# Quiet Skies Puget Sound

Jeff Lewis

- Son of a Boeing engineer and a nurse/social worker; grew up on Capitol Hill and east of Kent, before moving overseas in the early 70's

- FAA Air Traffic Controller (ATC) from 1986 until 2009; repeat whistleblower on fraud and safety issues; was forced into early retirement

- After retiring, he used FOIA to compel FAA to produce key records they had hidden. Also, filed two FOIA civil complaints against FAA.

- Created a website, aiREFORM.com, in 2012, aimed at empowering people in the growing imbalance between aviation impacts and community quality of life
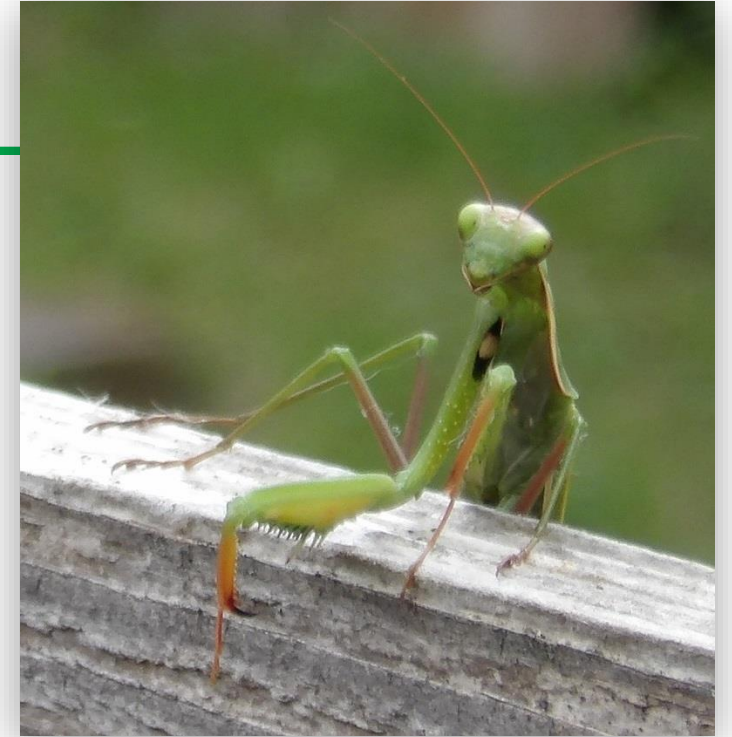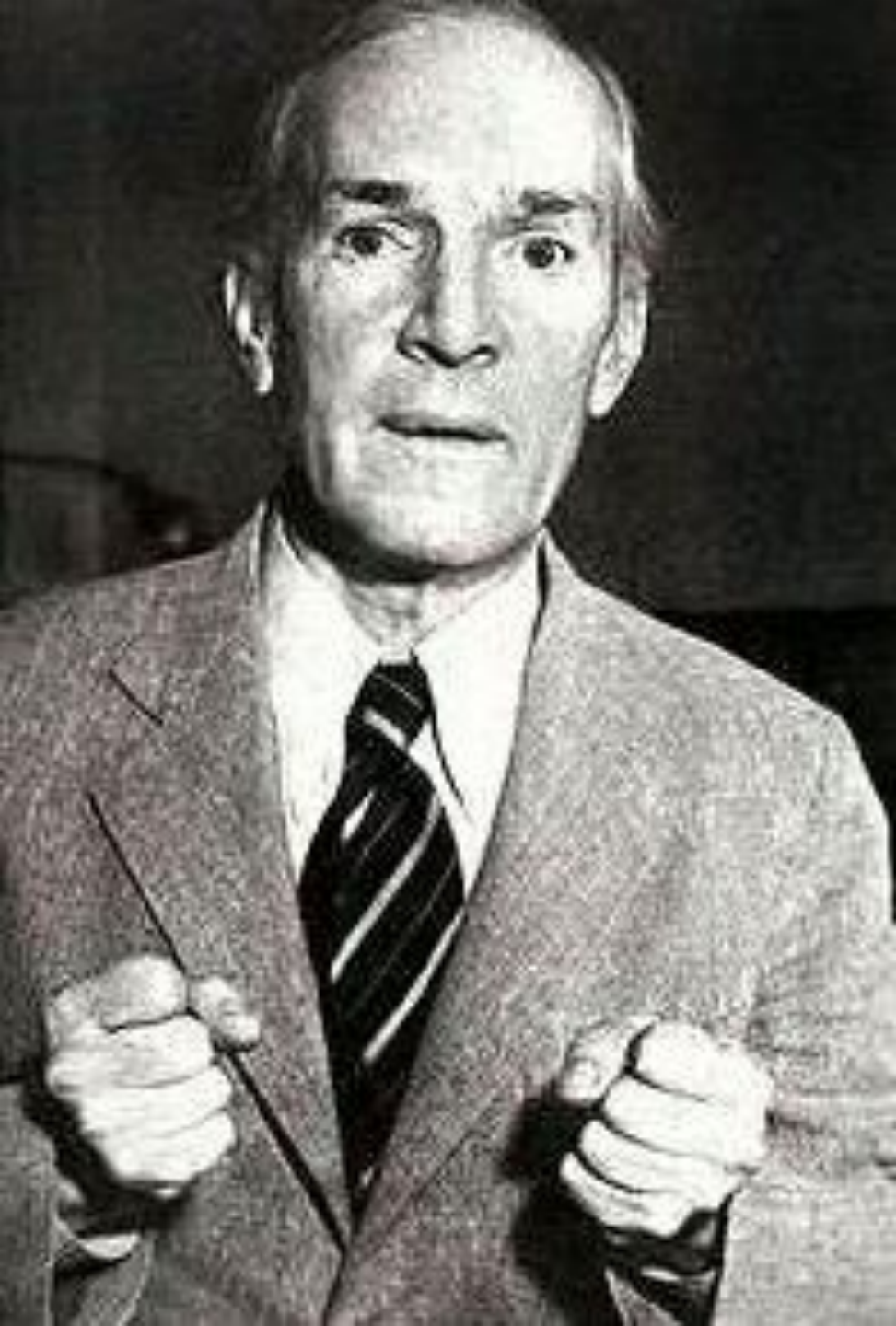
"It is difficult to get a man to understand something, when his salary depends on his not understanding it."

\- Upton Sinclair (1935)

Dissecting NextGen

A Quick Overview:

1. *What is NextGen?*

2. *Is there really a **NEED** for NextGen?*

3. *How did NextGen evolve?*

4. *What are the Main Problems with NextGen?*

5. *Restoring Balance – Fixing the Problems (How do we create aviation solutions that serve local communities and preserve quality of life?)*

Dissecting NextGen

<u>What is NextGen?</u>

- *A brandname – and nothing more*

- *The packaging of technologies that have been evolving since the 1970s, calling them 'transformative' and implying they are new, when they are already being used*

- *A focused strategy by FAA et al to convince Congress to unleash billions of dollars ... money that feathers the nests of industry players*

- *A wholesale abandonment of decades-old agreements to mitigate community impacts*

FAA's Latest Spin: What is NextGen?

Here is FAA's latest statement, pretending to answer the general question, 'What is NextGen?'

SOURCE: slide 13 of the 15-slide FAA presentation to the Port of Seattle Commission, on 4/25/2017

…and While We are on FAA's NextGen Spin…

FAA's most egregious propaganda and disinformation has been the liberal use of this graphic. It appears as a boilerplate diagram in all environmental documents.

The left zigzag diagram is utterly false. Airlines have been flying predominantly direct routes since the 1970s; nobody flies zigzags like this anymore.

**SOURCE: Exh. 1-5 in NorCal OAPM
Final EA, 7/31/2014**

Exhibit 1-5   Navigational Comparison – Conventional/RNAV/RNP

Source: U.S. Department of Transportation, Federal Aviation Administration, "Performance-Based (PBN) Brochure," October 2009.
Prepared by: ATAC Corporation, March 2013.
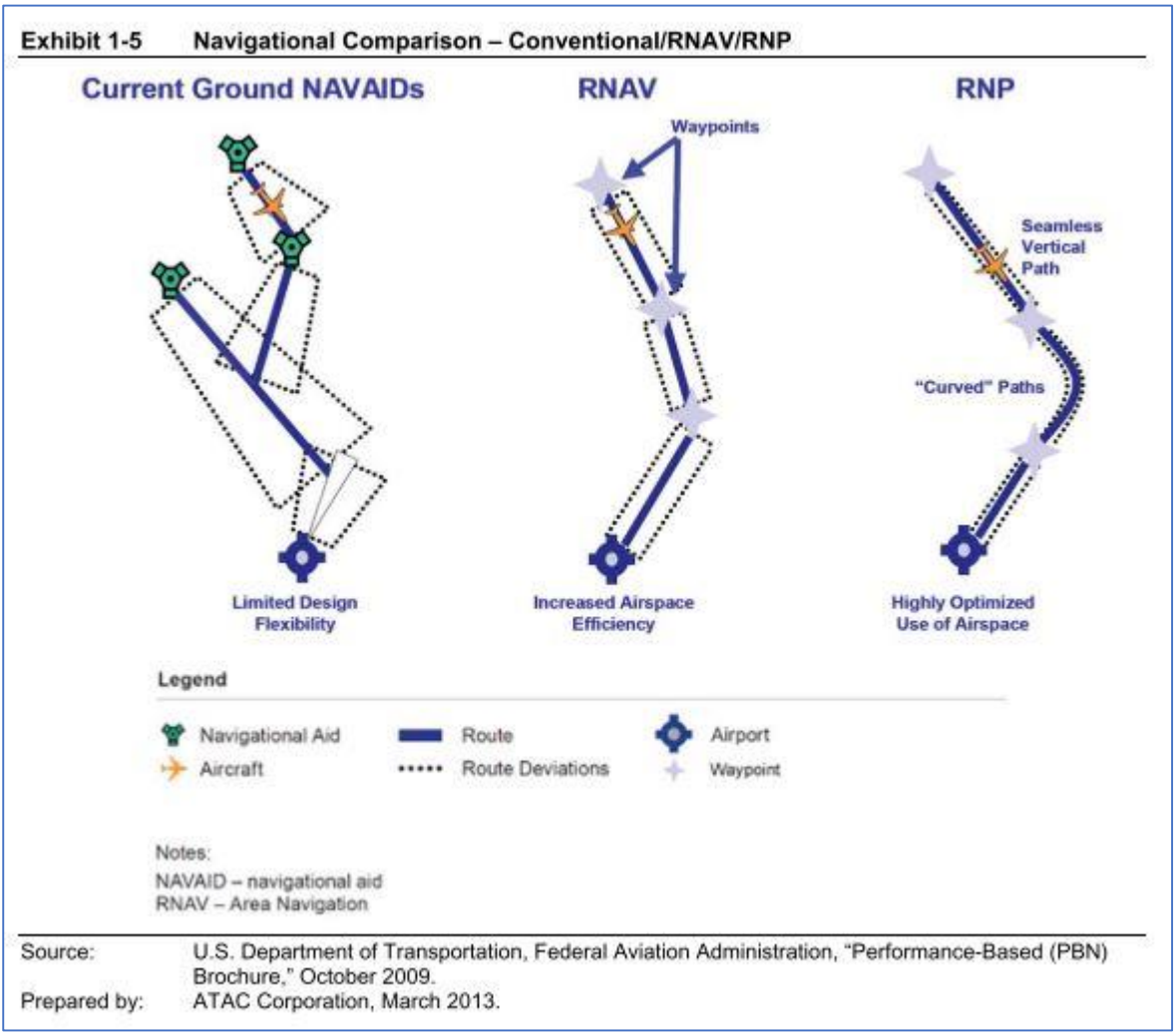
Dissecting NextGen

Is there really a *NEED* for NextGen?

- ***No:*** *the technologies are already largely in use (direct routes, digital radar enhancements, RNAV/RNP, TMU software, etc.)*

- ***No:*** *nearly all aviation sectors have declined severely in the last 20-years*

- ***No:*** *the only airspace that is 'increasingly congested/complex' could be easily remedied with smart capacity limits and targeted de-hubbing*

- ***Yes:*** *if you want to tap a large federal source of funds, to churn up corporate profits & dividends*

fac	PEAK year	PEAK ops	2016 v PK	1991	2016 vs 1991	25yr ave annual change	Annual Pop. change
JFK	2016	450,125	0%	280,105	61%	2.4%	0.9%
SFO	2016	435,129	0%	391,063	11%	0.4%	1.5%
DCA	2016	292,835	0%	241,743	21%	0.8%	2.3%
CLT	2013	531,137	-2%	374,732	38%	1.5%	2.6%
FLL	2005	262,382	-4%	135,208	87%	3.5%	1.6%
EWR	1997	448,634	-6%	359,199	17%	0.7%	0.9%
LGA	2006	394,850	-7%	311,213	18%	0.7%	0.9%
SEA	2000	440,078	-7%	329,545	24%	1.0%	2.5%
ATL	2007	979,683	-9%	566,684	57%	2.3%	2.1%
HNL	1995	269,929	-9%	261,437	-6%	-0.2%	0.9%
DEN	2010	631,621	-10%	453,065	25%	1.0%	2.7%
LAS	2007	555,895	-11%	292,031	69%	2.8%	1.4%
ORD	2004	968,025	-11%	776,283	11%	0.4%	0.2%
MCO	2007	345,048	-11%	246,131	25%	1.0%	2.7%
LAX	2000	764,272	-12%	590,374	14%	0.6%	0.9%
OEP35	2005	#######	-12%	11,619,793	11%	0.4%	0.7%
SAN	1995	219,140	-15%	181,277	3%	0.1%	1.3%
PHX	2005	505,946	-18%	373,454	12%	0.5%	1.6%
BWI	2001	291,418	-20%	226,207	3%	0.1%	0.0%
MSP	2004	505,470	-21%	309,285	29%	1.2%	1.5%
BOS	1998	480,915	-21%	410,538	-7%	-0.3%	1.6%
MIA	1995	498,786	-21%	398,892	-1%	0.0%	2.1%
IAH	2007	589,098	-22%	265,899	73%	2.9%	1.9%
DFW	1995	863,073	-23%	719,727	-7%	-0.3%	1.7%
DTW	2005	508,511	-24%	344,807	12%	0.5%	-1.0%
MDW	2004	280,341	-24%	199,878	7%	0.3%	0.2%
PHL	2005	508,687	-25%	317,748	19%	0.8%	0.5%
PDX	1999	275,426	-26%	191,940	7%	0.3%	1.7%
SLC	2005	379,291	-28%	217,652	25%	1.0%	0.7%
TPA	2000	230,852	-28%	172,251	-3%	-0.1%	2.0%
MEM	2003	361,523	-44%	258,506	-22%	-0.9%	0.3%
IAD	2005	476,134	-46%	214,285	19%	0.8%	2.3%
STL	1997	482,293	-63%	367,971	-51%	-2.0%	-0.2%
CLE	2000	301,725	-64%	198,510	-45%	-1.8%	-0.4%
PIT	1997	423,061	-70%	361,228	-65%	-2.6%	-0.1%
CVG	2004	506,725	-74%	280,925	-53%	-2.1%	0.1%

- *Despite claims of massive growth and congestion, aviation activity has declined severely in the last 20-years.*

- *The data in this table ranks declines for Commercial Operations at the OEP-35 airports.*

- *Notice the middle column, 2016 vs Peak Year. The top group (bright green fill) have 2016 ops levels within 10% of Peak Year; the bottom group (pink fill) have declined 10% to 74% from Peak Year.*

- *The column at the far right (yellow) adds annual population change rates.*

- *Facilities marked gold on red fill represent key hubs used by the airlines, for which abundant news and activism has been generated, related to noise and pollutant impacts.*

Increasingly Complex & Congested?

- ***Not really.*** *When you consider how far operational levels have declined below peak year, for all airports.*

- ***Not really.*** *When you get into the inner workings and recognize how much good technology has evolved (over many decades) for safety, efficiency, and task automation*

- ***FACT:*** *all airspace that is said to be 'increasingly congested/complex' could be easily remedied with smart capacity limits and targeted de-hubbing .. SEA example*

Dissecting NextGen

How did NextGen evolve?

- *Starting in 1983:* Airline bankruptcies & mergers

- *1990s: GPS & 'FreeFlight'*

- *9/11/2001 Aftermath*

- *12/12/2003: legislation forming JPDO*

- *Early 2006: 'NextGen' & 'An Inconvenient Truth'*

- *2/14/2012: the 'CatEx' Disaster*

- *...and the Beat Goes On*

Evolution of NextGen: 1983 to present

AMERICAN AIRLINES:

Eastern Airlines	MAR-1989: Ceased operations; American later acquired routes out of Miami
America West Airlines	JUN-1991: Filed bankruptcy; emerged in August 1994; merged with US Airways in 2005
Trans World Airlines	JAN-2001: Filed bankruptcy as part of an acquisition by American Airlines
US Airways	AUG-2002: Filed bankruptcy; emerged in March 2003
US Airways	SEP-2004: Second bankruptcy filing; emerged in September 2005, in conjunction with its acquisition by America West
Mesa Airlines	JAN-2010: Filed bankruptcy; emerged March 2011; operates as a regional feeder for both United and American
American Airlines	NOV-2011: Filed bankruptcy; merged with US Airways in late 2013 as American Airlines Group; includes parent company AMR Corporation and subsidiary American Eagle Airlines

SOUTHWEST AIRLINES:

ATA Airlines	APR-2008: Ceased operations; all assets were acquired by Southwest Airlines

DELTA AIR LINES:

Pan American World Airways	JAN-1991: Ceased operations; most assets purchased by Delta Air Lines
Northwest Airlines	SEP-2005: Filed bankruptcy; emerged in May 2007; merged with Delta Air Lines
Delta Air Lines	SEP-2005: Filed bankruptcy; emerged in April 2007; bankruptcy included subsidiary Comair
Pinnacle Airlines	APR-2012: Filed bankruptcy; emerged May 2013 as subsidiary of Delta Air Lines; name changed to Endeavor Air

UNITED AIRLINES:

Continental Airlines	SEP-1983: Filed bankruptcy; emerged June 1986 after merger with PEOPLExpress, Frontier Airlines, and New York Air
Continental Airlines	DEC-1990: Second bankruptcy filing; emerged in April 1993
United Airlines	DEC-2002: Filed bankruptcy; emerged in February 2006
Mesa Airlines	JAN-2010: Filed bankruptcy; emerged March 2011; operates as a regional feeder for both United and American
Continental Airlines	OCT-2010: Merged with United Air Lines

Evolution of NextGen: 1990s

- *GPS became operational in late 1993.*

- *With the implementation of GPS, a new FAA program called 'FreeFlight' was initiated.*

- *FreeFlight was a precursor to NextGen, preceding the use of the NextGen brandname by a full decade.*

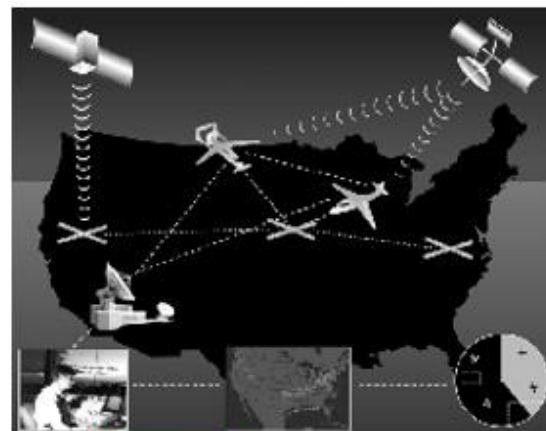- *The utility of civilian GPS was greatly enhanced in May 2000, when 'Selective Availability' was removed.*

Affordable Alternative Transportation

Excerpt from NASA news release, July 1996

AGATE[1] -- Revitalizing General Aviation

NASA News Release, FS-1996-07-02-LaRC | July 1996

Up to 50 helicopters equipped with AGATE-designed avionics will participate, proving communications, navigation and surveillance concepts, some integrated in flight for the first time. It is expected that more than 1,400 hours of flight data on operational use and human factors will be collected during the Olympic Games.

Most of the critical flight operations will be conducted in "uncontrolled" air space outside Atlanta's radar coverage area, hence the need for predetermined flight pathways. While flying over concrete highways on the ground, selected helicopters will fly electronic "highways in the sky," shown on an onboard computerized map of the Atlanta area. The composite image will be generated on the helicopter using an onboard database and replicated on ground consoles. The pilot sees GPS-based position updates provided via digital radio data links.

This technology effort will aid participating pilots in the safe and efficient conduct of their missions and additionally benefit ground personnel by indicating the precise location of aircraft to facilitate their timely deployment to satisfy high priority transportation and emergency response needs during the Olympics.

AGATE Free-Flight operating environment increases airspace and airport access, safety, and all weather reliability.

[1] AGATE (Advanced General Aviation Transport Experiments) was a consortium of Approximately 70 U.S. aviation-related organizations and companies including NASA, the Federal Aviation Administration (FAA), private industry, academia, and non-profit organizations are striving to reverse the decline of General Aviation (GA).

Evolution of NextGen: 9/11 Aftermath

- *Much of the economy, including Commercial Aviation, was chilled. Airlines saw a huge and immediate downturn in passengers and flight operations*

- *BTS data for 2004 shows a full recovery to the passenger and flight operations levels that existed prior to 9/11*

- *But, during the economic slowdown, Congress was under pressure to create stimulus spending*

- *In Washington, DC, in the full spirit of 'Disaster Capitalism', there emerged a wild rush to secure new funds and evolve new programs; FreeFlight thus morphed into NGATS.*

Evolution of NextGen: 12/12/2003

Vision 100: Historical Review of the Century of Aviation Reauthorization Act (P.L. 108-176)

Environmental Streamlining.

Vision 100 included provisions that can be described as proposals to accelerate the completion of major airport safety and capacity projects by streamlining the environmental review process. The act designated the DOT as the lead agency in the project review process and directed the Secretary to develop a coordinated process for major airport capacity projects that will assure simultaneous review by all government agencies. Much from the House bill, which included the most extensive environmental streamlining provisions, was included in Vision 100. The act provided detailed information on how environmental reviews are to be conducted to reduce the amount of time and number of reviews required for new airport project approval.

Coordination of Research and Development Efforts.

Vision 100 requires that a Next Generation Air Transportation System Joint Planning and Development Office be established within FAA, with an annual budget of $50 million for FY2004 through FY2010, to coordinate aviation and aeronautics research programs in an effort to develop more effective and directed research programs by coordinating goals, priorities, and research activities across the Federal government and with the aviation industry to facilitate technology transfer.

Source: 20040728.. Vision 100 - An Overview of the Century of Aviation Reauthorization Act (wikileaks, copy of CRS report re P.L. 108-176, 21p), downloaded 4/8/2017 from: http://wikileaks.org/wiki/CRS-RL32498 CRS-10

Laid the foundation for 'CatEx', eventually passed in early 2012

JPDO was formed, to develop NGATS (name evolved to 'NextGen ~2006)

Evolution of NextGen: March 2006

FAA's '2005 Annual Performance Report' contains the first uses of the NextGen brandname; the word appears 8 times in the 36-page report.

President George W. Bush's FAA Administrator, Marion Blakey, served from 2002-2007. Immediately after retiring, she became CEO at the Aerospace Industries Association (lobbyist AIA).

Air Traffic Organization | **2005 Annual Performance Report**
Moving America Safely

Foreword by the Administrator, 'Federal Aviation Administration
Marion C. Blakey

To the Congress of the United States of America:

America's aviation system is in one of its safest periods in history, and we continue to improve each and every day. That's the essence of the second Annual Performance Report that I am proud to present to you.

The 35,000 members of our Air Traffic Organization deserve a lot of credit for our safe skies. The ATO's air traffic controllers, managers, engineers, programmers and administrative staff work tirelessly to serve our customers by ensuring that the national airspace system flows at maximum capacity with minimum delay.

We're looking ahead to tomorrow today, by laying the groundwork for the Next Generation Air Transportation System. It'll have all the latest technologies and operational improvements that only American ingenuity could develop. The NextGen system holds tremendous promise, but it won't come for free. That's why we're staying focused on the bottom line.

Like the aviation industry we serve, the FAA continues to face challenges in a post 9/11 world. There continues to be a disconnect between Airport and Airway Trust Fund revenues and FAA costs. A recent GAO report said our operating costs will "significantly outpace available funding" through 2010. As a result, we are under significant pressure from our customers to reduce costs and improve performance.

That is why we believe that matching costs with revenues is the right way to go. It'll give us a funding stream that is more rational, stable, and equitable. The taxes funding the Airport and Airway Trust Fund expire on Sept. 30, 2007, so now is the time to seize the opportunity to change our funding mechanism. It can't wait. Millions of Americans rely on us to get them where they're going.

I encourage you to read our report, and you'll see why there has never been

Marion Blakey climbs aboard an Agency jet.
Photo: Ian Bradshaw, courtesy of University of Mary Washington

Evolution of NextGen: 5/24/2006

- *The issue of CO_2 as a greenhouse gas was popularized with the release of former VP Gore's documentary movie and book.*

- *Very soon after, NextGen sales pitches emphasized 'reducing greenhouse gases'.*

- *It was a way to manipulate public consent, pitching noise against climate change; FAA-industry thus framed the noise-impacted as indifferent to climate change.*
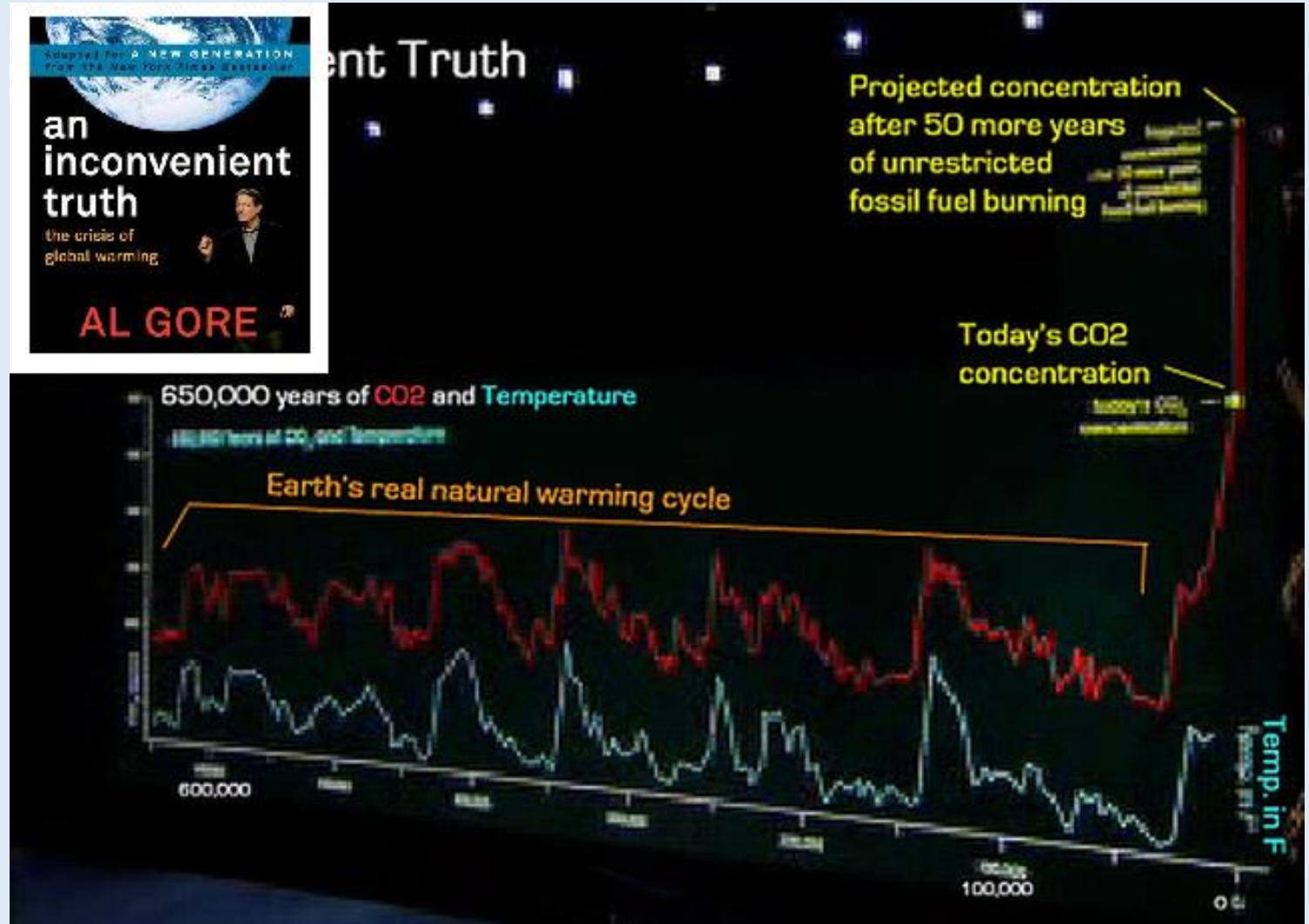
Evolution of NextGen: 2/14/2012

- *After months of delay, Congress did as they always do: quickly shoved through passage of thousands of pages 'in the dark'; the FAA Modernization and Reform Act of 2012 thus became law*

- *Section 213 included expanded use of the 'categorical exclusion' or 'CatEx', a way to shortcut environmental review and bypass citizen engagement*

- *Section 213 alone has proven to be a disaster for communities*

- *Other sections of the same law included foggy language related to drones, another huge FAA problem area*

(c) **Coordinated and expedited review** –

(1) In general –
Navigation performance and area navigation procedures developed, certified, published, or implemented under this section shall be presumed to be covered by a categorical exclusion (as defined in section 1508.4 of title 40, Code of Federal Regulations) under chapter 3 of FAA Order 1050.1E **unless the Administrator determines that extraordinary circumstances exist with respect to the procedure.**

(2) NextGen procedures –
Any navigation performance or other performance based navigation procedure developed, certified, published, or implemented that, in the determination of the Administrator, would result in measurable reductions in fuel consumption, carbon dioxide emissions, **and noise**, on a per flight basis, as compared to aircraft operations that follow existing instrument flight rules procedures in the same airspace, shall be presumed to have no significant affect on the quality of the human environment and the Administrator shall issue and file a categorical exclusion for the new procedure.

Evolution of NextGen: ..and the Beat Goes On

April 18, 2015:

Legislation tainted by Rep. Bill Shuster's relationship with airline lobbyist, critics say

By Tracie Mauriello / Post-Gazette Washington Bureau | April 18, 2015 12:00 AM

Rep. Bill Shuster

Shelley Rubino

WASHINGTON — By day, U.S. House Transportation and Infrastructure Committee Chairman Bill Shuster worked on a bill to overturn rules requiring airlines to include taxes and fees in advertised airfares.

By night, he wined and dined a top airline industry lobbyist whose employer was his 11th largest campaign contributor.

The eight-term Blair County Republican acknowledged the relationship Thursday and said there's no conflict of interest because girlfriend Shelley Rubino, vice president of government affairs for Airlines for America, doesn't directly lobby him.

Shuster lounges poolside with airline lobbyists as he pursues FAA bill

It's the latest example of the Transportation Committee chairman's coziness with the airline industry.

By Anna Palmer, Jake Sherman and John Bresnahan, Politico.com | 02/23/16

February 23, 2016:

House Transportation Committee Chairman Rep. Bill Shuster (left), accompanied by House Speaker Paul Ryan, speaks during a news conference on Capitol Hill Nov. 3, 2015. | AP Photo

On Feb. 10, Nick Calio, head of the nation's top airline trade group, Airlines for America, testified before Rep. Bill Shuster's House Transportation and Infrastructure Committee. The topic was a top priority for both men: A bill to overhaul the Federal Aviation Administration, most controversially by putting air traffic control in the hands of an entity favorable to the airlines.

Two days later, Shuster's committee approved the measure. And the week after that, he and Calio escaped to Miami Beach, Florida, with Shelley Rubino, an Airlines for America vice president who is Shuster's girlfriend.

The three lounged by the pool and dined together during festivities tied to Rep. Mario Diaz-Balart's (R-Fla.) annual weekend fundraising trip. Attendees said they looked as if they were traveling in a pack.

Dissecting NextGen

What are the Main Problems with NextGen?

1. *Route Concentration:* repetitive noise creates Noise Canyons, Noise Ghettoes, even far from airports

2. *Hub Concentration:* enables the remaining airlines to build up inefficient hubs, to the detriment of other airports ... and all communities lose

3. *Increasing 'Runway Throughput'* - will solidly intensify noise, air pollutant, and greenhouse gas impacts by aviation

4. *Closer → Lower → Louder*

5. *Fully ignores the root problem:* airlines want infinite capacity, and refuse to embrace limits and smart planning

Noise Canyons & Noise Ghettoes

- *Repetitive noise creates Noise Canyons & Noise Ghettoes – formerly thriving neighborhoods become unlivable*

- *Across the nation, two extreme examples include Belmont (Boston) and the Grand Avenue neighborhoods in Phoenix*

- *Related to Sea-Tac, the worst case has historically been areas near the airport, as well as Beacon Hill*

- *With NextGen, new impact areas include the north end of Vashon Island, northern communities even beyond Shoreline, and areas like Burien, Skyway and Federal Way, under defined early-turns*

bakera
@bakerainlondon
Following

Here's a new one, noise canyons, in the words of the CAA….

Performance Based Navigation (PBN)

- A key enabler that allows us to define routes differently and not to be reliant on fixed, ground-based navigation aids (VORs, NDBs, etc.).
- Aircraft Flight Management System (FMS) capable of flying the aircraft very accurately along these routes in a wide range of weather (wind) conditions.
- Good for concentration
- Could be good for dispersion/relief but there are not an unlimited set of options.
- Allows us to modernise the airspace through systemisation – removes need for ATC intervention (radar vectors) which in turn has SAFETY and CAPACITY benefits.
- PBN enables us to design-in Continuous Climb profiles (4-D tunnels in the sky)
- Focus on better climb and descent profiles has ENVIRONMENTAL benefits
- BUT……
- Concentration can create noise canyons
- Not an unlimited set of route options (waypoint capacity and safety (confusion) aspects)
- Not all aircraft capable to the same PBN standard (RNAV5, RNAV1, RNP 0.3, etc)

RETWEETS 7   LIKES 4

Noise Canyons & Noise Ghettoes

RNAV departures in Boston created concentration, in this example, heavily impacting the Belmont area.

Similar route concentration impacts are destroying quality of life in Milton, under steady arrivals to land Runways 4L and 4R.

Impacts up, yet KBOS commercial ops are down 21% from peak year 1998.

Boston Logan International Airport
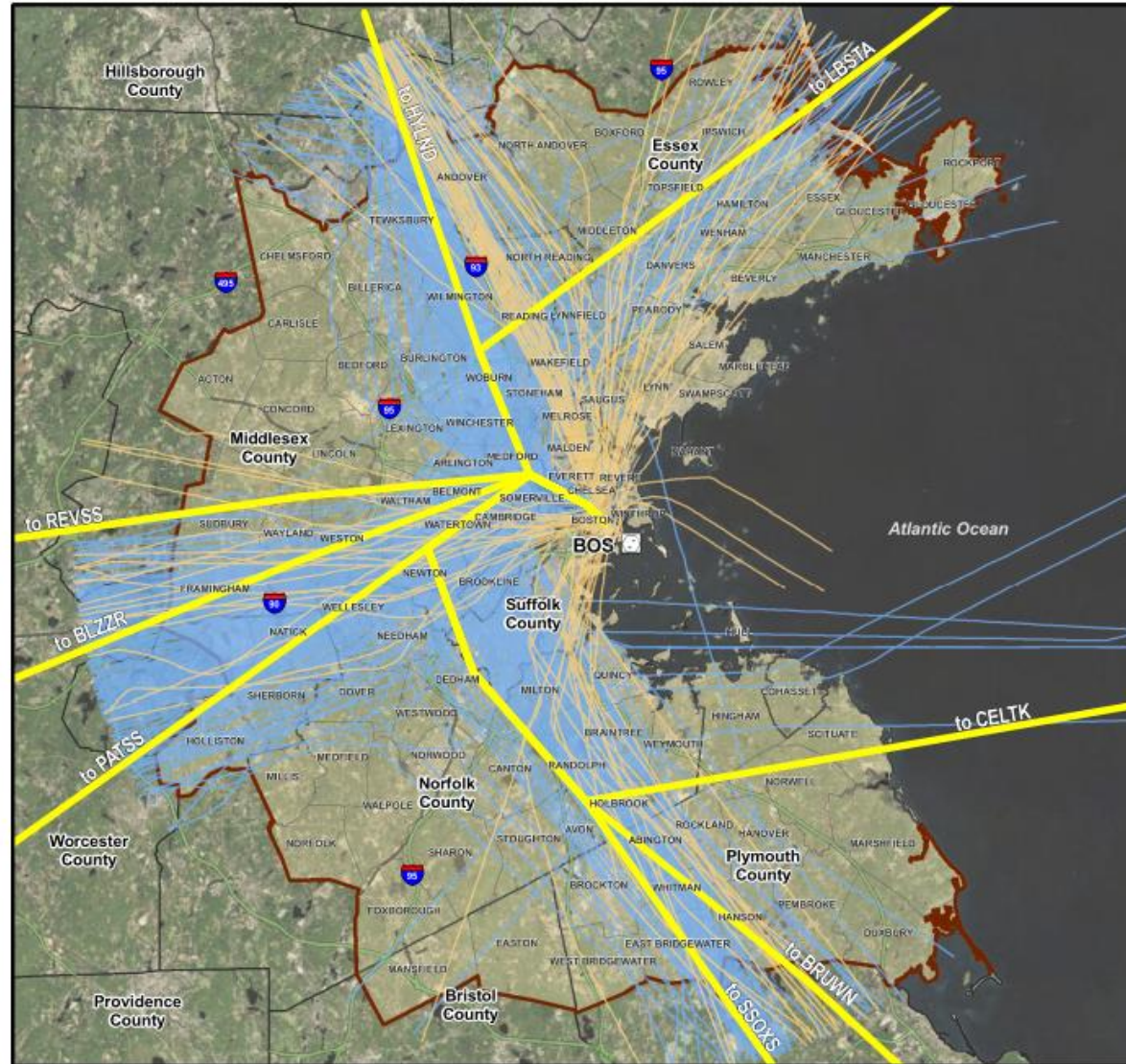
Figure 1-4
Proposed Action Alternative- Runway 33L RNAV SID Procedure

Noise Canyons & Noise Ghettoes

- *Phoenix has many historic residential neighborhoods along Grand Ave*

- *To shave off a minute or two per airline departure, FAA used NextGen and CatEx to implement early turns, impacting the neighborhoods*

- *Arizona's elected officials continue to press FAA to revert to pre-NextGen routes*

- *Phoenix is a major hub for Southwest and American*

- *Phoenix 2016 operations are down 18% from Peak Year 2005*

RNAV Departures (northbound)
Maysa, Snowball and Yotes RNAVs

PHOENIX SKY HARBOR AIRPORT - RNAV IMPLEMENTATION - DEPARTURE - Northbound Procedures

Zeper SID becomes Maysa RNAV (~11%)

Thomm SID becomes Snowball RNAV (~20%)

Thomm SID becomes Yotesi RNAV (~20%)
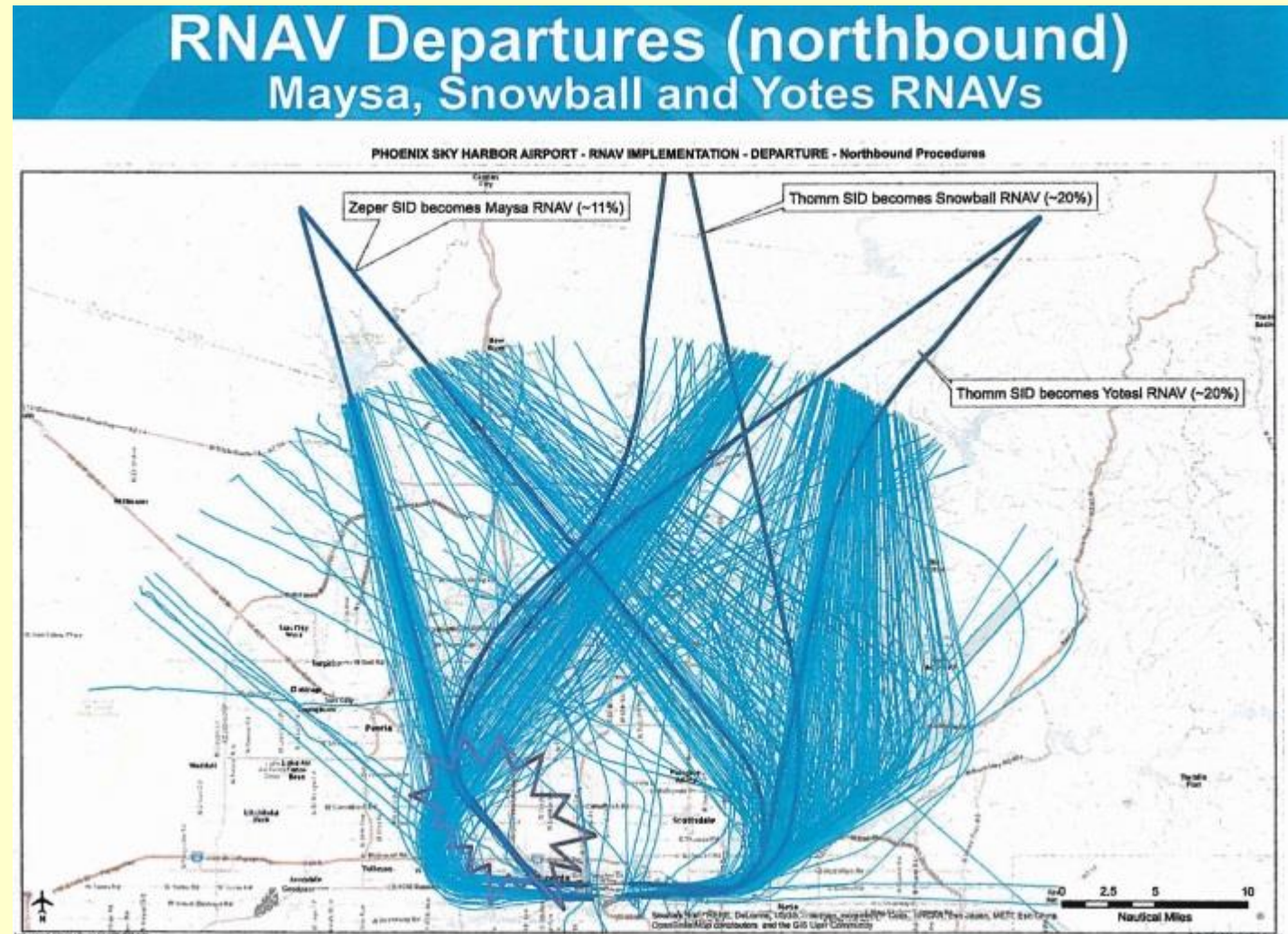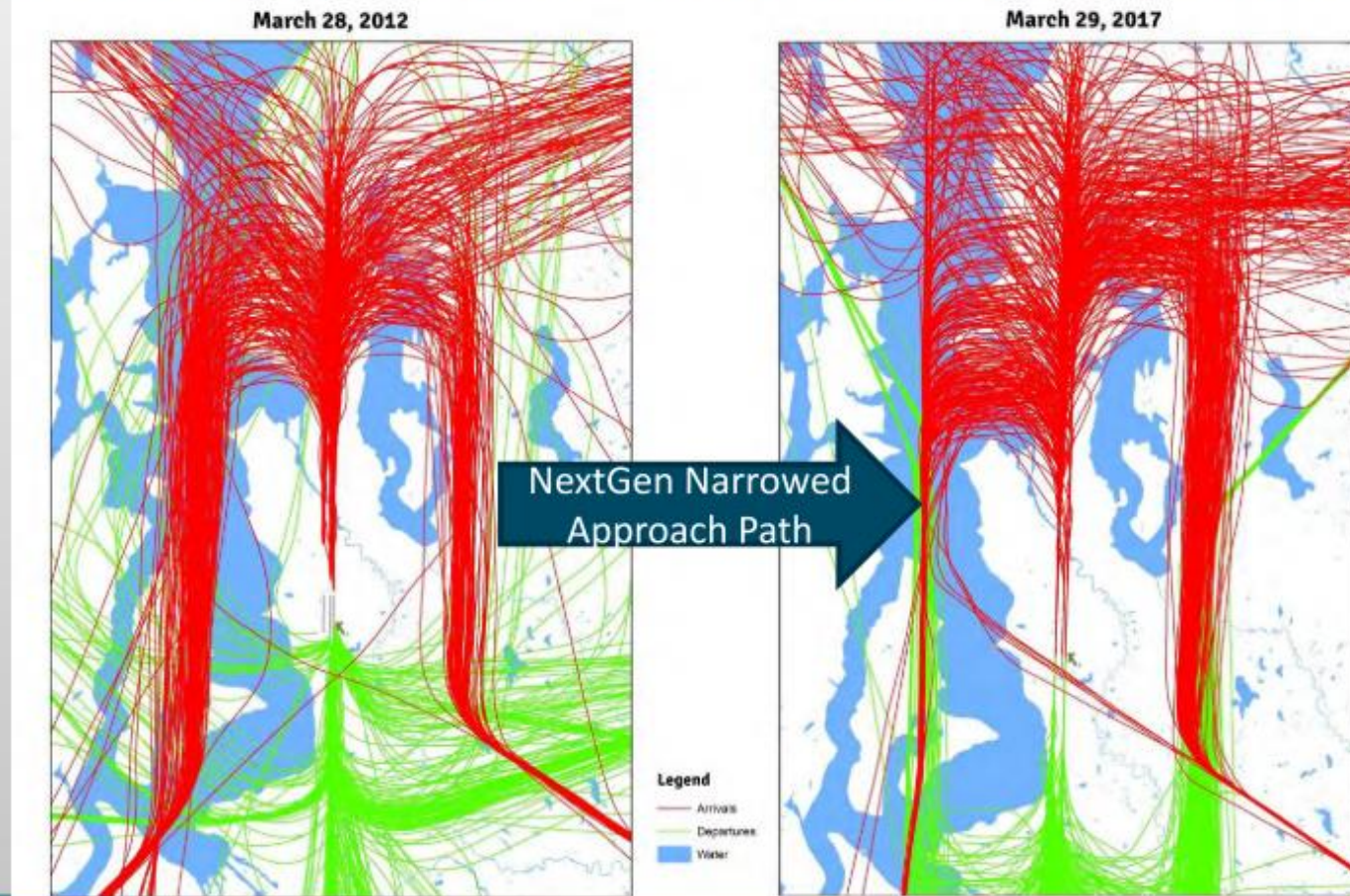
Noise Canyons & Noise Ghettoes

Port of Seattle graphic, showing before and after in South Flow.

March 2012 data vs. March 2017 data.

Note the intensive narrowing of tracks (route concentration)

Also note use of Elliott Bay as well as the stretched final to north of Edmonds.


South Flow Before and After Greener Skies

March 28, 2012

March 29, 2017

NextGen Narrowed Approach Path

Legend
— Arrivals
— Departures
Water

Greener skies approaches are west side only

13

Noise Canyons & Noise Ghettoes: Vashon

While the general flight paths have existed for as long as Sea-Tac has used N-S parallel runways (decades before 1990), NextGen's flight automation has precisely focused the routes. <mark>*The VASHN fix vicinity is impacted in both North and South flows.*</mark>

(Q: what is the date of the traffic POS depicts here? ... or is this a simulation?)


11
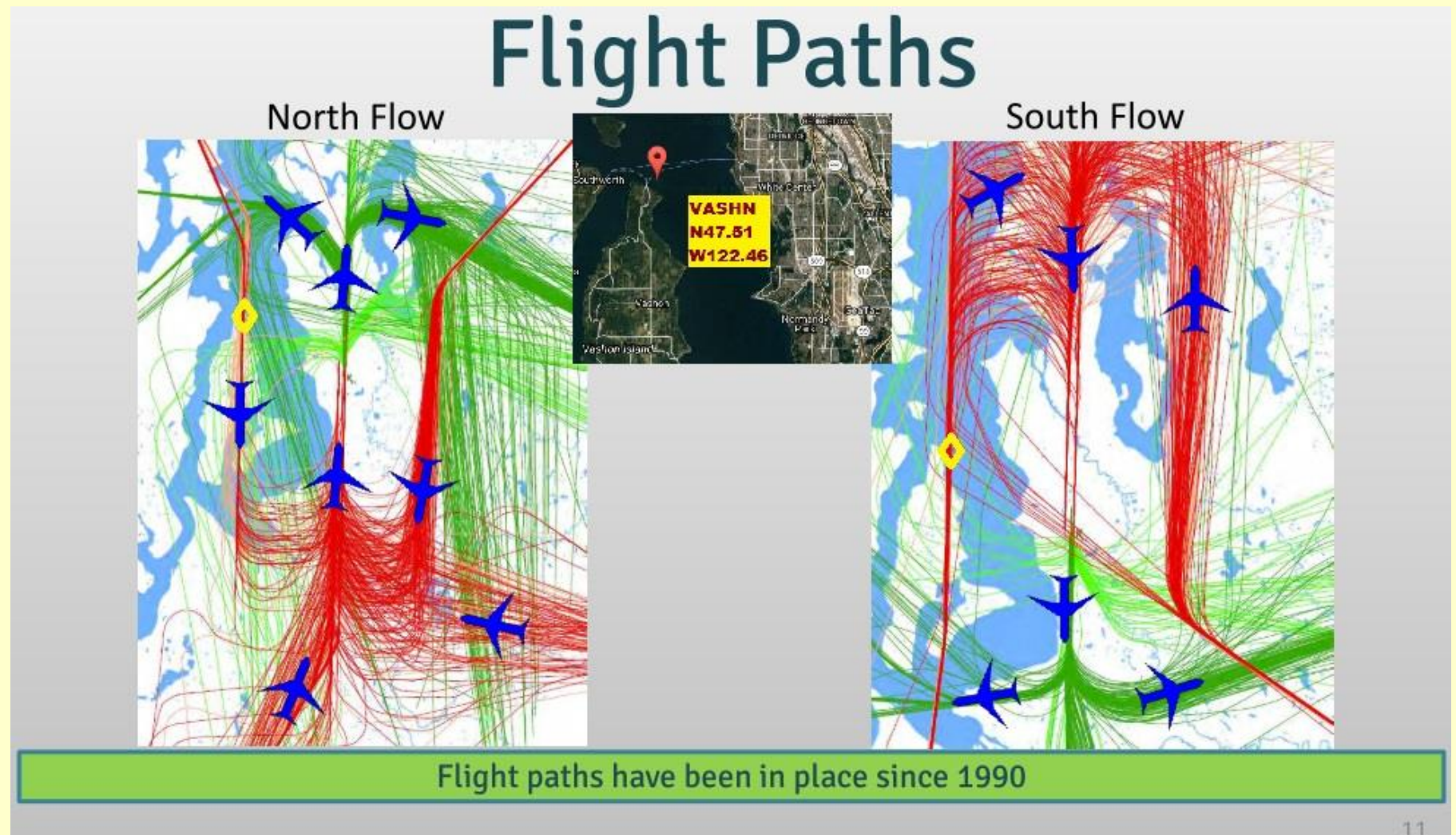
The Hard Costs of Hub Concentration

We are down to an airline 'Final Four': AAL - DAL - SWA - UAL

- *The vast majority of U.S. airports are now dominated by just one or two of these major carriers, who exercise a growing 'monopoly' ability to set excessive fares*

- *As hubs expand and become entrenched, they suck up all the money, making it impossible for other communities to develop good **LOCAL** commercial air service*

- *Hubs are efficient for the airlines alone: reducing unit costs while tweaking profit margins slightly upward*

- *Hubs are inherently inefficient for people: longer drive distances, more surface congestion, more effort spent changing planes at a distant hub airport, more time spent on much longer flights*

- *If FAA **REALLY** cared about efficiency to reduce aviation CO_2 impacts, they would tax airline jet fuel heavily, to disincentivize the use of dogleg itineraries via hubs (e.g., SEA-ATL-NYC)*

Route Concentration & Hub Concentration
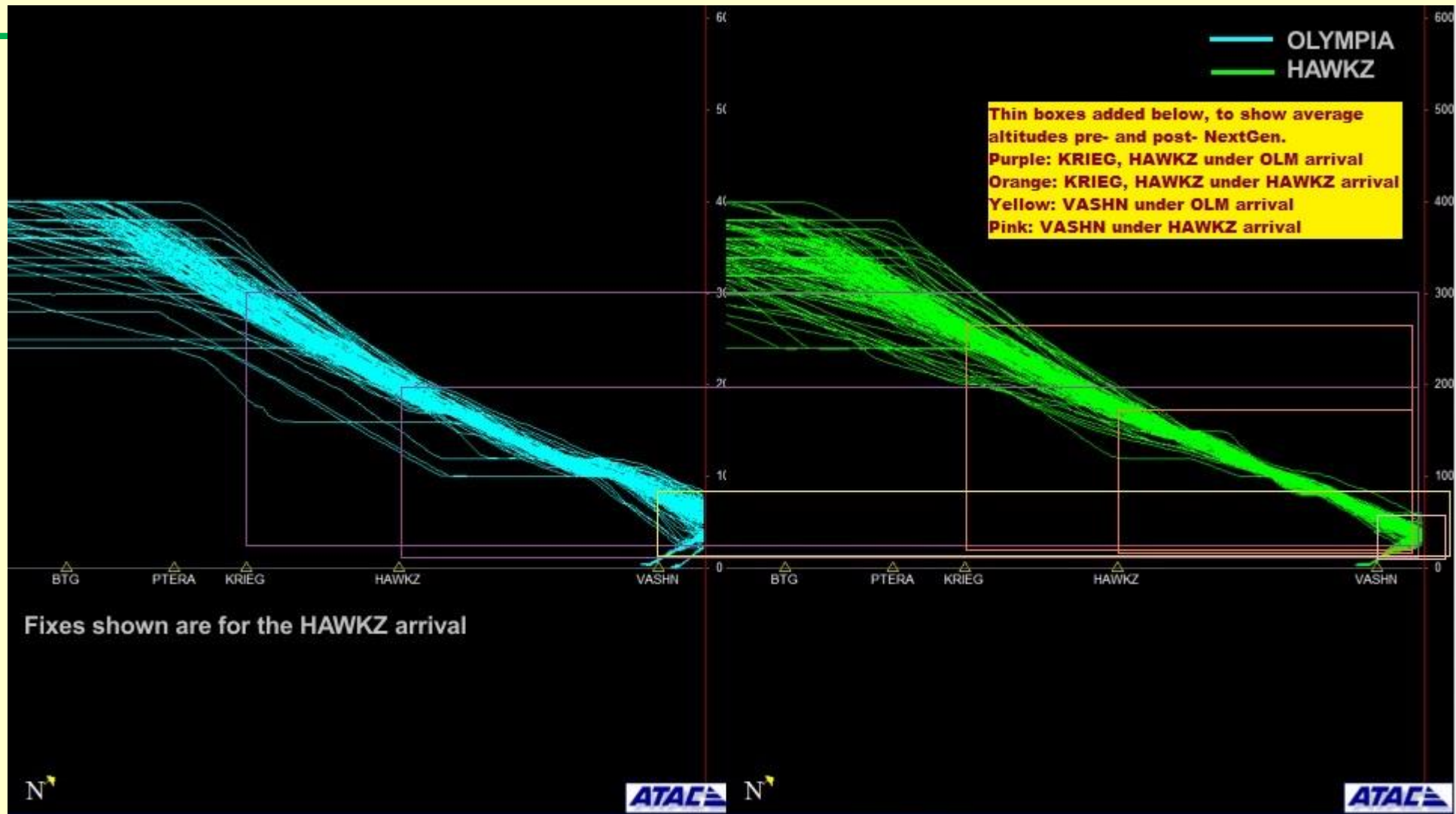
The Hard Costs of Hub Concentration

Hubs increase Through-Passengers, which translates to more flights and thus higher impacts (including flight congestion delays).

- *The percentage of passengers from upstate NY and airports in New England who PASS THROUGH the NYC airports: Newark (54%); JFK (38%); LaGuardia (47%)*

- ***Through-Passengers passing through Sea-Tac*** *from PNW airports: Bellingham (95%); Spokane (61%, 7,533 seats in 16Q3); Wenatchee (85%); Tri-Cities (78%); Boise (36%); Redmond (62%); Eugene (72%); Portland (69%, 8,507 seats in 16Q3)*

- ***Through-Passengers passing through Portland*** *from PNW airports: Bellingham (84%); Seattle (43%, 2,905 seats in 16Q3); Spokane (50%); Boise (24%); Redmond (95%); Eugene (94%)*
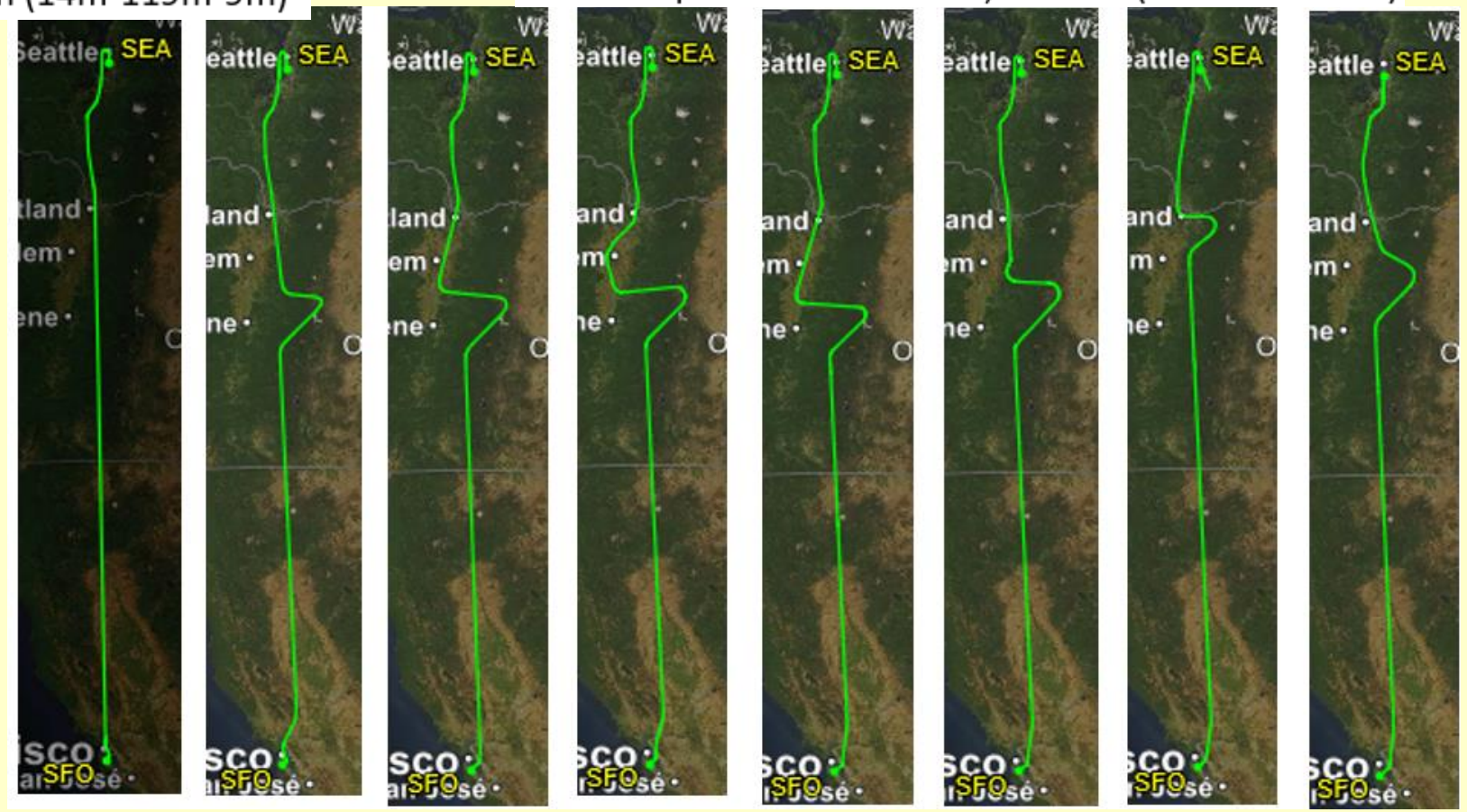
The Hard Costs of Hub Concentration

1. 7:04am: ASA935 B737, 117min (12m-98m-7m)
2. 8:44am: DAL2045 B738, 146min (30m-109m-7m)
3. 8:55am: ASA313 B738, 145min (23m-116m-8m)
4. 9:15am: VRD740 A320, 142min (14m-119m-9m)
5. 9:16am: UAL273 B739, 143min (19m-117m-7m)
6. 10:29am: ASA311 B737, 128min (11m-109m-8m)
7. 11:22am: CPZ5714 E170, 143min (24m-110m-9m)
8. 12:12pm: UAL1286 A320, 121min (13m-100m-8m)

(8) SFO-SEA Arrivals in 5-hours:

Monday, 4/24/2017, between 7:04am and 12:12pm

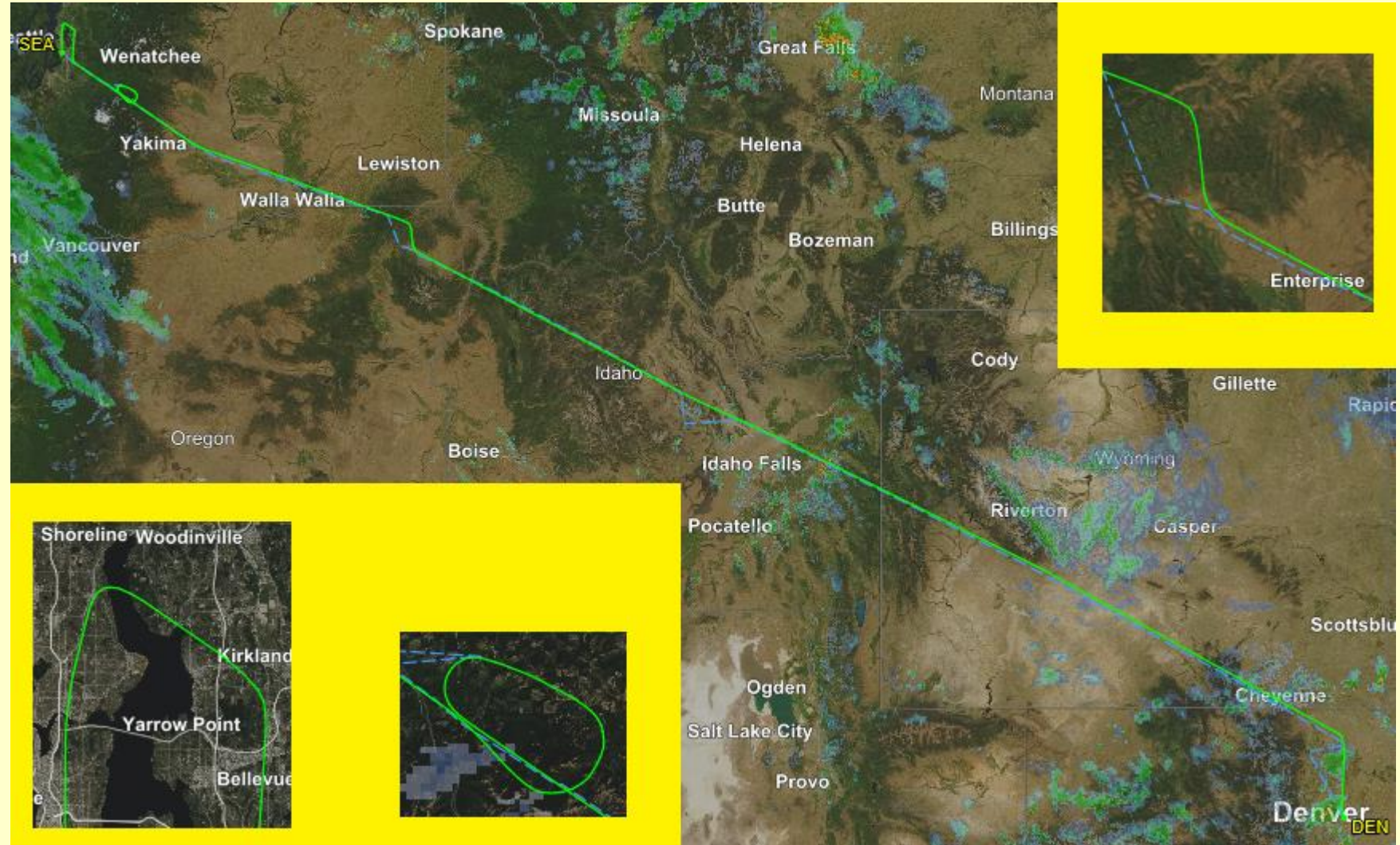*Via the HAWKZ Arrival (SW arrival gate)*

The Hard Costs of Hub Concentration

SWA260, B738 from Denver

via CHINS Arrival (SE arrival gate)

Landed 2:50pm on 4/25/2017

Three separate delays by ATC, due to traffic volume at KSEA

The Hard Costs of Hub Concentration

ASA989, B739 from Spokane

Via GLASR Arrival (NE arrival gate)

Landed 2:41pm on 4/25/2017

Delay turns over the North Cascades and a long final north of Shoreline, due to traffic volume at KSEA
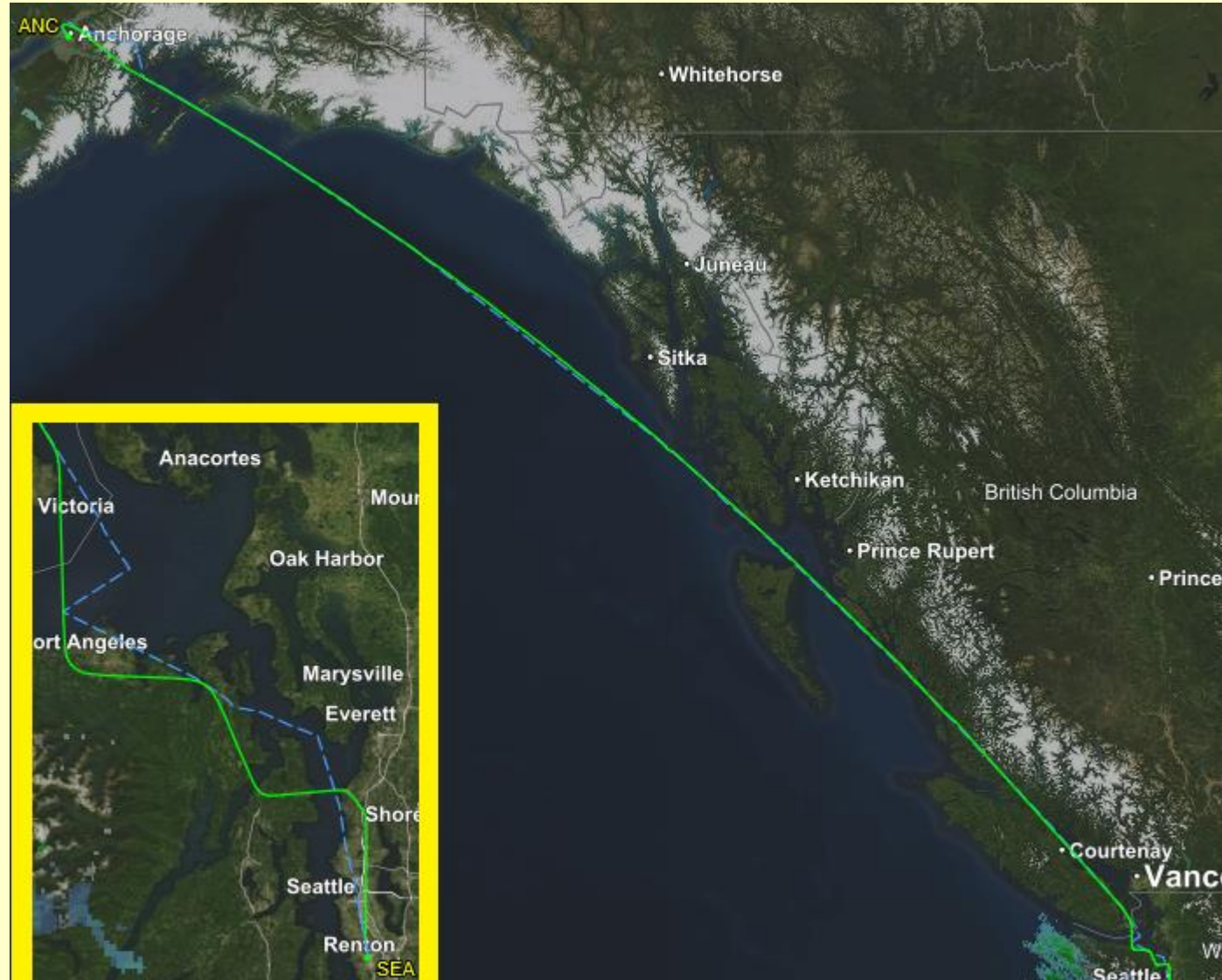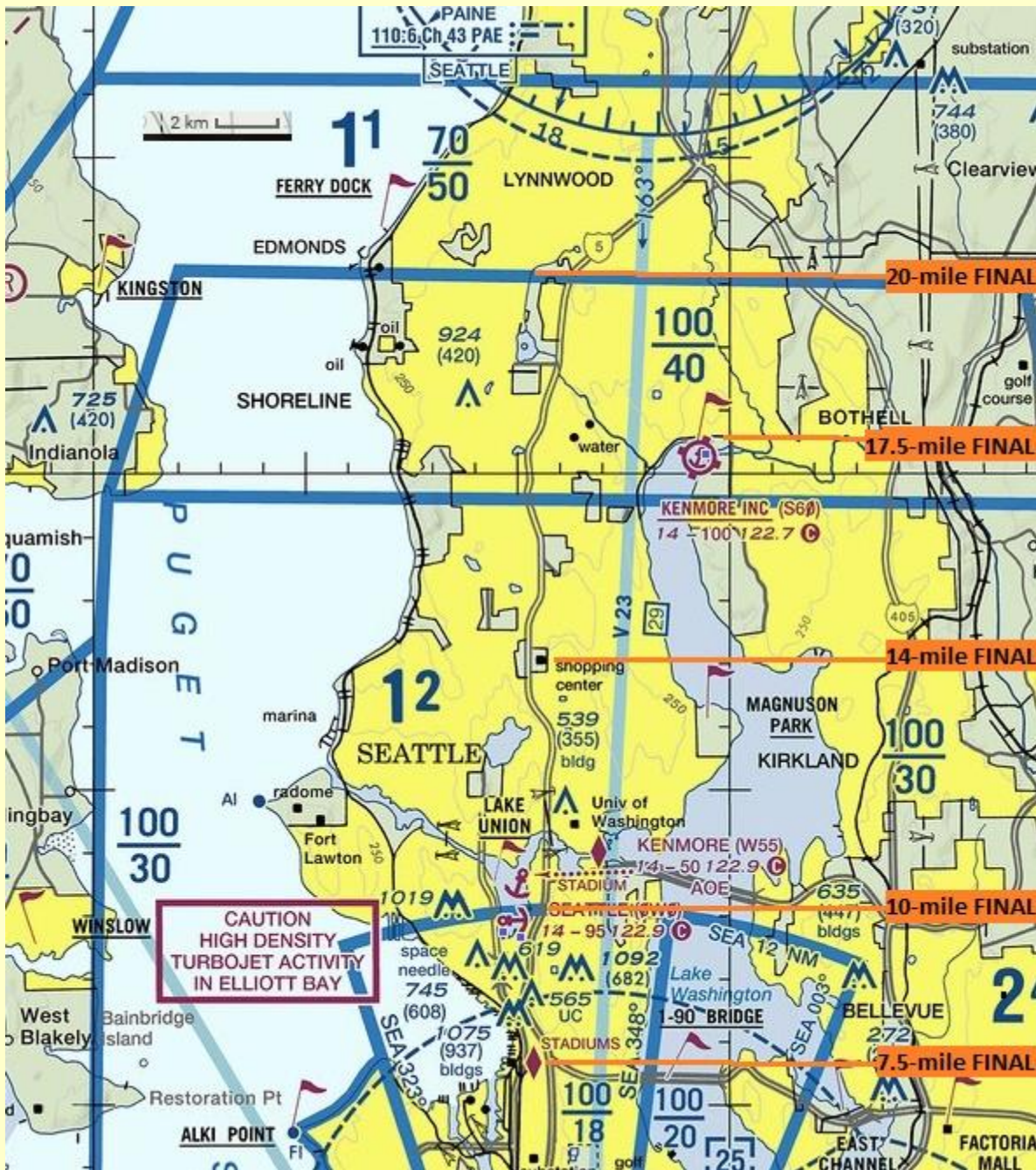
The Hard Costs of Hub Concentration

ASA86, B737 from Anchorage

Via MARNR Arrival (NW arrival gate)

Landed 2:16pm on 4/25/2017

Delay turns near Port Angeles and a long final north of Shoreline, due to traffic volume at KSEA

Distances for KSEA in South Flow

- *As a rule of thumb, approach altitudes should be 300-ft above runway elevation for each mile from the approach end of the runway*

- *Optimal all-weather approaches need a minimum ~8-mile final (i.e., 8-miles from the runway approach end to the point where the flight aligns for a straight-in final descent)*

Emphasis on 'Runway Throughput'

- *An intensive online research of NextGen produces papers with frequent reference to the term 'Runway Throughput'*

- *It is quite clear: the real driver behind everything NextGen is tweaking up operations per hour to tweak upward airline profits*

- *'Runway Throughput' will solidly intensify noise, air pollutant, and greenhouse gas impacts by aviation*

- *To claim NextGen benefits the environment AND increases airport capacity, while failing to identify the increased impacts of added capacity, is frankly disingenuous*

Why Do We Need NextGen?

- Delivers a better travel experience through safer skies and fewer delays
- Accommodates increasing demand in the National Airspace System (NAS)
- Reduces fuel consumption and engine exhaust emissions
- Saves money for aircraft operators, traveling public and the FAA

Slide #3 from FAA NextGen Presentation,

Federal Aviation Administration

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Closer → Lower → Louder

- *NextGen Net result: both arrivals and departures are being turned closer to the airport, even over the runway. Closer means lower - and louder - over airport neighbors*

- *A secondary result: with NextGen pressing primary airport flights lower, ATC often has to press flights to other airports under them. E.g., the large cargo planes to Boeing Field... flying long low and slow arrivals from Kenmore across Shoreline then south, all at or below 2,000 ft.*

Thursday, February 4, 1971: FAA instituted the new "Keep-'Em-High" program to reduce noise in the vicinity of the nation's airports. Under the program, which had been announced in October 1970, the agency instructed controllers to keep flights as high as possible during landings and takeoffs, delaying turbojet aircraft in their final descent until relatively close to their destination airport and climbing them out as rapidly as possible after takeoff. Where aircraft performance capabilities and considerations of passenger safety and comfort permitted, FAA required turbojet aircraft to be kept at 10,000 feet or higher until within 30 miles of the airport. By July 1, 1971, the program had been implemented at 387 airports, nearly all those airports serving scheduled air carrier and turbojet aircraft. (See December 4, 1967, and August 1, 1972.)

FAA's Refusal & Failure to Manage Capacity

- *FAA is failing its role, refusing to regulate and instead is enabling the airlines to pursue their profit-ideal of infinite capacity*

- *Simply, the airlines refuse to embrace capacity limits and smart planning*

- *How much better would we all be served, if FAA:*

  - *Set firm limits on arrival rates & departure rates, per hour or per 15-minute block?*

  - *Allowed and even encouraged) local communities to impose nighttime curfews?*

  - *Allowed and even encouraged) local communities to impose fees that disincentivized hubbing?*

Dissecting NextGen

Fixing NextGen, Achieving Balance

- *First, you have to define & acknowledge the problem*

- *MAIN GOAL: Local control of the local airport, to serve the LOCAL COMMUNITY (…ahead of airlines)*

- *FAA needs to change their system metrics, and replace the failed DNL noise metric; empower the average citizen with real data, to facilitate debate and a healthy democratic process*

- *Impose policies that disincentivize hubs: revenue-neutral aviation carbon tax, airfares keyed to miles flown (not O-D direct miles), etc.*

Fixing NextGen: Restoring LOCAL CONTROL

Slowly, over the years, FAA has taken away local control, denying the right for communities to impose curfews, restrictions, etc. Thus:

- *An airport like Santa Monica, with homes right up to the runway, has no right to ban jets, and is liable if/when a small jet impacts those homes*

- *Rural residents in Mora, MN cannot stop demolition of wetlands seasonally saturated with waterfowl, so FAA can use airline passenger revenues to construct a crosswind grass runway*

- *Residents from Long Island to Palos Verdes are soundly ignored when they protest FAA's refusal to regulate helicopters, to higher and less impactful altitudes*

- *Homeowners under skies plied by air tourism and skydive operator repetitive-flights have zero voice, and their elected officials can only defer to FAA's captured authority*

- *And dense/historic residential communities are being destroyed by NextGen near these major airports: KBOS, KBWI, KCLT, KDCA, KJFK, KLAX, KLGA, KORD, KPHX, KSAN, KSEA, and KSFO ... with more to come, solely to accommodate airline profit margins*

Fixing NextGen: New & Better Metrics

*In every way, FAA is failing to engage citizens in important aviation decisions. How? Largely, by overwhelming people with garbage data, and carefully NOT producing the data that would help people understand and decide. Here are some **new metrics**:*

1. *DNL is a total failure. A logarithmic scale applied to an impact that is largely binary (noise is annoying to some, unnoticed by others).*

2. *Noise impact metrics need to factor in repetitive flight patterns, noise level above ambient noise, societal benefit of the noise source (to justify the cost), etc.*

3. *FAA's arbitrary noise impact threshold at 65 decibels is absurd, even more so since the rest of the world prefers the much quieter 55 dB.*

4. *Through-flight passenger data needs to be routinely disclosed so that citizens can meaningfully debate hubbing impacts and airport capacity expansions*

5. *...and, FAA's new metrics need to embrace the REAL health impacts of lead, fine particulates, and other aviation air pollutants.*

Fixing NextGen: Disincentivizing Hubs

- *Impose a steep aviation fuel carbon tax, which could also be revenue-neutral, replacing other aviation taxes/fees*

- *Establish airport use fees (e.g., landing fees) that are ramped to support hourly capacity limits; airlines who hub excessively will pay double/triple fees (and more), to discourage excessive scheduling*

- *Empower local communities to limit operations per hour and set curfew hours, via local authorities, and ultimately via democratic votes by the taxpayers*

- *FAA needs to establish and annually post key hub-related metrics, to ensure transparency, and thus to pressure monopoly airlines against fare-gouging their passengers*

Fixing NextGen: People Power

People need to protect their homes and families. There is an enormous imbalance that has evolved, where corporate powers use corruptible elected officials and coopted hand-picked panels to block citizen engagement, to manufacture consent.

Do not let FAA and other servants of aviation money deny you your right – and responsibility – to meaningfully participate in airport development and management decisions. Don't let them spin you with propaganda optics; don't let them grab your tail with acronyms, technobabble, and thousands of pages of garbage documents using irrelevant protocols and flawed metrics.

And, keep clearly in mind: **Sea-Tac is an airport to serve YOU and YOUR COMMUNITY first**, not the airlines and their stockholders. Sea-Tac can be scaled back, brought down to an appropriate operational level, and it would still provide us all with a great airport, making a positive contribution to both the local economy *AND* local quality of life … while doing far less damage.

Demand transparency, accountability, and real citizen engagement.