## Vashon Island Fair Skies

## What changed?

Since 1990 the area roughly between West Seattle and the Kitsap Peninsula has been used as the downwind leg<sup>1</sup> for arrivals on the West side of the airport. It wasn't so much of a flight path as a flight swath. By the time flights were this close to the airport, Air Traffic Control (ATC) knew how long the downwind leg would need to be due to congestion<sup>2</sup> and would keep the planes high as long as possible.

In roughly 2015 a new arrival technology was introduced to SeaTac airport: Performance Based Navigation (PBN) approaches. The technology allows for precisely (within 100 yard) flown routes controlled by GPS. The PBN technology itself is not new; it has been used for a while to navigate through treacherous terrain. What *is* new is using this technology over a populated area when there is no hazard (like a mountain/ridge) that needs to be avoided. So what used to be a flight swath miles wide, now has become a razor sharp flight line 100 yards wide.

This, however, was only half of the misery.

At the same time downwind arrival altitudes were lowered several thousand feet. This was done as the FAA's grand vision was for all Westside arrivals to make a tight turn around West Seattle and into Elliot Bay, then South to the airport. However only a small percentage of arrivals are able to make this turn because of congestion pushing the downwind turn-around point further and further North. In spite of this, the altitude profile does not change with congestion, so all arrivals are brought low early so that they're low enough to take that shorter route, even if they won't due to congestion. This generates extended low altitude level-offs, which is extremely fuel inefficient and noisy.

It gets even worse. The altitude required at the North tip of Vashon to take the shorter route through the bay is 6000 feet. However ATC does not enforce this. Instead "descend and maintain" orders can be given long before this; as early as over Lakewood. The net result is that most arrivals are below the published altitude at the North tip of Vashon (a waypoint called VASHN), and some are way below, as low as 3000 feet, and again remember everything single arrival, all 250 of them, are following the exact same razor sharp line.

While not everybody who lives on Vashon does so due to its peaceful, rural, and natural environment, many of us who moved and built our lives here decades ago did so specifically *because* it was so peaceful, rural, and natural. The very inconvenient three and a half mile moat between us and Seattle was the trade-off we were willing to make for the peace it provided. Focusing half of SeaTac's noise over a group of people so annoyed by noise they moved to an Island to get away from it, is exceptionally cruel.

<sup>&</sup>lt;sup>1</sup> "Downwind leg" means that part of the arrival when, due to the wind conditions, planes cannot directly land from the direction they are approaching the Seattle area, so must fly North or South of the airport and then turn around to land. It's always better to take off and land into the wind as this the reduces the ground speed required for the same amount of lift. Southern winds (usually associated with cloudy weather) predominate in the Seattle area, except during the summer, which means planes need to land flying South. However, most arrivals to Seattle are coming from South of Seattle, thus in Southflow most of the arrivals must first fly North of the airport before turning around, and most of those do so West of the airport. Taken together this means that on Southflow days, about half of all arrivals to SeaTac fly over the new razor sharp and lowered flight path.

<sup>&</sup>lt;sup>2</sup> When arrivals get backed up at SeaTac, downwind arrivals can be sent further and further North or South, depending on the flow, thereby delaying their turn around point. This allows sequencing of arrivals with the required separations for safety.