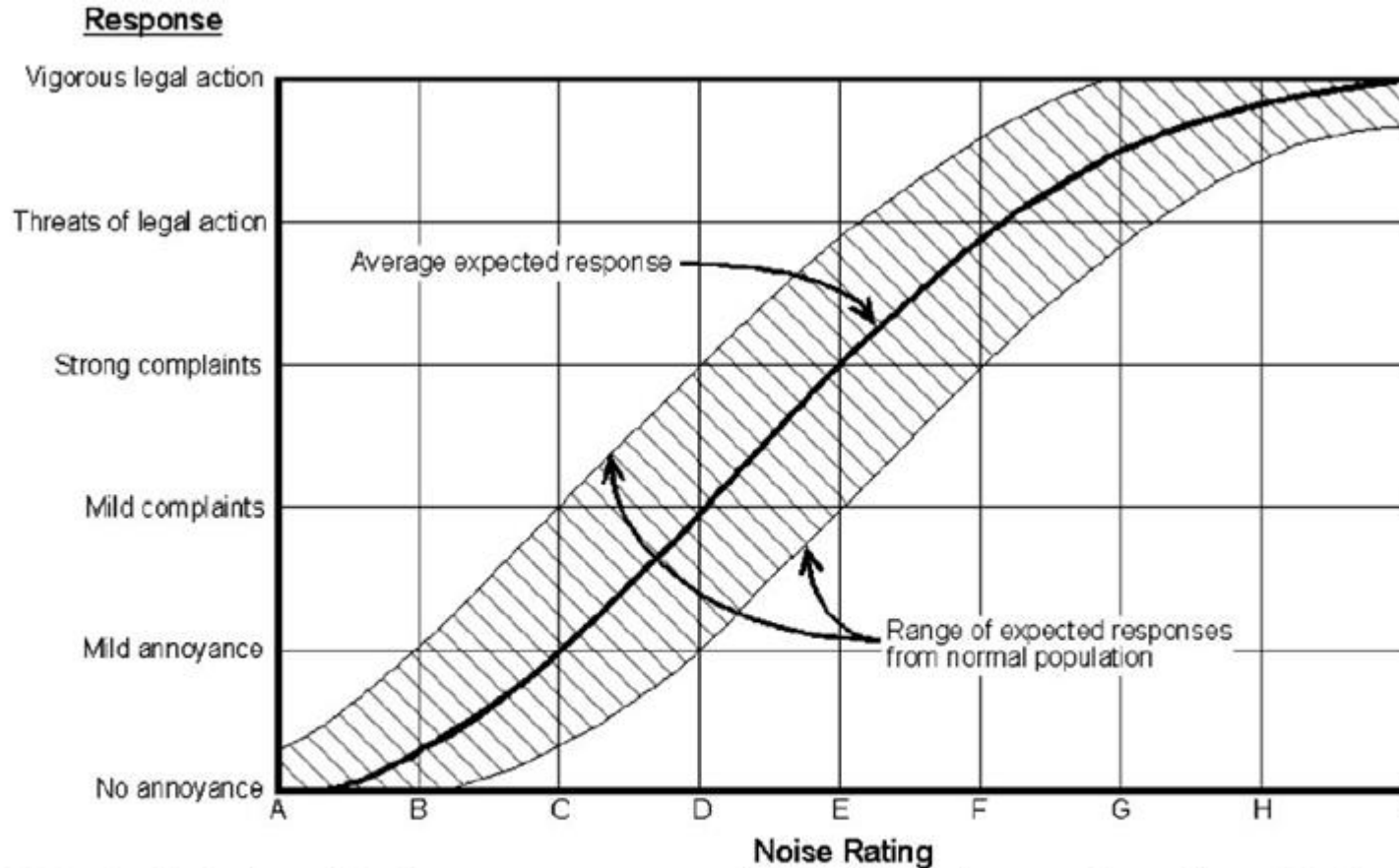


FIG. 1. Relationship between community noise rating and predicted behavioral consequences of environmental noise exposure, adapted from Fig. D-16 of Appendix D of “Levels Document” (EPA, 1974).

i.e., everybody responds differently. **Please be respectful of people who don't feel as impacted as you.**

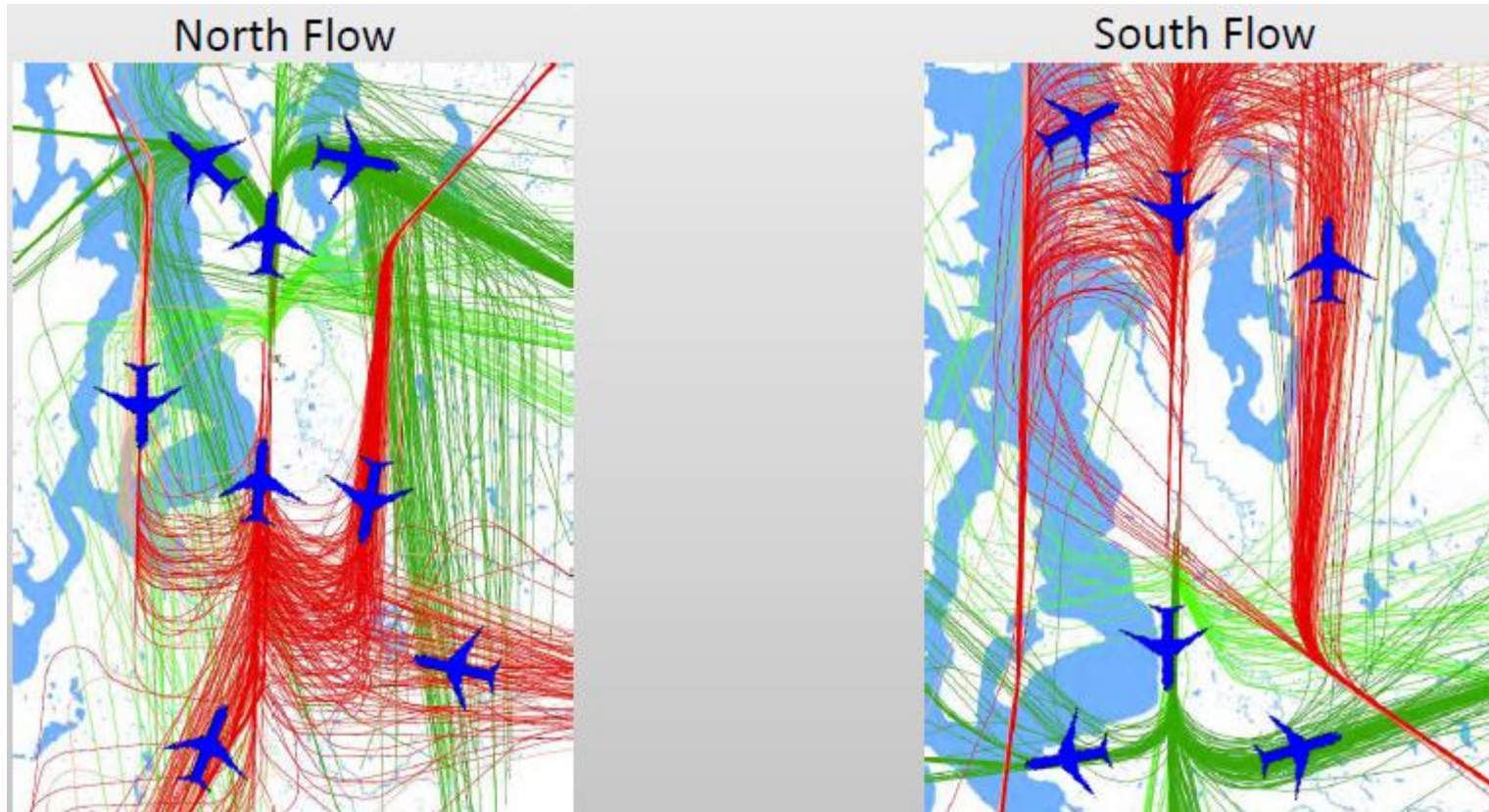
“Vashon Island Fair Skies” is a Washington not for profit corporation and 501(c)3 tax exempt organization.

- Officers:
  - David Goebel: President & Treasurer
  - Rob Briggs: Vice President
  - Beth Freiling: Secretary
- Legally formed in May 2018 and 501(c)3 tax exempt status retroactive to that date.
- This allows not just tax deductible donations, but also unlocks corporate matching at most large Seattle area employers.
- While not there yet, we may eventually have to undertake very expensive options.
- We are forbidden from participating in any election of a candidate.



# Fundamentals of Airport Flow

- An airplane's lift is a function of the airspeed, not the ground speed.
- By taking off and landing into the wind, ground speed is reduced.
- However SeaTac has a preference for Southflow, so may remain in Southflow until Northly winds become strong. It's frustratingly difficult to predict.



# Conventional RADAR Approach vs. NextGen

- Conventional Approach

- Air Traffic Control provides a sequence of vectors for planes to fly until final approach.
- These individualized instructions naturally created a broader distribution of plane noise.
- The descent was optimized based on traffic conditions so that planes stayed high until the length of the downwind leg was known.

- NextGen Approach

- Every single plane follows the exact same GPS enforced path typically within an error of ~100 feet. The technology enabling this is called Required Navigational Performance.
- Planes are brought low early in case they are able to make a sharp right turn into Elliot Bay and over downtown. However every plane is brought low early regardless of whether this shorter arrival is possible.
- The new NextGen RNAV (Area Navigation) governing Southflow downwind arrivals requires leaving Vashon Island at 6000 feet. About 2/3 are in the 5000 to 6000 window, but some – especially late at night – are as low as 3000 feet.

(HAWKZ.HAWKZ7) 18256

AL-582 (FAA)

HAWKZ SEVEN ARRIVAL (RNAV) Arrival Routes

SEATTLE-TACOMA INTL (SEA)  
SEATTLE, WASHINGTON

#### ARRIVAL ROUTE DESCRIPTION

From HAWKZ on track 023° to LIINE.

LANDING RUNWAYS 16L/C/R: From LIINE on track 022° to cross PIKEZ between 12000 and 15000 and at 250K, then on track 001° to COFAY, then on track 351° to cross BREVE between 10000 and 11000 and at 250K, then on track 350° to cross NETTZ at or above 8000 and at 230K, then on track 344° to cross KWEST at or above 7000, then on track 344° to cross VASHN at 6000 and at 210K, then on track 344°. Expect RADAR vectors to RNAV (RNP)/ILS/VISUAL approach as assigned by ATC.

LANDING RUNWAYS 34L/C/R: From LIINE on track 027° to cross FOOTT between 10000 and 12000 and at 250K, then on track 030° to cross GOALZ at or above 8000, then on track 014° to cross SONDR at 6000 and at 230K. Expect RNAV (RNP)/ILS/VISUAL approach as assigned by ATC.

#### LOST COMMUNICATIONS

LANDING RUNWAY 16: At VASHN, proceed to GRIFY and execute the ILS RWY 16R approach.

LANDING RUNWAY 34: At SONDR, execute the ILS RWY 34L approach.

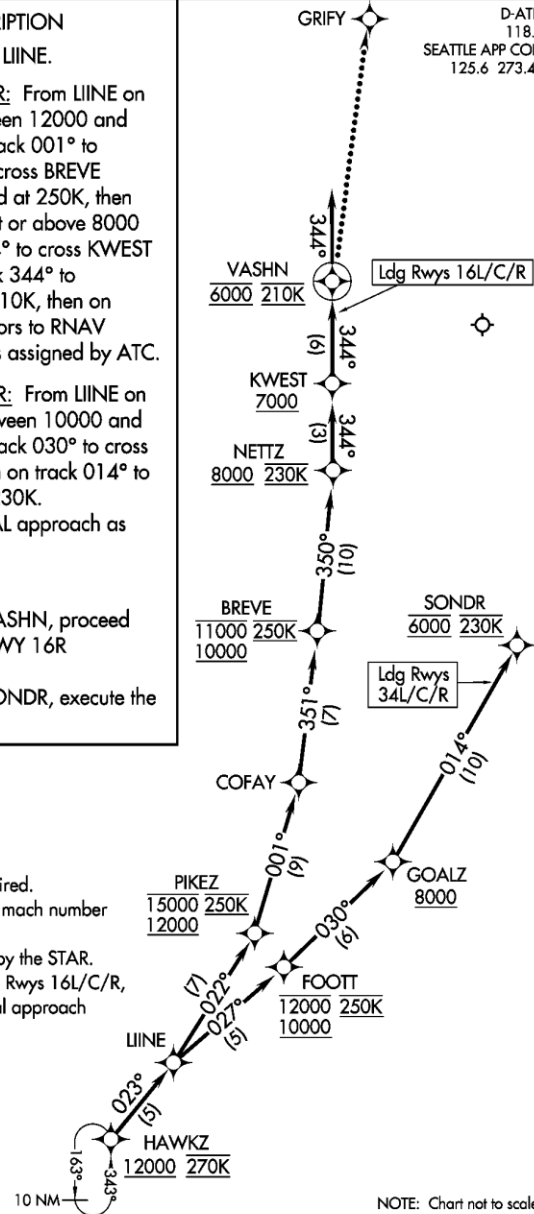
NOTE: RADAR required.

NOTE: RNAV 1.

NOTE: DME/DME/IRU or GPS required.

NOTE: Turbojet aircraft descend via mach number until intercepting 280K. Maintain 280K until slowed by the STAR.

NOTE: For non-RNP aircraft landing Rwy 16L/C/R, expect RADAR vectors to final approach course prior to VASHN.



HAWKZ SEVEN ARRIVAL (RNAV) Arrival Routes

(HAWKZ.HAWKZ7) 13SEP18

SEATTLE, WASHINGTON  
SEATTLE-TACOMA INTL (SEA)

# The new NextGen RNAV called “HAWKZ”

## The cause of the problem.

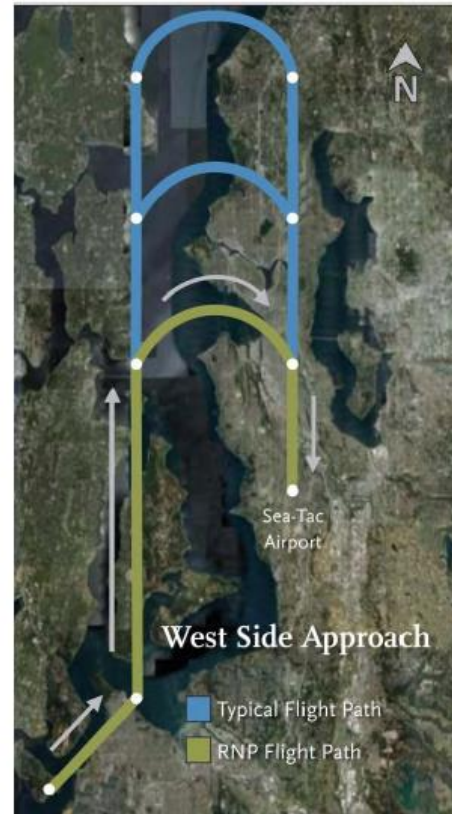




# This is what the FAA planned to happen:

## Required Navigation Performance (RNP) Approaches

- Consistent, controlled approaches
- Substantially shortened flight path length (green vs. blue)
- Noise exposure reductions with accurate routings over less noise sensitive areas (e.g. Elliott Bay)
- Reduced greenhouse emissions
- Minimized operational costs



Source: Slide presented at the Port Of Seattle April 2017 meeting.

Note that it doesn't even reflect the actual location of the RNP path, i.e. this is an old slide, and assumed all flights would turn right into Elliott Bay.

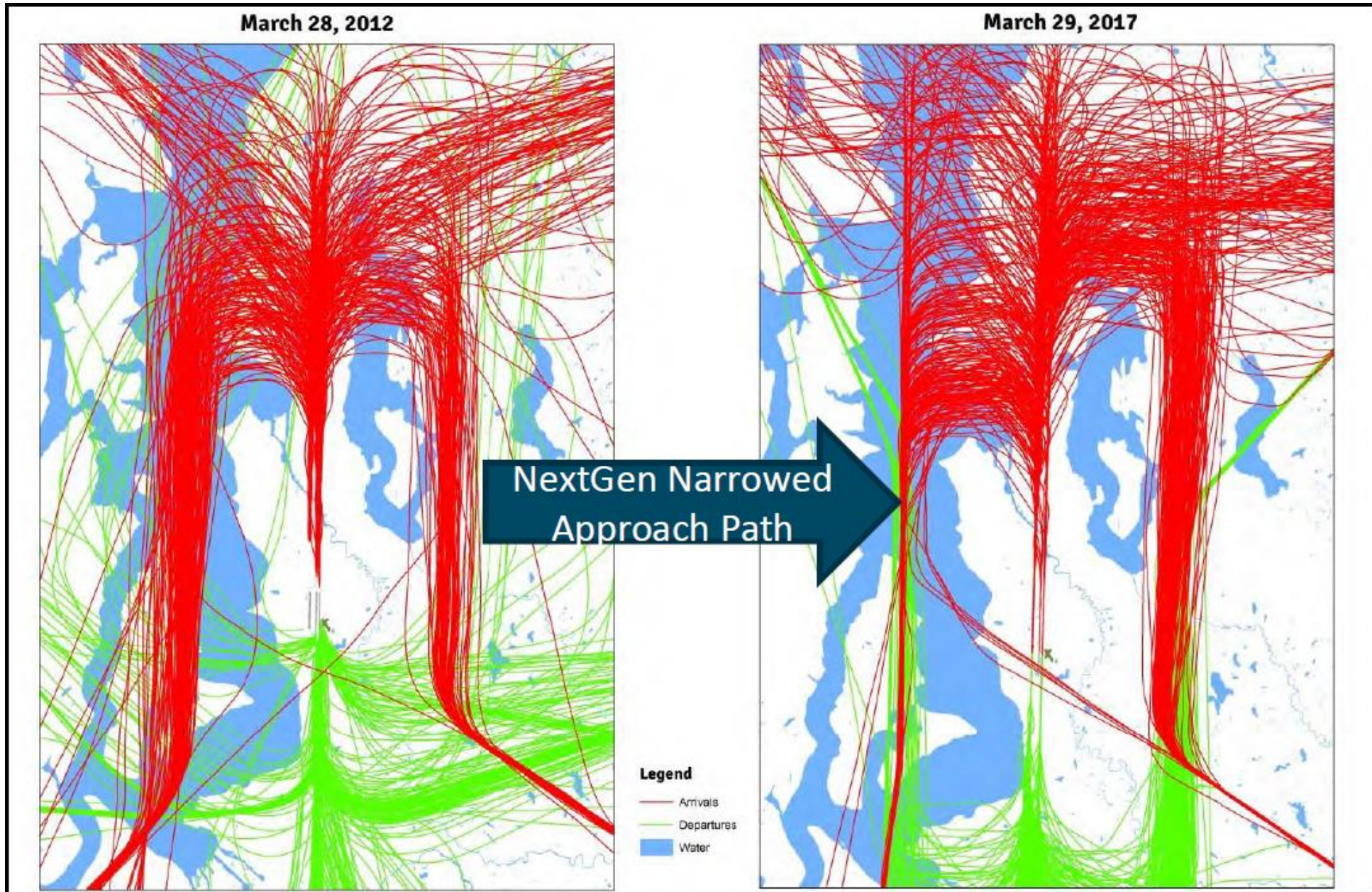
**Note also that Vashon is relegated as a “less noise sensitive area.”**



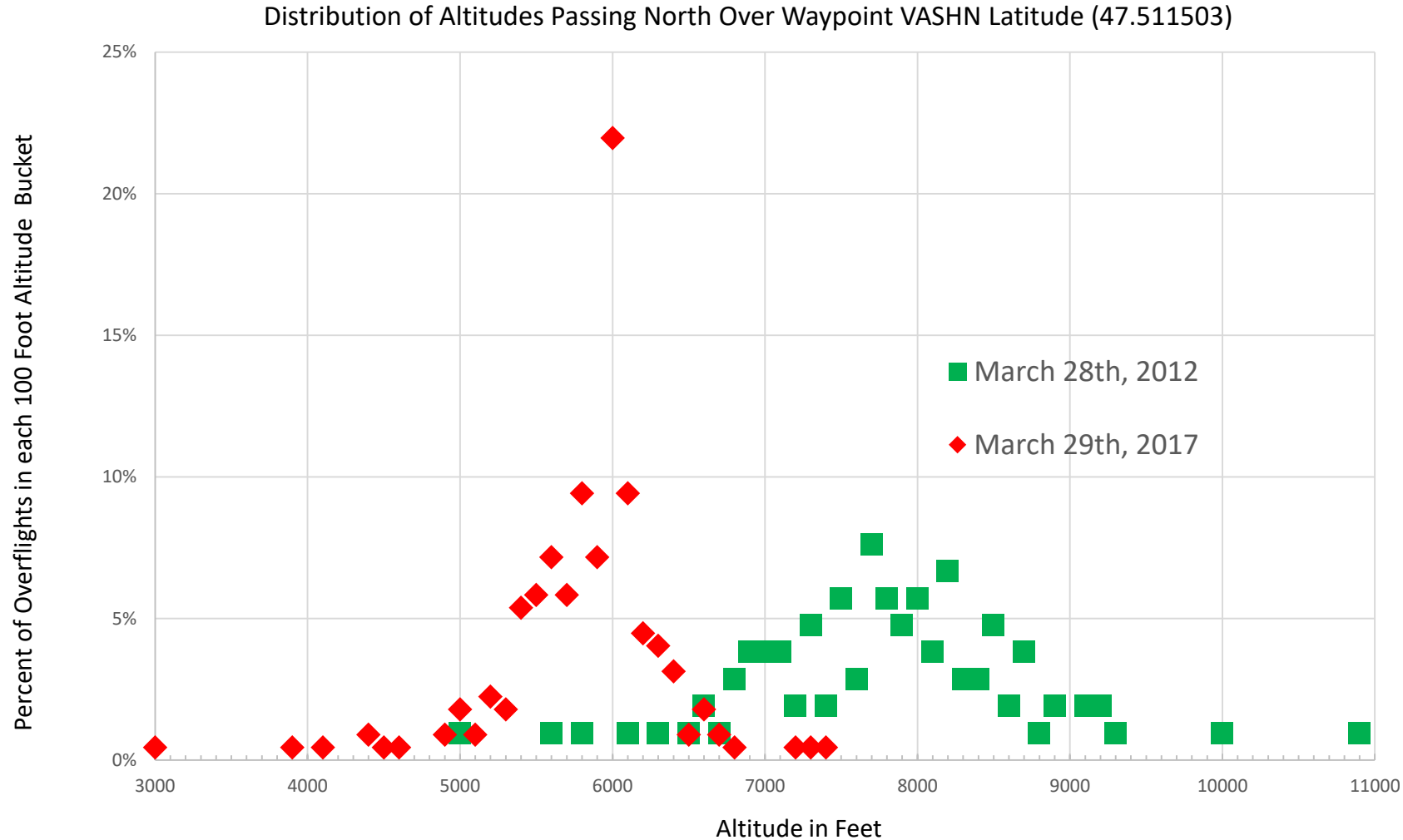
Federal Aviation  
Administration



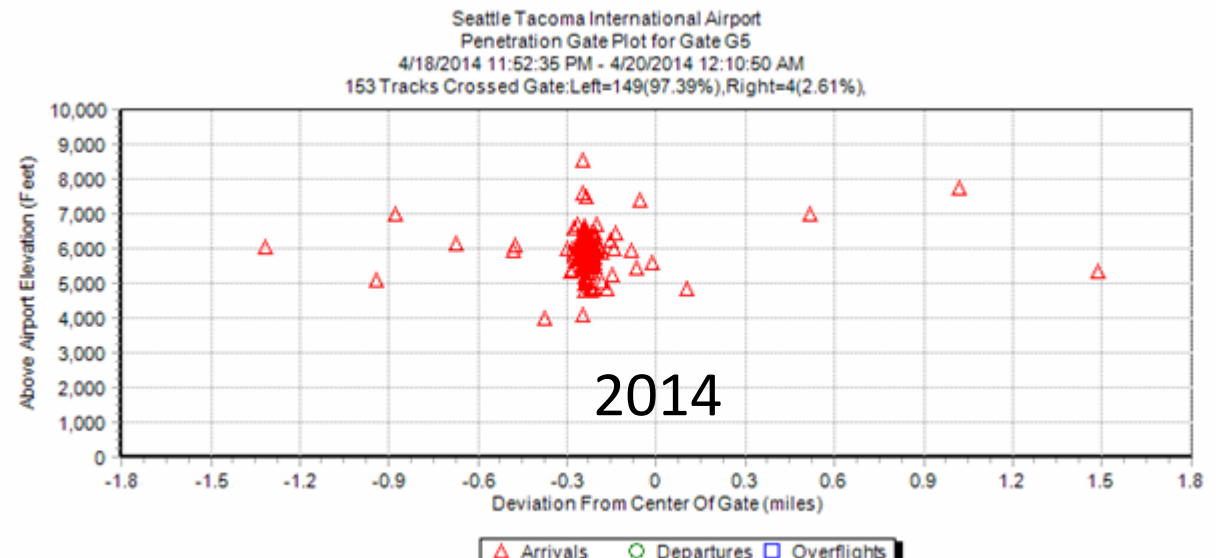
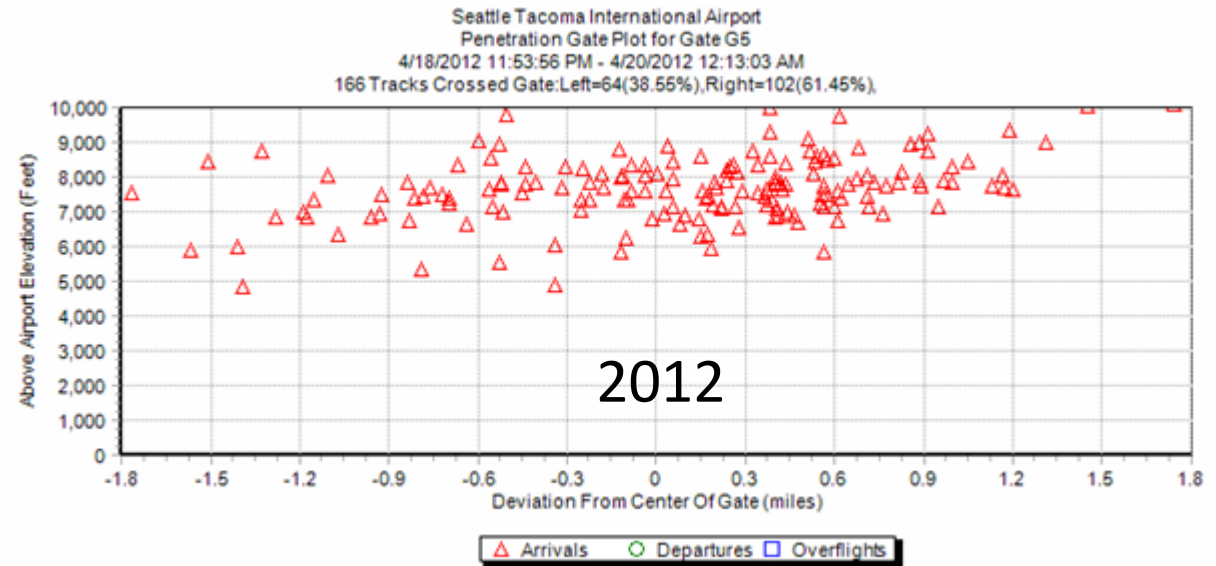
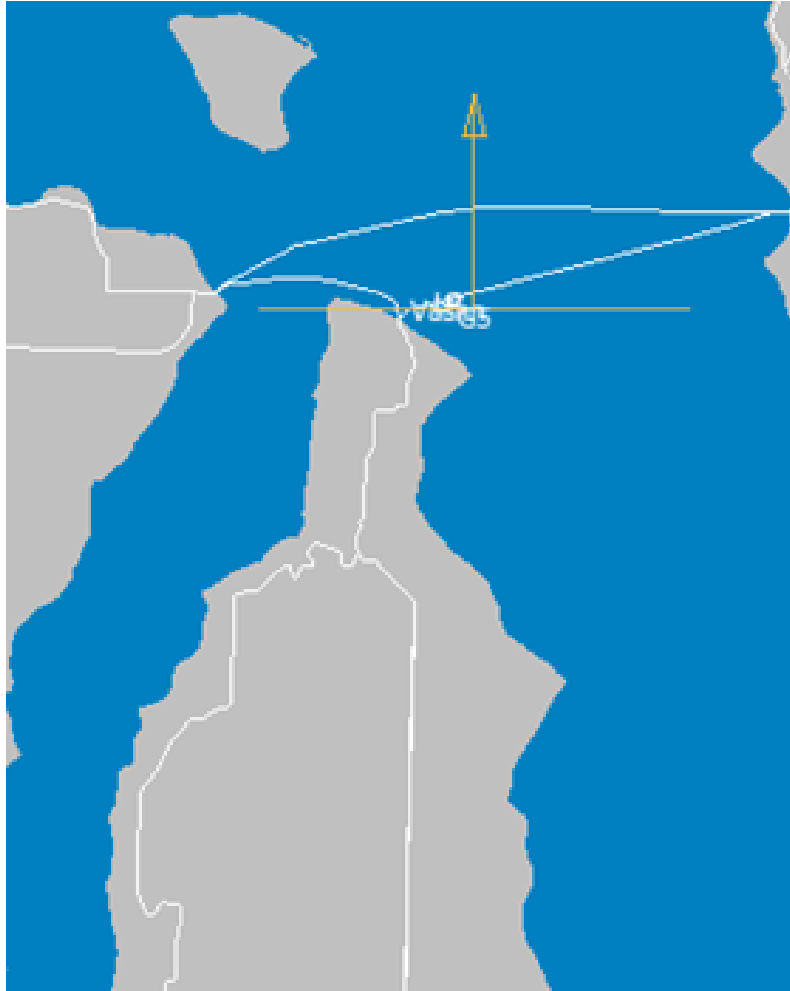
# This is what actually happened:



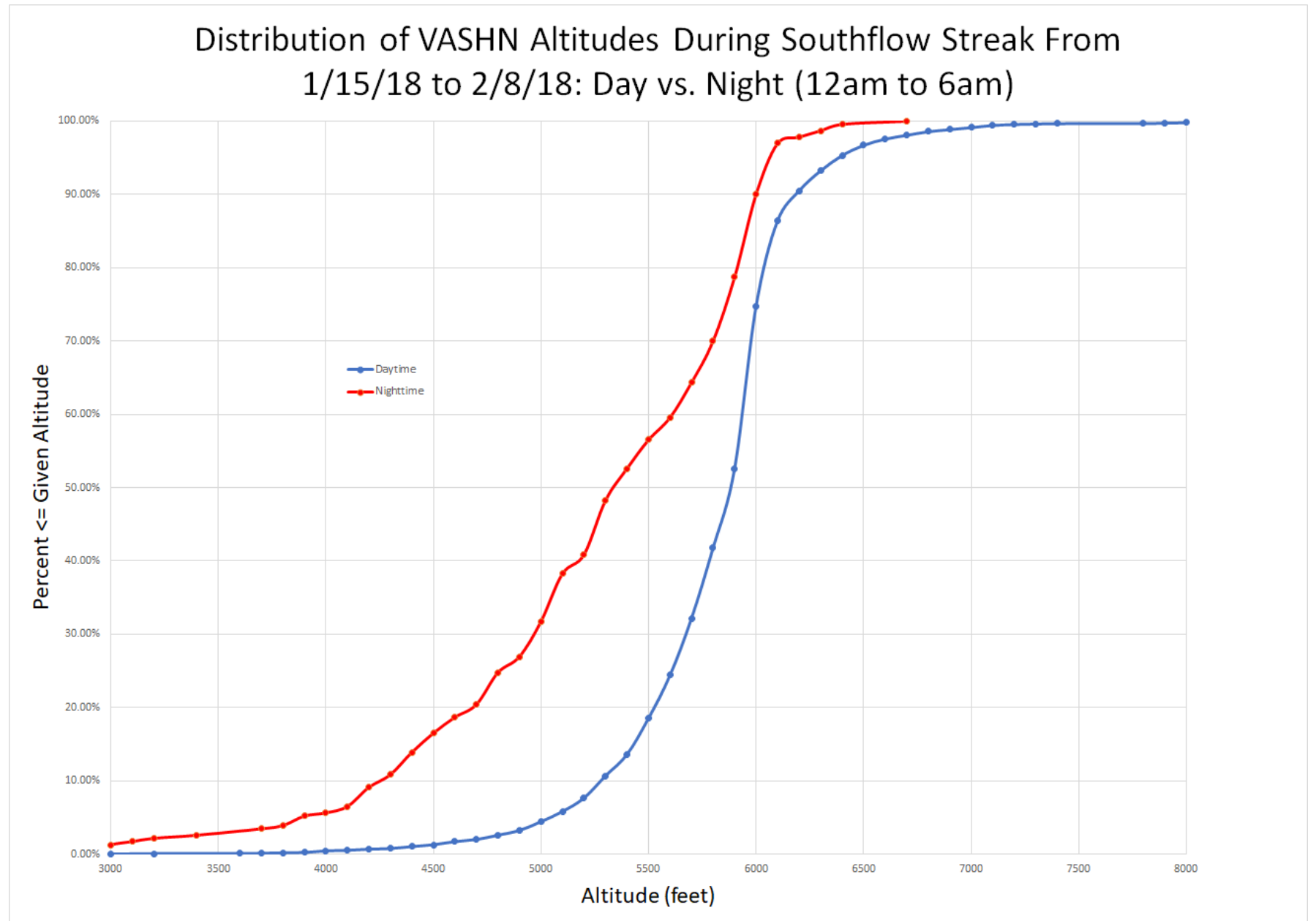
...but that's only half the story, look at what happened to the altitudes:



# Or another way to display it.



...and the  
later it gets  
the lower  
they get





# To summarize NextGen changes over Vashon

- Razor sharp downwind flight paths with every flight following the exact same path.
- The Port's own slide though shows this focusing of noise is for naught as paths randomly diverge again just North of Vashon.
- In addition to narrowing paths, flights were also substantially lowered in altitude:

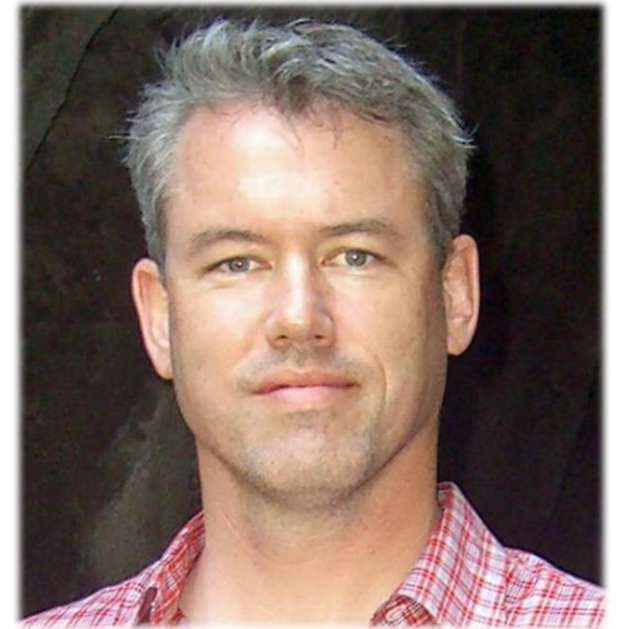
Date	% < 6000'	% between 6000' and 6100'	% >= 6100'
March 28 <sup>th</sup> , 2012	2.85%	0%	97.15%
March 29 <sup>th</sup> , 2017	51.57%	21.97%	20.46%

- When the airport is in Northflow, the situation is basically reversed, but not nearly as painful since:
  - The sheer volume of flights is two and half times less.
  - Flights are mainly from Alaska & Asia, and those from Asia are more modern aircraft that appear to be less noisy. Subjectively for instance, the B777 seems noticeably less noisy for its altitude.
  - In south flow older B737 and the A320 series with their annoying 'whine'\* noise predominate.
- Extended low and level flying over large parts of greater Seattle have become the norm.

\*See <http://a320whine.com>

# The Button:

- Created by US Air Force combat pilot turned software engineer Chris McCann.
- Seeing the injustice NextGen was wrecking upon his neighbors in La Jolla, CA, and with only cumbersome ways to register that grievance with the airport, Chris created a better way.
- The button uses the address you provide when registering to locate you, and when pressing the button it uses your WiFi and public data sources to find the airplane closest to you and automatically files a complaint with SeaTac Airport.



Airnoise.io inventor  
Chris McCann

# Button Logistics: Part 1

- We have acquired 100 buttons. They cost us \$23 each and using them requires a \$5/month paid plan on Airnoise.io to cover the processing cost.
- If you can't afford the \$23 for the button, we can provide it for free, however the \$5/month subscription will be your responsibility.
- Payment is either via check or PayPal on our web site. If you want to contribute more to help the cause, that is of course welcome. Any amount in excess of \$23 is tax deductible.
- If you think you want the button please take one and mail a check or do PayPal when you get home.
- Airnoise.io has a free option that requires clicking a button on their web site to register a complaint (up to 30 a month). If you're only occasionally bothered and in front of your computer all the time anyway, this can be a viable option. Just leave a tab open on the Airnoise.io page.

# Button Logistics: Part 2

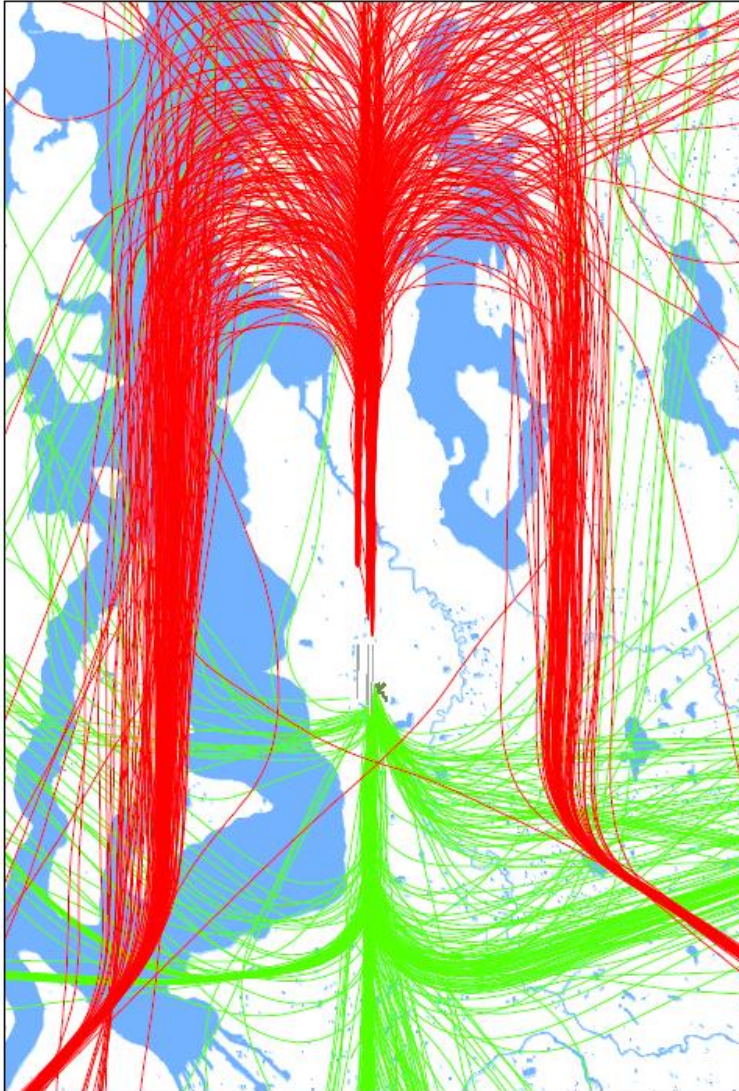
- The buttons have a “Claim Code” that you will use to bind them to your account. Please write your name and email next to your button code on the tracking sheet.
- There are printed basic instructions and a link for detailed instructions.
- I’ve created an email “button@vifs.org”. If you found setting up the button easy and would be willing to help others having problems, please let us know at that email. If you are having problem please send us email before bothering Chris. The nature of having to be connected to WiFi means that issues have to be worked out at your location, so troubleshooting in person is best.
- The paid Airnoise.io account comes with a free 30 day trial. If you find you’re not using the button much you can cancel the paid service and just use the free account. We’ll be able to transfer the button to someone else and can refund what you paid (less PayPal fee) or, or course, you could call it a contribution.
- This is lots of detail. We’ll be here as long as it takes today after the meeting getting the buttons distributed.



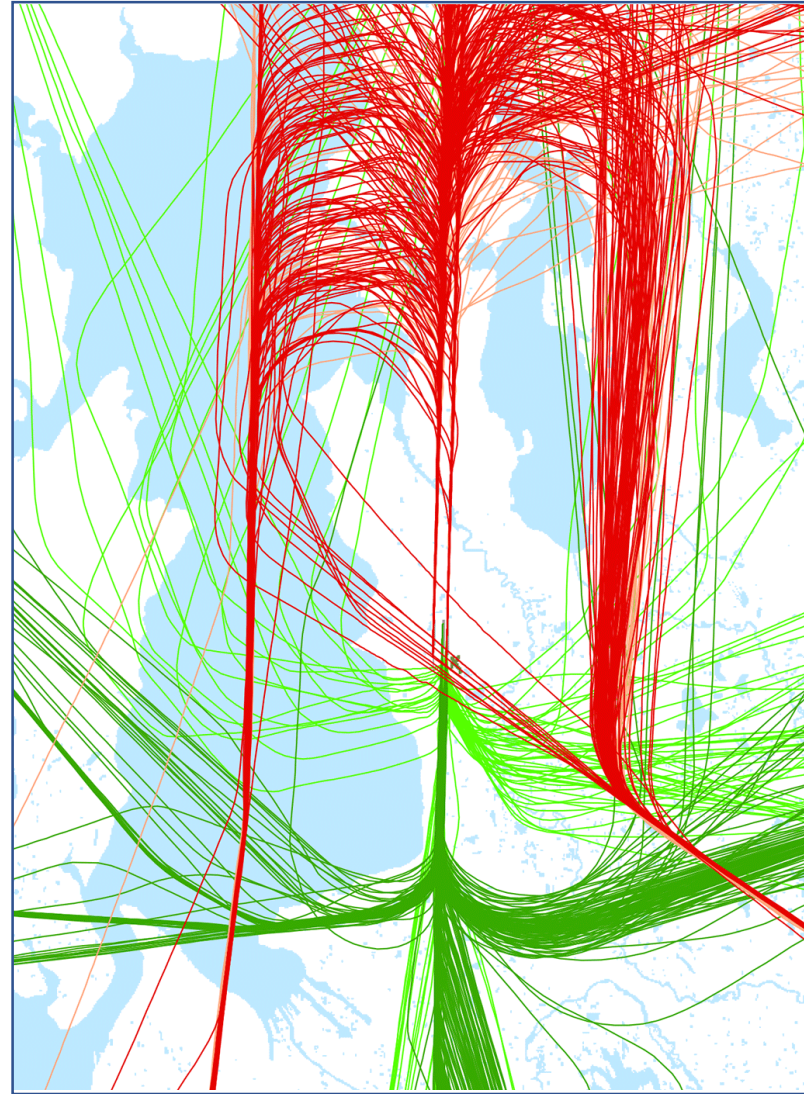
# The ominous growth of Southflow Cross-Overs

- They used to be relatively rare, but now happen more often:

March 28, 2012

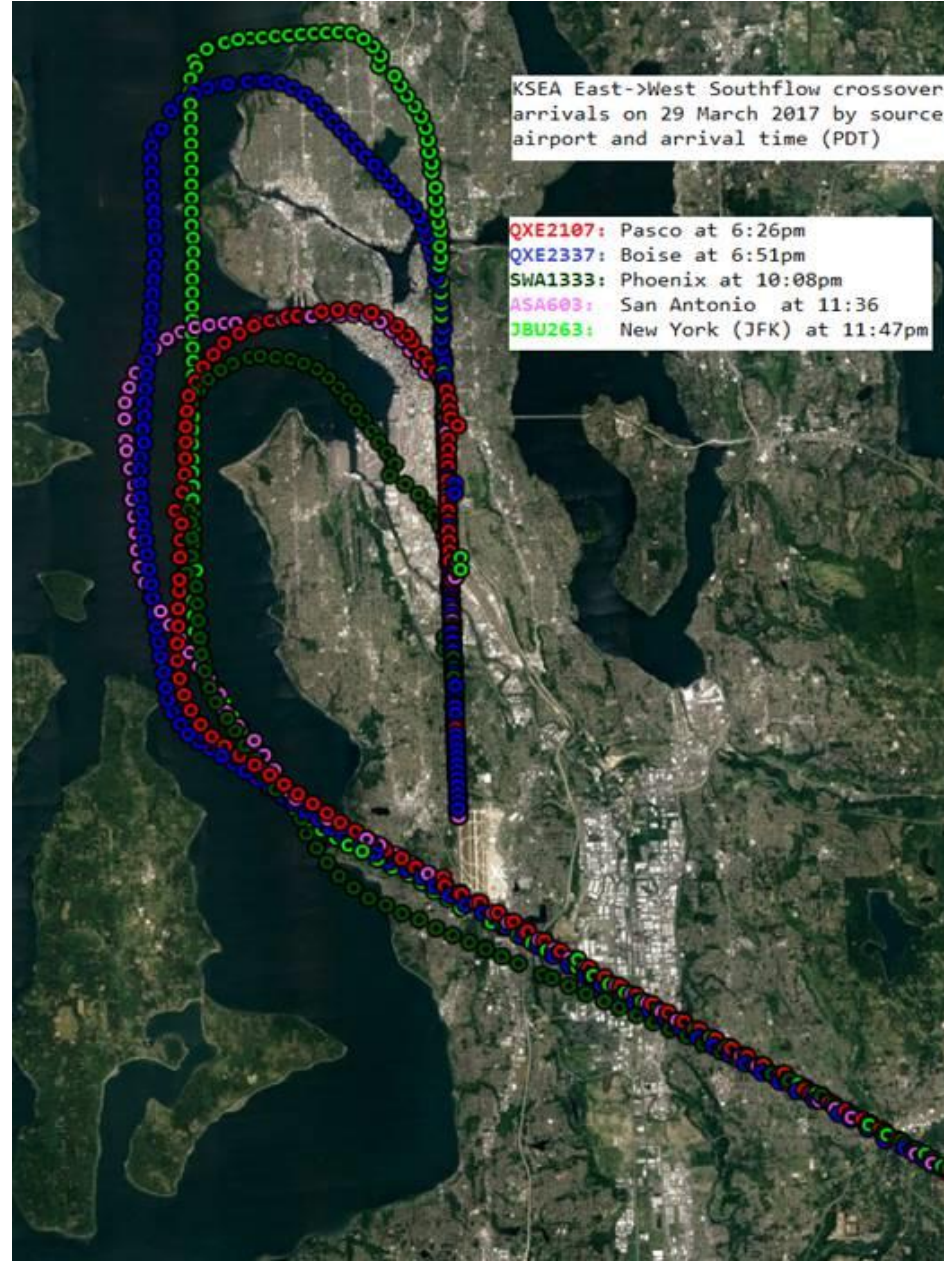


January 17, 2017

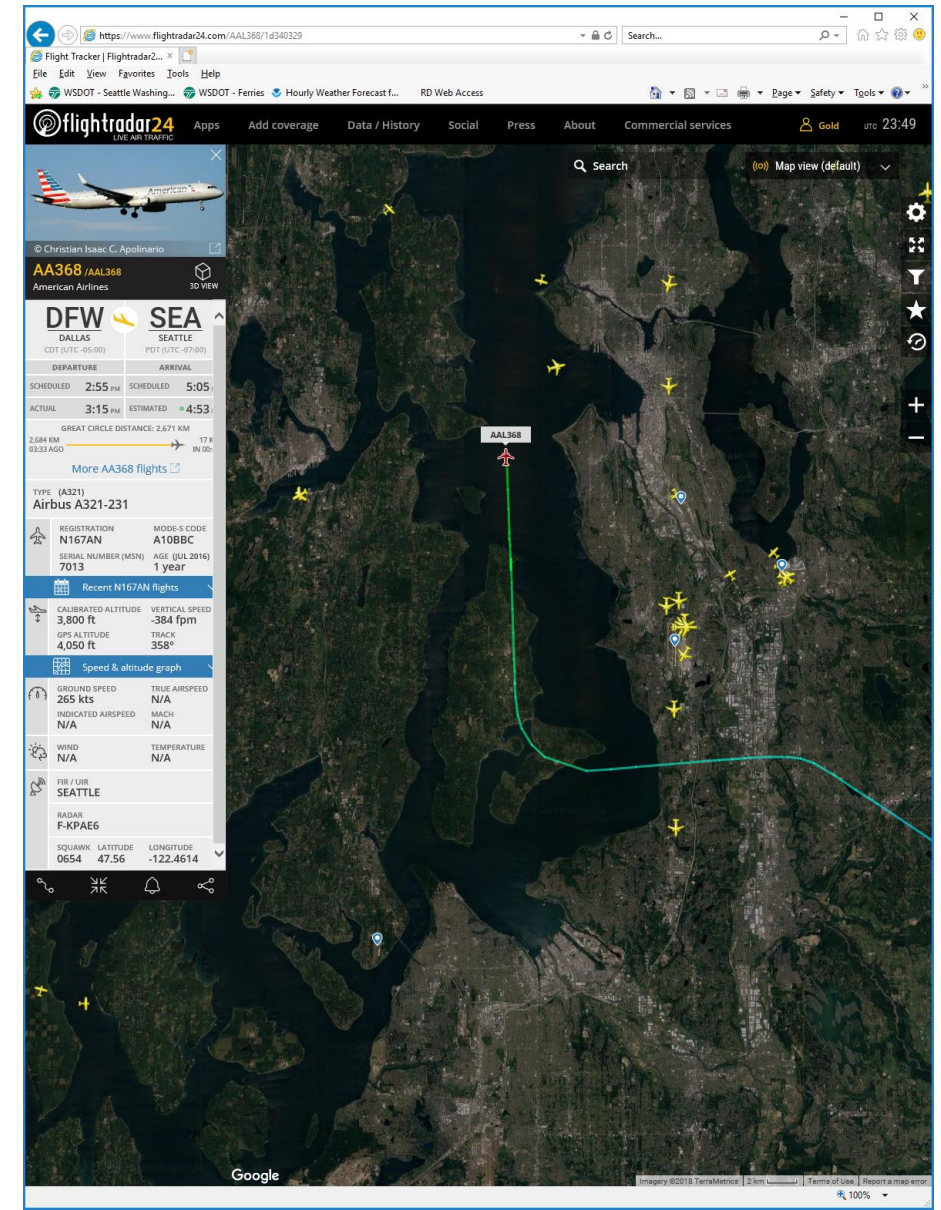




They Don't Just Occur When Busy



Some Really Demonstrate the Gravitational Pull of HAWKZ



# Why is this so Scary?

- Currently NextGen in Seattle is a failure (40% increase in fuel wasting level-offs) because RNP traffic from the West can't mix well with conventional ILS traffic from the East.
- One option is adding a NextGen approach on the Eastside, but they won't do that:

From: Reis, Mark  
Sent: Friday, September 18, 2015 7:55 AM  
To: Merritt, Mike; Ehl, Larry; Ehl, Michael  
Subject: FW: Greener Skies Incentives Response to Commissioner Bowman

Mike (Merritt), please pass on to Commissioner Bowman as well any other who may be interested.

Commissioner Bowman:

Thank you for your interest in the Greener Skies initiative begun in 2008 with the partnership of the Port, Alaska Airlines, and the FAA.

During the public session of September 8, CEO Ted Fick reported on the benefits of the program now accruing to Alaska Airlines and the community in regard to fuel savings, emissions reductions, and decreased flight times. The following information is provided in response to your subsequent inquiry as to how other airlines might be incentivized to participate in that program.

Approximately 50% of Sea-Tac arrivals approach from the southwest as well as about 10% from the northwest. These arrivals are the focus of Greener Skies. **Due to noise considerations, no approaches from the east were included in the program.** From the southwest, the Standard Terminal Arrival Route (STAR) takes the aircraft over Vashon Island and then further north (~ Shoreline) prior to making a "Uturn" and aligning with the runways, southbound....

- The other option is to just move them all over Vashon, eliminating downwind overflights of the Eastside, and drastically reducing the RNP/ILS conflict.

# Why a noise monitor petition and why to the Port?

- “Why not petition the Port to revert the NextGen flight paths?”. Because the Port can’t. Flight paths are completely under the control of the FAA.
- Why not petition the FAA to revert the NextGen flight path/procedure change?”. Because it won’t do anything. The FAA is a completely captured and unaccountable federal bureaucracy under strict control from Washington DC and industry.
- It’s important to be clear eyed and pragmatic here. The FAA didn’t pick a sparsely populated rural Island to dump all the plane noise on by accident. Our quality of life was sacrificed. Attempting to petition the FAA in Washington DC is not a productive use of our energy and resources, at least not now.
- The Port of Seattle, on the other hand, is controlled by five **elected** local officials. Further, Port of Seattle Commission races – for better or for worse – are not exactly the star of the ballot, i.e. enthusiasm counts for a lot, more than raw numbers.
- The ask of this petition is easily doable by the port. Nothing has to be invented.

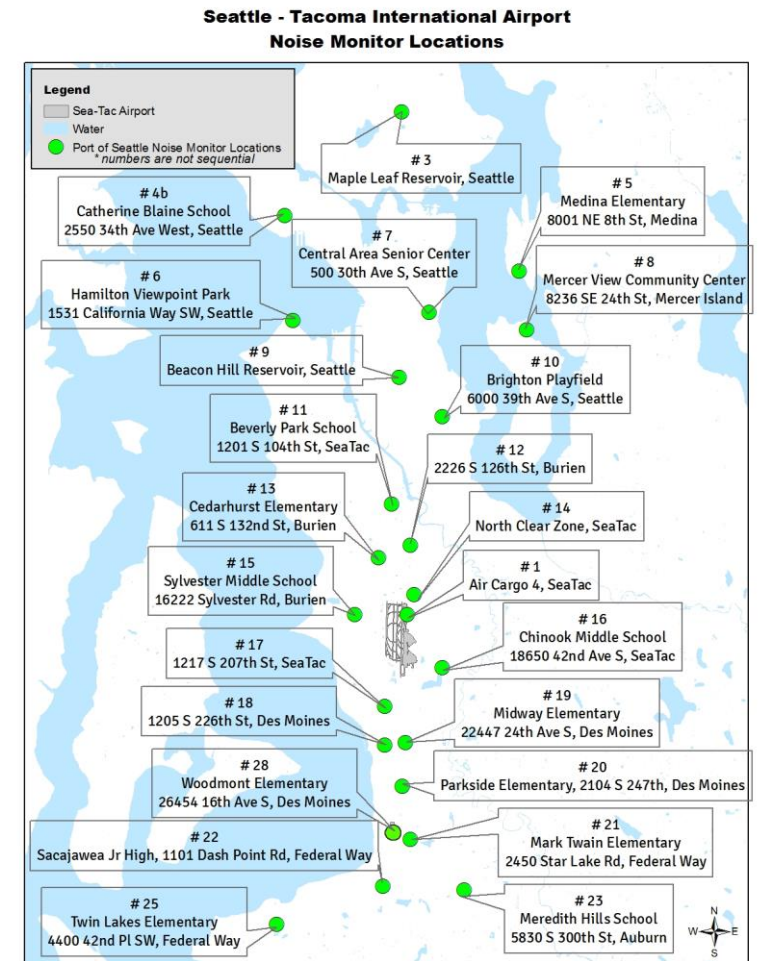


# Petition text on signature pages:

## PETITION TO THE PORT OF SEATTLE COMMISSION:

We, the undersigned residents of Vashon & Maury Islands, and other concerned citizens, demand that the Port Of Seattle augment its existing system of 24 noise monitors with two new monitors. One located as close as possible to longitude -122.4553611 on the Northern tip of Vashon Island and the other as close as possible to longitude -122.4552778 on the Southern tip of Maury Island."

Where the monitors current are and what they look like:



# Noise Monitor Petition Status:

- The petition was presented to the Port of Seattle last December. About 16 Vashon residents, and a KOMO TV news crew, were on hand at the Port Headquarters for the event.
- The final signature count was 673. The breakdown was: 574 Vashon, 77 other King County, 14 other WA, and 8 other.
- After months of constant prodding there may finally be movement.
- It might be discussed at the August 13<sup>th</sup> Port Commission meeting at Pier 69. The official agenda comes out several days before the meeting. Please hold this date. If it is going to be debated, we need as many Vashon people as possible providing public comment at that meeting.
- I will send email if it's going to be covered.

# Other Communities

- Culver City: They actually met the 60 day filing window so the merits of the case will be heard. Unfortunately this case was lost.
- Maryland: The attorney general filed a petition against the FAA last June 26<sup>th</sup>.
- Georgetown: Their case was dismissed due to timeliness, and the request for an en Banc review was denied. Only option now is the supreme court.
- Phoenix: They got an exception to the 60 day window. Dream decision:

“For the foregoing reasons, we grant the petitions, vacate the September 18, 2014 order implementing the new flight routes and procedures at Sky Harbor International Airport, and remand the matter to the FAA for further proceedings consistent with this opinion.

*So ordered.”*

Another highlight on page 15: “The idea that a change with these effects would not be highly controversial is 'so implausible' that it could not reflect reasoned decisionmaking.”



## CALIFORNIA

### L.A. is suing the FAA as residents are fed up with noisy planes in their neighborhoods



A jet descends into Los Angeles International Airport. New flight paths into LAX, redrawn by the FAA to save fuel and reduce delays, have prompted the city to sue the federal agency. (David McNew / Getty Images)

By DAKOTA SMITH | STAFF WRITER

JUNE 24, 2019 | 7:26 PM

Citing concerns about airplane noise for residents in West Adams, Mid-City and surrounding neighborhoods, the city of L.A. is suing the Federal Aviation Administration to get a court to invalidate the routes jets now use to access Los Angeles International Airport.

The lawsuit follows complaints from residents in those neighborhoods who say planes are bearing down on their homes, causing a thunderous and constant commotion.

The city's three-page petition challenges the FAA's May 2018 publication and subsequent implementation of its "North Downwind" approach procedures to LAX.

The city pushing back on what it describes as a new policy to limit public comment on flight paths. Comments submitted to the FAA's website on the proposed flight procedures now aren't taken into account, the city claims.