

Analysis of 8 KSEA South Flow Arrivals (5/12/2016)

This analysis looks at two issues for SeaTac arrivals in a south flow:

1. the routine issuance of enroute delays on flights from California, and
2. the repetitive pattern noise impacts on residents of Vashon Island

To the right is a screencap showing a table with a half-hour of arrivals, as copied from FlightAware.com; earliest arrival at the bottom to latest arrival at the top. This half hour time period shows 22 arrivals, with roughly a third inbound from California (on the south arrival feed over Battle Ground, just north of Portland). Note that, of the 8 California arrivals, 3 are from SFO and 3 are from LAX (that averages one per ten minutes from each of these major hub airports!).

The arrival sequence is marked 1 thru 8. Screenshots of the routes flown, showing significant delays issued to all eight arrivals, are presented on the following four pages.

| | | | | | |
|-------------------------|----------------------|--|----------|------------------|-----------------|
| DAL100 | B752 | Los Angeles Int'l (KLAX) | 8 | Thu 08:34AM PDT | Thu 10:52AM PDT |
| ICE685 | B752 | Keflavik Int'l (KEF / BIKF) | | Thu 12:25PM GMT | Thu 10:51AM PDT |
| ASA138 | B734 | Fairbanks Int'l (FAI / PAFA) | | Thu 06:34AM AKDT | Thu 10:50AM PDT |
| CP25736 | E175 | San Francisco Int'l (KSFO) | 7 | Thu 09:09AM PDT | Thu 10:48AM PDT |
| DAL2531 | B738 | Anchorage Int'l (PANC) | | Thu 05:46AM AKDT | Thu 10:47AM PDT |
| ASA889 | B734 | Spokane Int'l (KEG) | | Thu 09:56AM PDT | Thu 10:45AM PDT |
| UAL618 | A320 | San Francisco Int'l (KSFO) | 6 | Thu 09:11AM PDT | Thu 10:44AM PDT |
| AAL1402 | A321 | Dallas/Fort Worth Int'l (KDFW) | | Thu 08:48AM CDT | Thu 10:43AM PDT |
| ASA163 | B737 | San Diego Int'l (KSAN) | 5 | Thu 09:11AM PDT | Thu 10:42AM PDT |
| ASA1 | B738 | Reagan National (KDCA) | | Thu 09:11AM EDT | Thu 10:41AM PDT |
| AAL907 | B738 | Phoenix Sky Harbor Int'l (KPHX) | | Thu 07:52AM MST | Thu 10:40AM PDT |
| ASA453 | B739 | Los Angeles Int'l (KLAX) | 4 | Thu 09:18AM PDT | Thu 10:39AM PDT |
| ASA802 | B738 | Snohomish County (KPAE) | | Thu 10:23AM PDT | Thu 10:39AM PDT |
| DAL2221 | B753 | Minneapolis/St Paul Int'l (KMSP) | | Thu 09:16AM CDT | Thu 10:37AM PDT |
| EJA311 | C680 | Ravalli County (655) | | Thu 10:19AM MDT | Thu 10:35AM PDT |
| ASA577 | B738 | John Wayne (KSNA) | 3 | Thu 08:04AM PDT | Thu 10:33AM PDT |
| DAL281 | B738 | Detroit Metro Wayne Co (KDTW) | | Thu 08:56AM EDT | Thu 10:31AM PDT |
| DAL1029 | B739 | Hartsfield-Jackson Int'l (KATL) | | Thu 08:22AM EDT | Thu 10:28AM PDT |
| QXE2207 | DH8D | Vancouver Int'l (CVR) | | Thu 09:57AM PDT | Thu 10:27AM PDT |
| ASA311 | B737 | San Francisco Int'l (KSFO) | 2 | Thu 09:45AM PDT | Thu 10:26AM PDT |
| ASA23 | B737 | Chicago O'Hare Int'l (KORD) | | Thu 08:13AM CDT | Thu 10:24AM PDT |
| VRD781 | A319 | Los Angeles Int'l (KLAX) | 1 | Thu 07:51AM PDT | Thu 10:22AM PDT |

The Impact on Vashon

Vashon Island is a pleasantly rustic area, served by a ferry boat to Lincoln Park in south Seattle. Sadly, the NextGen airspace procedures have created a noise ghetto for residents, as the arrival streams are now being narrowly RNAV-routed on wide downwind legs over Vashon. Of particular interest in this analysis, the KSEA south flow arrivals create an excessive repetitive noise pattern when they transition much lower than they need to be (and often level off), while descending on the same RNAV-defined path over the full length of Vashon Island.

Note that the precise latitudes for northbound transitions over Vashon are:

- Southern tip (just N of Dash Point): 47.350°
- Mid-section (due west of Three Tree): 47.450°
- Northern tip (near ferry terminal): 47.517°

Also, the precise latitude for the approach end of KSEA runways 16 is 47.467° (this, compared to the northern-most latitude for an arrival, provides an approximate distance for the Final Leg).

Analysis of 8 KSEA South Flow Arrivals (5/12/2016)

VRD781:

Airbus A319, from KLAX.

DELAYS: large turn over OR Cascades, then a large loop near Battle Ground

VASHON altitudes:

- (S-mid-N)
- 8000-6800-5500

Northernmost Latitude:

47.69° (22-mile final)



ASA311:

Boeing B737, from KSFO.

DELAYS: large turn over OR Cascades

VASHON altitudes:

- (S-mid-N)
- 8000-6600-5700

Northernmost Latitude:

47.62° (15-mile final)



Analysis of 8 KSEA South Flow Arrivals (5/12/2016)

ASA527:

Boeing B738, from KSNA.

DELAYS: large turn over OR Cascades

VASHON altitudes:

- (S-mid-N)
- 8200-6400-5400

Northernmost Latitude:

47.66° (19-mile final)



ASA453:

Boeing B739, from KLAX.

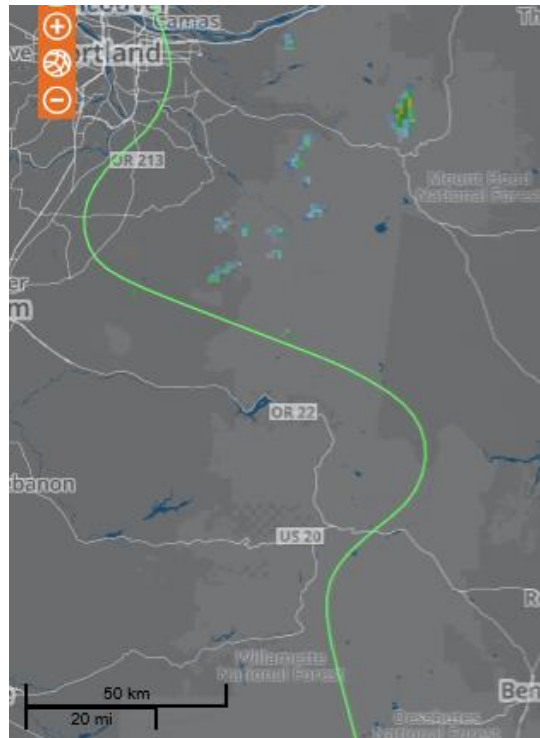
DELAYS: large turn over OR Cascades & smaller turn over Willamette Valley

VASHON altitudes:

- (S-mid-N)
- 8300-7000-5900

Northernmost Latitude:

47.65° (18-mile final)



Analysis of 8 KSEA South Flow Arrivals (5/12/2016)

ASA493:

Boeing B737, from KSAN.

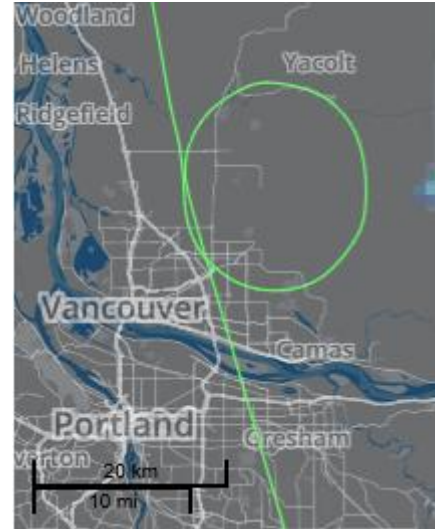
DELAYS: large right turn loop at Battle Ground (approx. 3-minutes)

VASHON altitudes:

- (S-mid-N)
- 8100-6800-5900

Northernmost Latitude:

47.67° (20-mile final)



UAL618:

Airbus A320, from KSFO.

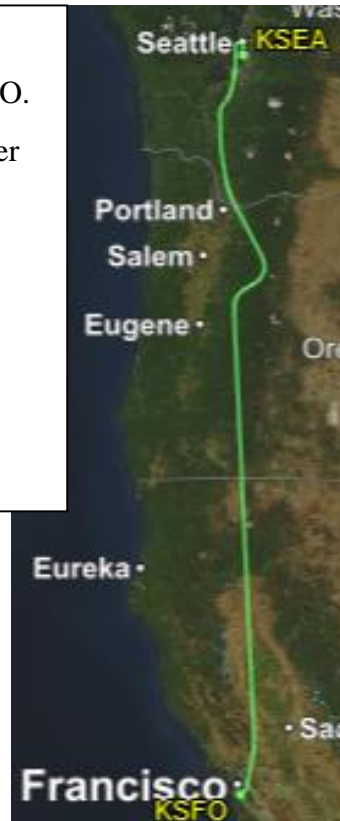
DELAYS: large turn over OR Cascades

VASHON altitudes:

- (S-mid-N)
- 7700-6300-5200

Northernmost Latitude:

47.60° (13-mile final)



Analysis of 8 KSEA South Flow Arrivals (5/12/2016)

CPZ5736:

Embraer E170, from KSFO.

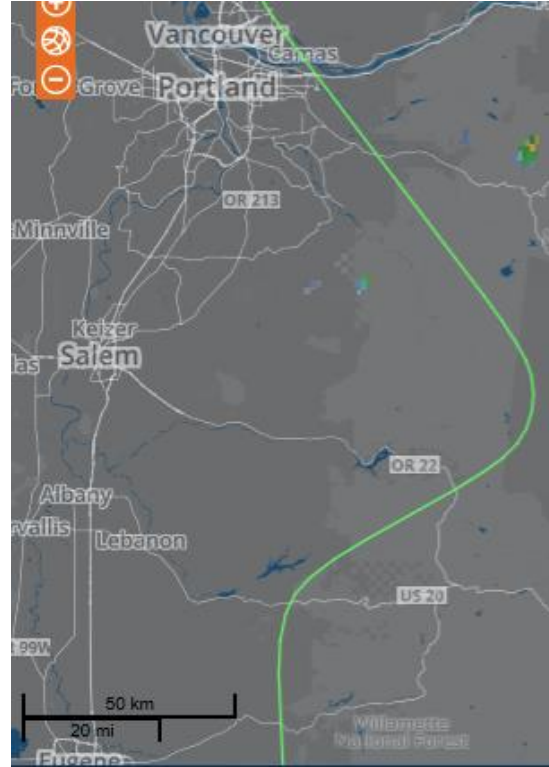
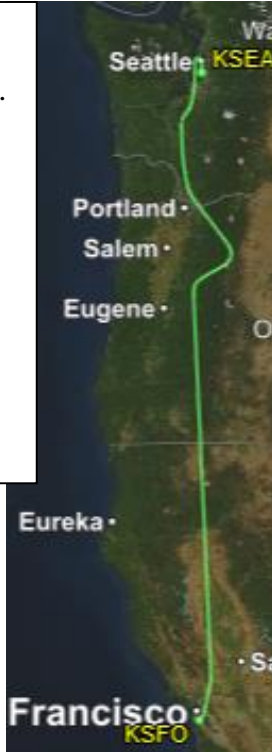
DELAYS: large turn over OR Cascades

VASHON altitudes:

- (S-mid-N)
- 9000-7100-5600

Northernmost Latitude:

47.64° (17-mile final)



DAL199:

Boeing B752, from KLAX.

DELAYS: large turn over OR Cascades

VASHON altitudes:

- (S-mid-N)
- 8900-7200-6100

Northernmost Latitude:

47.67° (20-mile final)

