

SAMP Comments 2024

Stuart Jenner, concerned citizen and Seatac Airport neighbor

December 13, 2024

This is a rough draft, written in great haste. Some of the content is duplicative. Some is sarcastic. Some is no doubt wrong, or not based on complete information of what's in the 4000 + pages. Oh well. There's no search function that appears to work for the documents. Trying to make sense of several hundred pages a day is hard. Did you know War and Peace is around 972 pages to 1400 pages, depending on the edition? Could you read War and Peace 3 or 4 times in a month and half and make sense of it? That's the ballpark of the number of pages. I got through maybe one third of them. Would neutral observers guess that the people who set this deadline have a great deal they don't want readers to see or understand?

Structure of this writeup:

- Introductory comments
- What is sustainability?
- What would a sustainable airport look like? What projects would we be working on?
- Comments on specific projects

## Introductory comments

Dear Port Commissioners, and FAA and Port readers of SAMP comments,

I base the following comments on reading about 1/3 of the pages on the SAMP web site. What I'm sending is the worst writeup I've ever done: it is a rough draft, it has some repetition, there are some comments I made where I later found what may be partial answers to comments ..... but in the time you have given us to comment, 12 years of your work that we are supposed to respond to in 53 days, 4000 pages that we had 27 days to go through after the last of the open houses that really were necessary in order to even begin making sense of the docs, this is better than no response at all.

**PLEASE GIVE US MORE TIME for the SAMP comments.**

**Please then INSIST on an Environmental Impact Statement.**

After attending two of the open houses, looking over a part of the materials from the project web site, and doing some additional research, I have major concerns that both you commissioners and the community near the airport are going to be blindsided. An Environmental Assessment is not sufficient to assess the cumulative impact of the near term projects, or for that matter the longer-term impacts of what you're doing.

I wrote an article for a local blog about the SAMP proposals and the open houses. Please read it, <https://burien.news/perspectives/editorials/opinion-algorithms-airports-and-anxiety-the-curious-case-of-a-sustainable-airport-master-plan/>

especially noting the following:

1. It is ridiculous to assert passenger traffic can go up nearly 50% with no environmental impacts.
2. Two employees at the meeting said there's no impact because a computer model they use says there's no impact. I tried to evaluate the model. It appears impossible for citizens to review. We can't check the code, the calculations, or even know what factors the model uses. There appear to be attempts at outlining numbers in some of the SAMP appendices, but a suggestion: create a video where whoever is inputting the numbers explains how it works, how what if analysis works, and what the ranges are.
3. This seems like a situation where the judge, jury and party that brought the matter forward are all the same. Is there any objectivity? Who decides what evidence is deemed worthy of consideration, what criteria is used to evaluate the evidence, and the weights used to say one item (handling more passengers) is more important than another (health of residents). Or the cost of delays compared to the tens of billions I bet all these projects will ultimately cost, even with lowball mitigation numbers that often get shoved onto the community. It is hard to take this process seriously! 1.5 dB is not significant because the area is already at a certain noise level?

Even if this process is ridiculous, at some point, other readers can hopefully use these points at a time and place of their choosing.

4. Since the Port web site was not operational for the majority of the very short review period, I could not check some key information that is missing from the SAMP papers. This info provides context. This makes writing a solid set of comments very difficult.
5. The problem sets up the answer.

The problem in the SAMP pitch book is defined as "we will need to limit capacity. We are running out of room / flight operation capacity / fuel capacity whatever."

What other problems should or could we be trying to solve?

How about "we're increasing the amount of CO2 pollution we inject into the air and waters around Puget Sound. We're increasing the acidity of the waters. We are putting people at health risk. We need to reduce the health damages to people."

How about "we the airport are a major contributor to traffic congestion, which ends up necessitating the construction of billions of dollars worth of roads."

Or this "we are hindering the development of alternatives to Seatac, such as additional airport capacity in the region, through the way we get airlines and others on board with our plans, the way we tie them into our cost structure."

Why does Seatac have to be a lemming, just following the same rut as every other airport?

6. Repeatedly, the baseline shifts. When the Port was seeking permits to build the third runway, the promise was "the only time we will use it is in bad weather when flights would be delayed." Well now, that turns out not to be the case. Instead, it is used constantly. The comparisons are NOT to what the Port promised, they are using baselines far in excess of what the Port said would be the use.

7. It is extremely hard to tell what information is current. Some documents are dated 2023. Even worse, see page 9 on this document written in 2019.

<https://www.airportprojects.net/sampenvironmentalreview/wp-content/uploads/sites/45/2024/09/N01-Scoping-Report.pdf>

One of the points says:

Excessive aircraft delays on the airfield

As part of the SAMP, the Port of Seattle prepared a delay analysis that found that without intervention the Airport will experience average delay per operation (landing or take off) in excess of 20 minutes by 2027. This level of delay results in a severely inefficient airfield operation at the airport

My question is “what’s the current situation in December 2024?”

And, what is the cause of the delays? Could it be there are too many small planes? Or could the problem be from the way the gates were not properly built at one of the terminals? I understand there’s a lawsuit about that, with Port staff and construction companies each blaming the other.

A comment: the third runway was never designed to be used at the same time as the other two runways. So yes, if you’re going to use all three runways at the same time, there’s going to be “inefficiency.”

8. Making sense of the proposals is very hard to do on a part time basis

At the open houses it was not possible to have discussions with staff about every slide. Every slide was very complicated. Two hours goes by very quickly for 30 slides, especially when the staffers are talking with someone else, or when they don’t know the answer to a question and have to go find someone else.

9. Demand is a function of price.

This is basic economics, but it is something infrastructure providers often seem to forget. The other day, I talked with some people who flew to Spokane, rented a car, drove to Walla Walla, then back to Spokane to fly back to Seattle. I asked them why they didn’t fly from Walla Walla instead of Spokane. The answer was simple “the flights cost too much. Spokane was cheaper.”

The point: when you’re running out of space, whether it is for planes, for cargo, parking or other items, why don’t you adjust the price?

That leads to the next point:

10. The costs of these projects is not listed.

A year ago, I talked with a Seatac airport planner about the crunch for passenger arrivals and departures. He said they were working on a plan for a type of bridge. I said oh that’s interesting, how strong will it need to be in order to handle the weight of electric vans and cars, since they

weigh more than regular cars? He gave a blank look. I changed the subject, thinking “these people are totally impractical.”

I did a search on the SAMP site. See what the result is for a search on the word “cost?” It is a faint “oops”. This is why it is so unfortunate we can’t see the regular Port web site, because surely there must be some discussion of costs, right?

## Couldn't find what you're looking for!

Oops!

**Helpful Links:**

**Try again**

If you want to rephrase your query, here is your chance:

11. It is very hard to tell what the environmental impacts are on soil, air, water, and noise.

Soil as an example:

When the Port was seeking permits for fill on the Third Runway retaining wall, they attempted to use tests for soil that were wildly inaccurate. They wanted to test for lead, arsenic and other contaminants with tests that would say 50 times the permitted levels were ok. So, if the permitted limit was one part per million, and the contaminant level was 49 parts per million, the sample would still be considered “clean” because the tests couldn’t detect any problems below 50 ppm.

I am guessing there will need to be a considerable amount dirt moved around, with new fill brought in. But that is not at all clear in the documents on the airport sites web site.

12. A 53 day comment period is exceptionally short to read, conduct supplemental research, think, and then write. Making this period even shorter: the bomb cyclone knocking out power and internet for many area residents for several days, Thanksgiving family time, and the time waiting for open houses that should have provided an introduction not being held into several weeks into the comment period. Same with presentations to the city councils.

I am jealous of how different the process is for light rail expansion. In West Seattle, one four station project that has been extensively discussed and presented got a 90 day comment period. This project is MUCH simpler than what Seatac is trying to do. They don’t have over 4000 pages to go through. <https://www.soundtransit.org/system-expansion/west-seattle-link-extension> . Why can’t we have a 90 day comment period?

13. The Port of Seattle’s web site was not restored until late November. I mentioned this to a port employee. His response was to criticize ME, blame ME, in a bullying manner imply that I am to

blame because “all the info was on the SAMP web site which was not down.” No. That’s wrong. Searches on the SAMP web site for many topics yield no results. Examples: historical airport activity, use of third runway, environmental history, flight data, air traffic numbers, number of flight operations – none of these searches give any results on the SAMP site. (Page 15 has a few data tables on flight ops, but they only go back to 2011.)

<https://www.airportprojects.net/sampenvironmentalreview/wp-content/uploads/sites/45/2024/10/Appendix-A-Forecast-and-Operational-Assumptions.pdf>

There’s nothing on SAMP about historical pollution.

On the SAMP site, I did see some links to documents on the right hand side in “related posts”. See screen shot.

Couldn't find what you're looking for!

Oops!

**Helpful Links:**

**Try again**

If you want to rephrase your query, here is your chance:

**Recent Posts**

> 2024 SEA Architecture Design Guidelines & Standards

> 2024 SEA Landscape Standards

> Sustainable Aviation Fuels

> TM No. 4 Forecasts of Aviation Activity

> TM No. 9 Sustainability Plan and Management

**Recent Comments**

**Archives**

I clicked on the “forecasts” of aviation activity. It is from 2015, nine years ago!

<https://www.airportprojects.net/sampenvironmentalreview/wp-content/uploads/sites/45/2024/09/TM-No-04-Forecasts-of-Aviation-Activity.pdf>

I went through some of the other links. The air cargo assessment is TEN years old. And yet the URL says uploaded in Sept 2024! What’s the point of having data that’s so old? Where’s the new data?

<https://www.airportprojects.net/sampenvironmentalreview/wp-content/uploads/sites/45/2024/09/TM-No-03-Air-Cargo-Market-Assessment.pdf>

14. The set up of the open houses was mixed: partly helpful, partly confusing. It was better than nothing. But it was very hard to get the big picture from looking at 31 or so different easel panels. It would have greatly helped to have one overall presentation that people watched, then break out to the tables. Also, it would have helped to have one overall QA, then later have breakouts, for three reasons:

- A. Several consultants and employees did not have answers to specific questions, and did not offer any way to get follow up answers. In an open QA, the speakers are more likely to be on the spot and have to answer follow up questions.
- B. Port employees and consultants at the open houses in some cases contradicted each other. It was hard to tell who was right. Or maybe they are all wrong?
- C. Port employees and consultants are not on the record for any statements. In some cases, they created impressions or made statements that upon further review were false.

An example is a conversation I had with a senior Port employee. I decided not to name him in this writeup because I did not take notes in real time, I did not record what he said, and I have desire to embarrass him. In our conversation in an open house, distinct impression I got was the claim there are no significant air quality impacts, because that's what the "AEDT" model used by the FAA states. He went on to state that I could critique the AEDT model, get a break down of the results, pick it apart to analyze how users could get to conclusions, and that the model had been first created 70 years ago so it was industry standard.

After the open house, I looked up the model. It turns out first, there are a lot of critiques of the models produced by AEDT. Second, the software costs over \$1000 to use – there are no trial versions - and that only people with a government email account (.gov) can access the support docs. The software is not 70 years old

- These comments by employees or consultants, hard to tell who's who, support my point: individual answers to questions are very easy to misunderstand, and when there's no recording or witnesses, it is a case of he said / he said.
- This does not build trust or positive working relationships. It does not build credibility for the planning documents.

15. There are no international comparisons or benchmarks in the SAMP plan. After reading a report from Library of Congress about practices in other countries, I can see why no one would want comparisons.

<https://tile.loc.gov/storage-services/service/ll/llglrd/2019713400/2019713400.pdf>

My wish: the approaches in here could be adopted as a part of SAMP. But, this is a big document and in the time I have, I can't go through and pull out every idea.

## What is Sustainability?

When I heard the name of the plan was the “sustainable” airport master plan, I had some hope that this plan would have some benefits for the environment and for people in the Seattle area, ranging from Shoreline to northeast Tacoma, and from Vashon to the eastside, who are negatively impacted by airport operations.

My hopes are dashed by what I read.

I recently went to Norway. While there, I was quite impressed by all the living roofs. I sent the idea to a Port Commissioner: how about living roofs on the Port building? (both seaport and airport). He emailed back, said “let’s keep the dialogue going.” Well, then a month later, I learned that SAMP was opening for comments. It struck me as odd that he didn’t say “let’s roll this into SAMP” or “put your comment in SAMP.”

But now as I look at the plan, I can see why: this plan is NOT about sustainability. It is about maximizing growth. It is about jamming as many passengers and as much cargo as possible, through the smallest major airport in the nation. It is about maximizing revenue. (one pilot told me recently that he has heard the Port gets a 30% cut of restaurant and retail sales. He said SAMP is just a money grab: more passengers means more revenue, pure and simple).

And it appears the plan is about doing only the minimum amount needed, or less, for anything related to mitigation, environmental protection and improved quality of life for people in the Seattle area who are impacted by flight operations. Apparently the only limiting factor long-term is the airspace constraints that are standard in any airport, and that are further reduced in the Seattle area by operations at Boeing Field, Renton, and to a lesser extent Paine and McChord.

There are various definitions of the word “sustainability”. I use two as a starting point for looking at SAMP: the UN’s definition, and one from IBM.

### ***UN and sustainability goals***

The United Nations approach, as outlined on this link, provides a “north star” we can aim for:

<https://www.un.org/en/academic-impact/sustainability>

Excerpt:

In 1987, the [United Nations Brundtland Commission](#) defined sustainability as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.”

My wish is that the SAMP plan was aligned with the UN Sustainable Development Goals. I wish there was an explanation of how each project aligned with a particular UN goal. Or, start with the goals and map SAMP to the goals.

Here is an example of what could be in the SAMP plan. The loss of forested area is in section number 15, <https://www.un.org/sustainabledevelopment/biodiversity/> specifically in 15.2

**15.2** By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

So, where's the maintenance of forests, or increased care of forested area, or restoration, IN THE SAMP PLAN? Nowhere. The SAMP plan is all about cutting down trees, clearing land, and building parking garages and warehouses.

My hope is that the next iteration of the airport plan will be very different: that it will align with UN goals. The sustainable development goals are lengthy and complicated, but could form a great framework for Seatac.

### ***IBM points to broader definitions of sustainability and suggestion for what SAMP could include***

IBM has an interesting page on sustainability in business, which is essentially what the airport is (a business).

Sustainability in business refers to a company's strategy and actions to reduce adverse environmental and social impacts resulting from business operations in a particular market. An organization's sustainability practices are typically analyzed against environmental, social and governance (ESG) metrics.

<https://www.ibm.com/topics/business-sustainability>

This leads to questions: how does the Port reduce adverse environmental and social impacts from operations beyond the minimum required by law (laws the Port has often worked to undermine or ignore, as with efforts to use very polluted construction fill in the construction of the Third Runway)?

### **Sustainability Topics and Suggestions**

Here are some specific topics and suggestions. These relate to multiple areas of the SAMP plan, so it works better to outline them here than to try to shoehorn them into a specific area.

#### ***A1. Air Pollution: Airplanes***

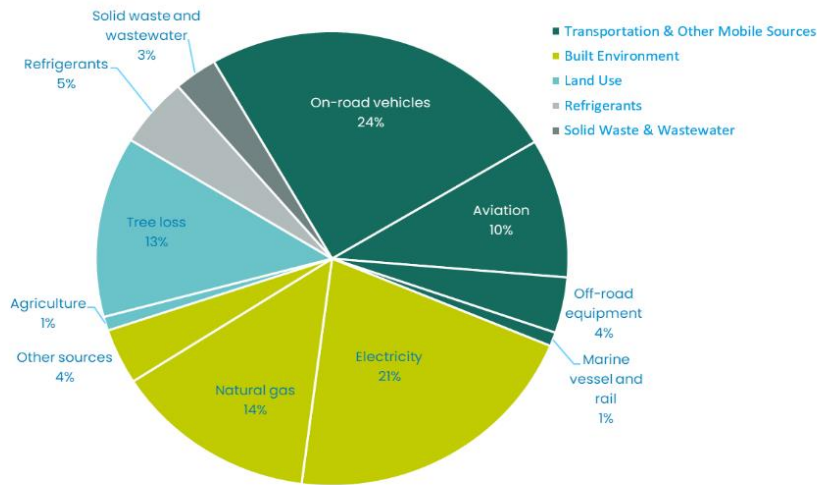
What could the airport do to improve air quality or at least reduce emissions?

PSCAA wrote a report in 2019 stating 10% of the regional GHG emissions are from Aviation. There is a not a breakout by source, but since SEA is the biggest airport by far, I think it is logical to assume nearly all of the 10% is from SEA. The biggest overall bucket is from transportation, which includes getting people to/ from the airport. Another bucket is for cutting down trees, which is also a part of the SAMP plan. So add all these together and we have an airport with a huge negative impact on regional GHG emissions.

Here's a graph from page 15.



Figure 5. Pie chart of GHG emissions sources for PSCAA counties in 2019



Source:

<https://www.pscleanair.gov/DocumentCenter/View/5361/2019-Four-County-GHG-EI-FINAL?bidId=>

SAMP ignores that (or if it is present, it is buried in the 4000 pages).

Is anyone trying to reduce the amount of GHG? One could hope “sustainable” aviation fuel does so, but that appears to be a minor part of the SAMP projects. And the projections are mixed. The US Department of Energy has some nice-sounding SAF aspirations.

<https://afdc.energy.gov/fuels/sustainable-aviation-fuel>

But a think tank’s authors are skeptical about how well SAF can really work.

<https://www.wri.org/insights/us-sustainable-aviation-fuel-emissions-impacts>

excerpt:

The guidance, finalized on April 30, opens the door to tax credits for fuel made from corn ethanol or vegetable oils — despite strong evidence that these crop-based “biofuels” actually *increase* net emissions while diverting valuable cropland away from food production.

This would be a sharp turn in the wrong direction. U.S. domestic flights were responsible for [150 million metric tons](#) of carbon dioxide emissions (MtCO<sub>2</sub>) in 2019, representing almost 3% of the country’s total emissions. With air travel projected to grow rapidly, aviation emissions are expected to roughly double by 2050, both in the U.S. and globally. And that’s before factoring in a heavier reliance on unsustainable biofuels.

As I asked in my article, do ultrafine particle levels get included in the AEDT model? What are the levels they consider acceptable? What are the levels we have now, and what will be the new levels?

The same question applies to CO<sub>2</sub>. If you want a healthy Puget Sound, then checking the CO<sub>2</sub> in the airport vicinity is very important. Emails with King County, not attached here but received December 10, outline how CO<sub>2</sub> does lead to the formation of carbonic acid in Puget Sound, with ripple impacts on fish and salmon.

A related issue for air pollution is what do we need to do for mitigation and air cleanliness indoors? Are the HVAC systems in schools sufficient to handle the increase from a 50% increase in flights, a major increase in cargo, and a major increase in road traffic? I use 50% metaphorically, it obviously depends on what year we're talking about, but it is notable to me the analysis ends in 2037, instead of outlining what the maximum is/ will be.

## ***A2: Suggestions for Addressing Air Pollution***

### 1. Carbon capture and removal

Please look into carbon capture and carbon removal. Deploy vacuums that clean air from the taxiways and runways. Use land for this process instead of more cargo facilities.

This type of carbon capture and removal may not be feasible in the next few years. But the airport plans are so jammed that if land is not set aside NOW, it will be very difficult for it to EVER happen.

This idea is prompted by carbon capture startups profiled in this recent story.

[https://www.wsj.com/us-news/climate-environment/carbon-dioxide-removal-innovation-5ea77d3d?st=9X6nkn&reflink=desktopwebshare\\_permalink](https://www.wsj.com/us-news/climate-environment/carbon-dioxide-removal-innovation-5ea77d3d?st=9X6nkn&reflink=desktopwebshare_permalink)

excerpt:

Companies looking to offset their own emissions to meet climate pledges are entering deals with carbon-removal startups, purchasing “credits” for each metric ton of CO<sub>2</sub> the projects promise to remove. The U.S. government is offering incentives to spur the market, including a tax credit in the Inflation Reduction Act of up to \$180 a ton of CO<sub>2</sub> removed.

Carbon-dioxide removal, which is known as CDR, is different from carbon capture in that it aims to reduce what has already accumulated in the atmosphere, rather than catch CO<sub>2</sub> before it is released from power plants or other industrial facilities.

### 2. Trip reduction

Many businesses have trip reductions as a condition of getting permits for growth. Example: the University of Washington. They could not build unless they significantly raised prices for parking and held traffic to a steady level, even while enrollment and employment was growing. They have met their goals.

Does the airport have any goals?

Not that I can tell from SAMP. Instead, there's more parking for employees and more parking for travelers.

The airport could institute similar policies to the UW. It frankly might be a lot cheaper to rebate travelers who comes to the airport by bus than to build parking.

Also, NOW is the opportunity to rework departure and arrivals so that buses have a much easier time getting to / from the terminals. Flixbus, Metro, Pierce Transit, Amtrak buses and more should all have much easier access. So should vans carrying passengers.

Unfortunately, the SAMP plan ignores the cumulative GHG and other impacts of traffic of people getting to / from the airport.

Also, I can't see any aspirations or solid goals in the SAMP plan that aims to reduce congestion. A friend of mine asked one of the employees or consultants about the new proposed north terminal and parking. She said the exits off 518 are already a mess, how is this going to work? She got a blank "I don't know." The plan to have a new north terminal is hard to evaluate, but at first glance, more parking is just going to lead more congestion exiting 518 and 509. More trips leads to more air pollution, both at the airport and in getting to the airport.

It is hard to imagine how any significant increase in traffic going through the very narrow funnels at the airport could NOT increase delays exponentially. The current cell phone lots are at capacity, and there are cars that are dangerously parked on the sides of roads while the drivers wait for a call.

The SAMP plan ignores traffic realities, congestion, air pollution from vehicle traffic and the need to plan NOW for better outcomes of people getting to the airport (and no, it won't be light rail, it is a slow route because of all the at grade crossings, and there are no luggage racks).

Pay for buses to the airport so people don't need to park.

Adjust the parking garage area and entrance areas so buses and vans can have a much easier time getting to the terminal, and exiting the terminal.

We need trip reduction, both in percentage and in absolute terms, to be a major part of any "sustainable" airport plan.

### ***B1. Air Pollution: Cargo Traffic to/ from the airport***

I shudder at the cumulative impacts of 509/167 expansion, cargo expansion and all the warehouses the port is building.

These need to be studied as a part of the master plan expansion. There are significant environmental impacts. They need to be mitigated, not ignored or wished away.

### ***B2. Air Pollution: Cargo Traffic Suggestions***

First, transparency. What percentage of the air cargo is actually origin and destination in the state of Washington? Vs what percent is just passing through?

Second, price for true costs.

The Seattle Times story on Amazon to Anchorage has this stunning statistic: Amazon is going to have two cargo flights per day from Seatac to Anchorage.

Why Seattle? Google maps shows flying to Portland from Anchorage is actually five minutes faster. And there are many airports situated in areas with lower cost land and labor, which in turn should reduce costs for warehousing items.

Amazon is all about “cost.” I wonder if they got landing fee discounts (in which case, the Port would not just be ‘meeting’ demand, it would be ‘stimulating’ demand.)

When Amazon doesn’t have to pay a cost for the problems caused by cargo flights, then flying from SEA is cost effective. If Amazon instead had to pay a price for noise, for polluting the air in residences and schools, etc, then their cost would go up and they would choose to fly from elsewhere, such as Denver where the airport is so big, neighbors are not impacted.

Third, discourage planes that are relatively noisy and relatively polluting. There are ways the airport could do this if they wanted through policies and priorities. Instead, the Port is marketing the daylight out of Seatac to cargo carriers.

The reality is: building lots of warehouse space drives demand for flights. Some may call that economic development, but there are costs that always seem to be ignored.

### ***C1. Noise Pollution***

There is noise from planes, and also noise from truck and car traffic.

The SAMP plan is fundamentally flawed at ignoring the joint interactions of the combined noise of passenger and cargo traffic on roads getting to and from the airport.

The SAMP plan misses the reverberation that will occur from sound waves hitting warehouses, not trees and unbuilt land. This is an increase in noise not modeled by AEDT.

The SAMP plan misses the reflected and amplified noise from increased numbers of flights on roads.

The SAMP plan is fundamentally flawed at only using dnL contours, and not looking at other metrics. This is a choice of the Port. They could choose supplemental metrics, such as number of days with a certain number of noise events above 55, 60 and 65 db.

Aspiration: What could the airport do to improve REDUCE noise from current airplane levels?

Minimum: What can the airport do to keep noise at current levels, and not increase it?

Reality on noise:

At one of the poster boards, I heard an employee or consultant giving a discussion of DNL, the mathematical smoothing algorithm used to compute the contours of noise impacted areas.

Unfortunately, averages don’t really tell much. It is peak noise that can impact quality of life, sleep, and learning in school, including learning outside of a school building. If an area has 15 events per hour (so one every four minutes) that peak at 80 decibels, the “average” will not likely be “high enough” for mitigation. But these events will certainly have an impact. And unfortunately, cargo planes are very large,

tend to be older, and are more likely to fly at night time when the impacts on health are much greater than during the day.

## **C2. Noise Pollution: Suggestions**

It is “nice” to think some of this is done in Part 150, but really, it should be in the master plan.

First, transparency. Send out mail ahead of time saying “here’s what’s causing the noise between 10 pm and 6 am. It is the flight to Taipei, the red eye flights leaving at midnight by Jetblue, etc.” Would the airplanes fly as much if they knew they would be visible, not anonymous? Would airport “demand” be the same? You may find that transparency reduces demand, which then reduces the need for as big an expansion of gates, and as much new construction as proposed.

Second, plan on noise mitigation, such as insulation, AHEAD of time for everything near the airport: multifamily, single family, commercial, churches etc.

Third, try using materials in construction that absorb noise and don’t reflect it.

The NY Times has had several stories in recent years about the impacts of urban noise. Several of these have had suggestions. This one discusses materials. The main point of the story is about residential noise reduction, but the applicable point to SAMP is construction materials matter.

<https://www.nytimes.com/2015/12/13/realestate/soundproofing-for-new-york-noise.html>

Fourth, stop the pretense that noise does not have health impacts. It does. As mentioned in comments by section below, these claims in the SAMP planning document are especially infuriating. The NY Times discussed the reality of noise impacts.

<https://www.nytimes.com/2023/06/14/us/noise-san-diego-health-effects.html>

We’ve all been annoyed by the stomping of our upstairs neighbors, a blaring ambulance that rouses us from sleep, a dog barking while we’re on a Zoom call.

But could these quotidian sounds ever cross over from merely irritating to actually dangerous?

My colleagues have just published [a fascinating project](#) exploring how unpleasant noise can take years off your life, a largely unrecognized health threat that’s increasing the risk of hypertension, stroke and heart attacks for Americans.

When we hear the whooshing din of a freeway or the thundering of a low-flying plane, the sound alerts the stress detection center in our brain, which then sets off a cascade of reactions in our body that, over time, can take a serious toll on our health.

While we think we get used to these ambient noises after a while, the data actually shows the opposite: Repeated exposure makes people more sensitive to noise, lowering our tolerance for unpleasant sounds and essentially making the bad effects worse.

“Noise is worth worrying about,” Emily Baumgaertner, who led the reporting, told me. “The relationship between noise and health looks fairly linear on a plot. The louder your environment is, the higher your risk of heart disease, heart attack and even heart-related death.”

Noise levels are measured in decibels, and according to the World Health Organization, average road-traffic noise above 53 decibels, or average aircraft noise above about 45 decibels, is associated with adverse health effects. Roughly one-third of the U.S. population lives in areas with average noise levels at least that high.

This story also points to the realities of noise harming people:

<https://www.nytimes.com/interactive/2023/06/09/health/noise-exposure-health-impacts.html>

To simulate relentless nights, scientists played dozens of sporadic recordings of [passing trains](#) and [planes overhead](#) in healthy volunteers' bedrooms — recordings taken of real disruptions from people's homes. They found that the next morning, the volunteers had higher adrenaline levels, stiffened arteries, and spikes in plasma proteins that indicate inflammation.

When researchers [analyzed](#) the brain scans and health records of hundreds of people at Massachusetts General Hospital, they made a stunning discovery: Those who lived in areas with high levels of transportation noise were more likely to have highly activated amygdalas, arterial inflammation and — within five years — major cardiac events.

And also ([emphasis added in yellow](#))

According to the [World Health Organization](#), average road traffic noise above 53 dB [or average aircraft noise exposure above about 45 dB are associated with adverse health effects.](#)

These parts of the story relate to socio economic inequities that are completely ignored in the SAMP section on socio economics.

### **Who is most at risk?**

As with so many health issues, poor people and communities of color are more likely to experience excessive noise exposure because they often have fewer housing choices and are more likely to live near high-traffic roads, raucous waste dumps and industrial areas.

According to a study of [more than 94,000 schools](#), students in those estimated to be most highly exposed to road or aviation noise were significantly more likely to be eligible for free or reduced-price meals and to be Hispanic, Black, or Asian/Pacific Islander. Such excess noise in schools is associated with heightened [stress hormones](#), lower [reading scores](#) and even [hyperactivity](#) among children.

Nighttime noise shows similar inequities. Census data [shows](#) that city communities with almost no low-income residents averaged 44 dB at night, compared with about 47 dB in those where half of residents fall below the poverty line. Neighborhoods with almost no Black residents averaged about 42 dB at night, compared with about 46 dB in communities that were three-fourths Black.

[The difference of a few dBs might not seem like much, but for every one dB increase, the risk of developing cardiovascular disease climbs by roughly another percentage point, according to a](#)

preliminary analysis of more than 100,000 U.S. nurses. And as dBs climb, so too do associations with death because of cardiovascular disease and heart attack.

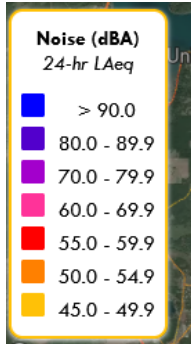
It is folly for the Port to assert an increase of 1.5 db in an area that's within the 65 dnL contour is "not significant." Of course it is significant! Read the health studies. Or even better, try having the Port commission meetings outdoors, at the Des Moines Field House, or the Mt Rainier High School tennis courts (where a piece of an airplane once landed). How well could you communicate? What would your blood pressure be?

Sixth, assign costs to this noise. SAMP economics and cost-benefit ratios, to the extent they exist, are based on ignoring the costs associated with noise.

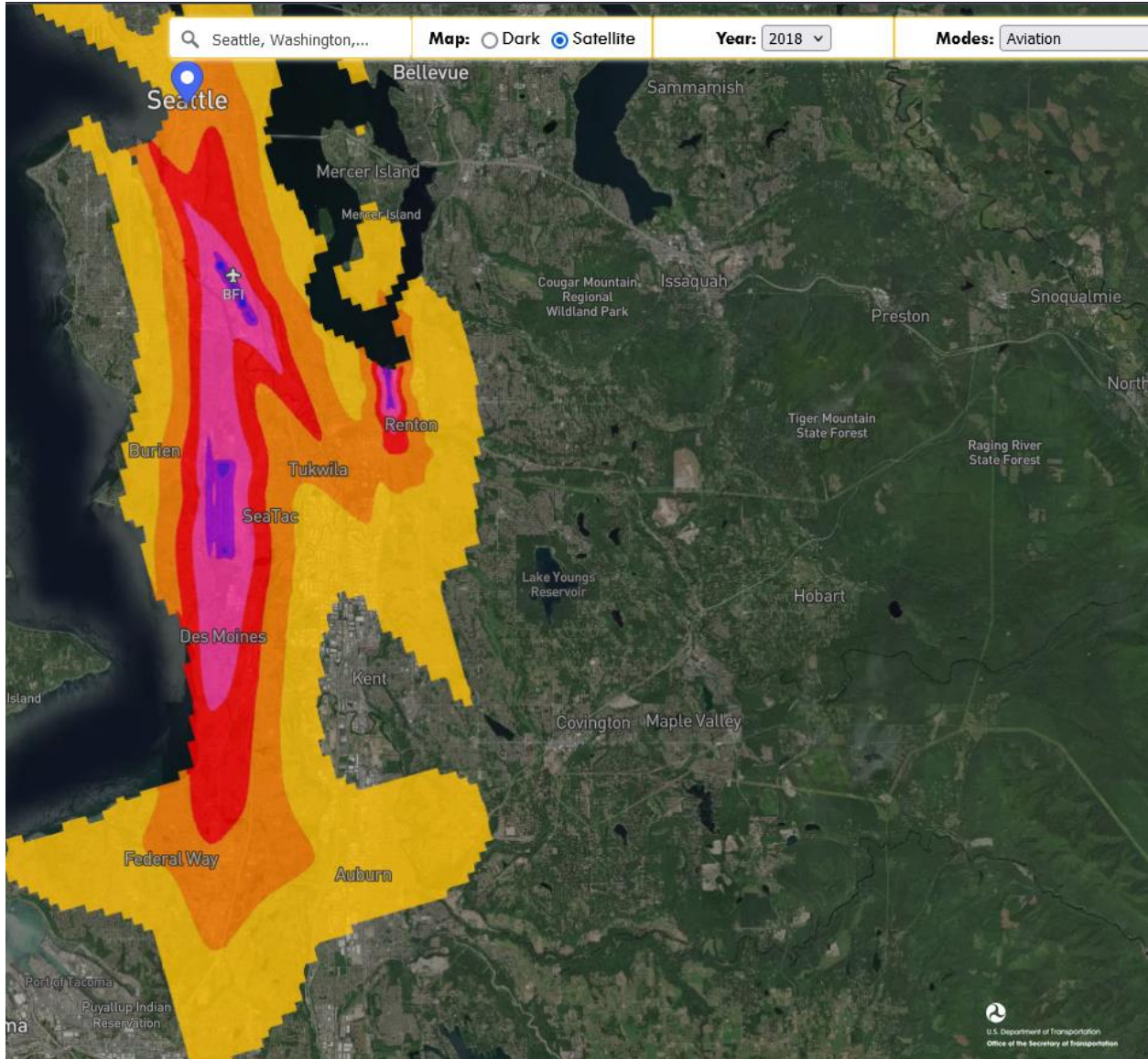
Seventh, create COMBINED noise maps that use CURRENT data and have forecasts for the COMBINED impacts.

Create a model like this image from the Office of Spatial Analysis and Visualization at the Bureau of Transportation Statistics, U.S. Department of Transportation, and forecast it for the growth in traffic when 509 has the full amount of cargo traffic on it that will result from all the warehouses that are opening.

<https://maps.dot.gov/BTS/NationalTransportationNoiseMap/>

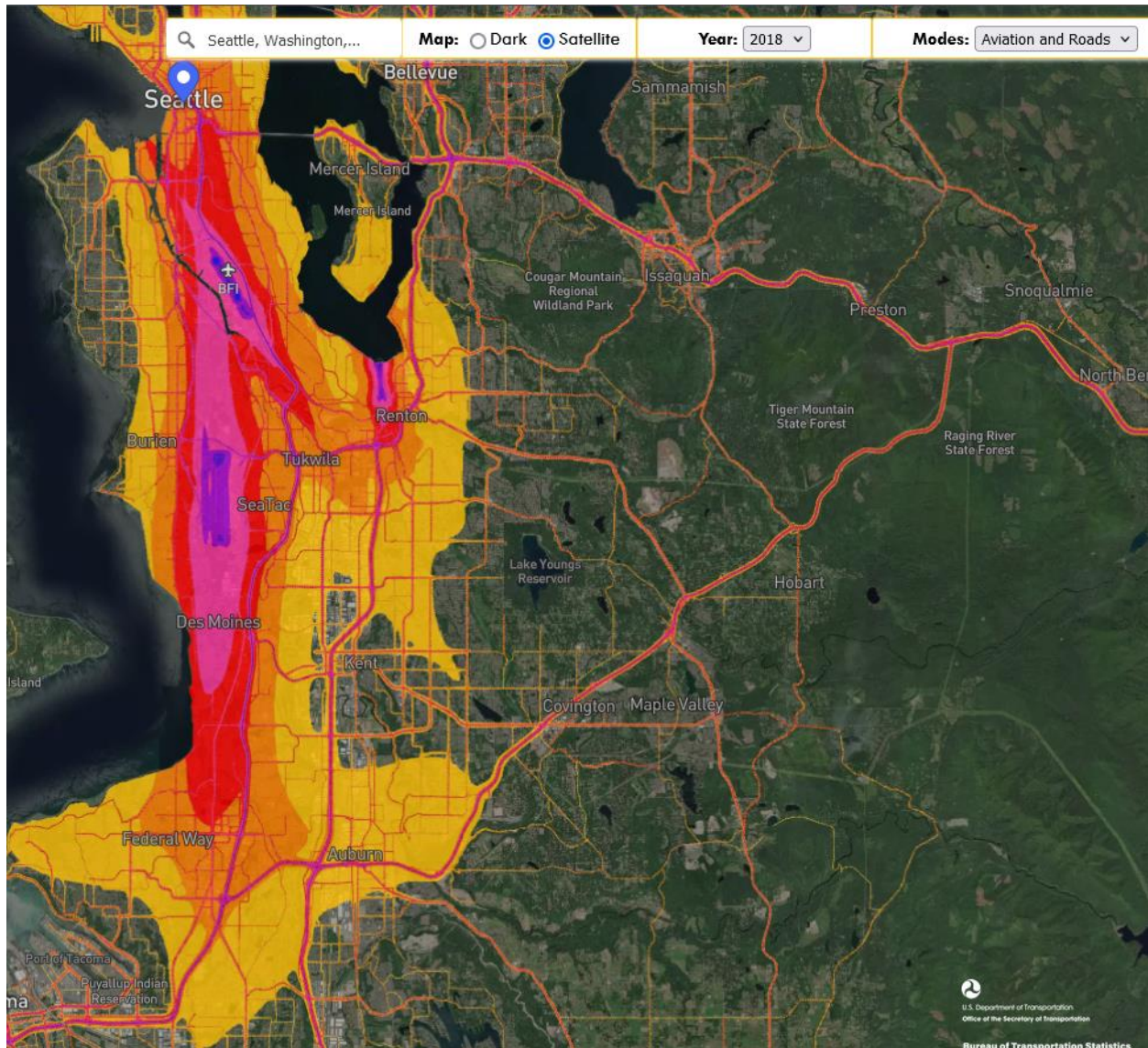


**Image 1: Aviation only**



**Image 1: Aviation and roads**





I read about this in this story:

<https://www.nytimes.com/2023/06/09/health/noise-sound-exposure.html>

The story notes of the model:

...(it) accounts only for transport-related noise — and, like all modeled data, it is based on approximations — so it pales in comparison with on-the-ground measurements.

Eighth – Absorb noise through building techniques

After the massive glass walls of the main terminal were constructed, the noise levels west of the airport increased. Cause/ effect? It is hard to know. But, the walls were not built to absorb noise. They instead reflect and amplify noise because of the materials and also the height.

Several people asked some 15 years ago for noise walls on the west side that could absorb noise. The response from the Port was to pooh pooh these requests, or shove them off into Part 150. Well, Part 150 is NOT about construction. When all the buildings are in design mode, a central design goal SHOULD BE to set them up so they absorb noise and do not amplify it.

There are ways to design buildings so they reduce noise instead of increasing it. For examples, look at this story from the Wall Street Journal on

I mentioned cargo earlier. How about noise absorbing warehouse designs, lots of trees planted as buffer zones, and noise walls for the warehouse traffic

Techniques could include the shape, size, siding materials, angle and other attributes of the buildings.

#### Nine - Absorb noise through a Hush House

Several years ago, State Rep (now Senator) Tina Orwall, former Burien mayor Rose Clark and I brainstormed on hush houses. Tina did some follow up. These structures absorb noise from airplane engines that are being tested. At the time, we were told “there’s no space to put one. Every inch is occupied.”

Well, now it turns out there are construction projects proposed that could be a hush house, but instead are other items. The cargo space could just as easily be relocated for a Hush house as it is for a terminal.

Choices, choices. Where there’s a will, there’s a way. Please fit in a hush house, or else agree that there will never be engine runups at the airport.

It is very hard to tell what alternatives in the SAMP planning were considered but did not make the cut for projects. An example: a “hush” house.

This is another ‘oops’ in a search on the SAMP site

Couldn't find what you're looking for!

Oops!

Helpful Links:

Try again

If you want to rephrase your query, here is your chance:

hush house

A hush house is a building where planes can be brought that need engine testing. The tests are very Very **VERY LOUD!** A hush house absorbs the sound. Several years ago, Tina Orwall, Rose Clark and I tried to get the Port to consider a hush house. Well, we were told "there's no space." But now it turns out there is space, where the Fedex facility is that will be replaced by the terminal and parking. This is a choice, it is a lost opportunity to reduce noise pollution, and evidently it was not considered. Why?

Ten: more ways to absorb noise

Absorb noise through current retaining walls and the planned enhancements, such as the blast pads

The concrete walls at the north end reflect noise. Modify them. Put the art elsewhere. Noise reduction is more important.

The concrete blast pads are going to reflect noise. How can they be designed to reduce noise?

And for that matter, blast pads probably mean more take offs and landings. The port said at the time of third runway permitting that the runway would only be used for landings in bad weather. Putting blast pads at both ends looks like bait and switch. Put the project into parts, evade scrutiny, sandbag the total cost, rinse, repeat.... And you think people trust you?

Absorb noise through berms, walls, pylons that break up sound waves or have sound coming from them that counteracts the sound waves.

The rationales the Port gave in the past for why sound walls are not feasible are negated by the Port's plans.

Absorb noise through roofs of current and proposed buildings

I mentioned living roofs earlier. Living roofs can capture noise, not reflect and amplify it. They do this by absorbing energy and sound waves.

#### ***D. Water quality - general***

The Port has had extensive monitoring for compliance with pollution permits. Is there anything possible to go beyond the legal minimum? What impacts will more impervious surface have on the required capacity for storage ponds? Will the SAMP projects preclude future water quality improvements by taking away space?

#### ***D1. Water quality – aquifers***

Maps show the projects are partly built over Highline well fields. What are the impacts of building on top of aquifers? Will clearing land and putting in buildings impact well recharge? How prudent is it to dig the basement needed for the parking garage when the digging is over an aquifer? Is the Port paying for insurance in case something goes wrong?

#### **E. Other Suggestions – considered but don't make sense**

I wish the port planning process involved a search for best practices of design, a reality check on the impacts of growth, and a chance for problem/solution thinking. Some examples that may not make sense, but might trigger ones that do:

##### 1. Solar power as a possibility

I wish there was some analysis of solar power.

I have already suggested living roofs and noise absorbing materials. Using roofs for these purposes may preclude solar power.

Also, roof top solar may not be possible because the air pollution from planes and vehicles could impact the efficiency of solar panels. Keeping the panels clean could take more time and resources than the power is worth.

But, I wish this could be looked at.

And maybe the giant glass walls could have solar built into them, especially on the sides that don't face the runways.

##### 2. Geothermal as a possibility

Tyee High School is being rebuilt in the city of Seatac. The school is going to be heated in part by geothermal wells.

I don't know if it is realistic because the holes needed for geothermal could interfere with the operations of the wells, and possibly their recharge.

I wish this could be explored.

### 3. Wind power

The airport is on a hill. Can winds from the west drive any type of wind power? I do not mean the tall turbines one sees in the wind farms, I mean something smaller scale but still helpful.

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Comments on specific sections of SAMP

Again, this is a rough draft, written in haste, without time to tie together a lot of loose ends. A hairball response to a hairball govt planning doc. 😞

Overall URL I used.

<https://www.airportprojects.net/sampntpenvironmentalreview/materials-2/>

Chapters 1 and 2

<https://www.airportprojects.net/sampenvironmentalreview/wp-content/uploads/sites/45/2024/10/Chapter-1-Purpose-and-Need.pdf>

<https://www.airportprojects.net/sampenvironmentalreview/wp-content/uploads/sites/45/2024/10/Chapter-2-Alternatives.pdf>

I remember when the third runway was being built. It was going to solve all the delay problems from weather. It was only going to be used in landings in “bad weather.” Many neighbors said bait and switch, you’ll use it for a lot more. Turns out they were right. And turns out breaking the project into pieces was a long term strategy. What a scam. Blast pads, high speed exits, taxiways, all needed because of the ignorance, lies or incompetence of the airport planners.

Not considered is price adjustments for travelers using Seatac. A friend recently flew from Seattle to Spokane, then drove to/from Spokane to Walla Walla, then flew back to Seattle, all during a 48 hour period. I asked them why they didn’t just fly from Walla Walla back to Seattle. The answer: “Cost. Walla Walla to Seattle is a lot more than Spokane to Seattle.” People do look at cost. Your “analysis” ignores this. Raise the price, demand drops. If seattle Spokane had been \$100 higher, they would have taken the train, a bus or driven themselves.

Appendix A

<https://www.airportprojects.net/sampenvironmentalreview/wp-content/uploads/sites/45/2024/10/Appendix-A-Forecast-and-Operational-Assumptions.pdf>

Missing: a lot of historical information on fleet mix, destinations, and especially local vs non local traffic.

Missing: anything on Cargo

Sept 2023 was a year ago. Why didn't they at least have complete 2023 data?

This is an incredibly complicated document, too much to review in too short a time.

Chapter 3: affected environment

<https://www.airportprojects.net/sampenvironmentalreview/wp-content/uploads/sites/45/2024/10/Chapter-3-Affected-Environment.pdf>

First, I see the word "draft" in the footer. So is this a final document or a draft?

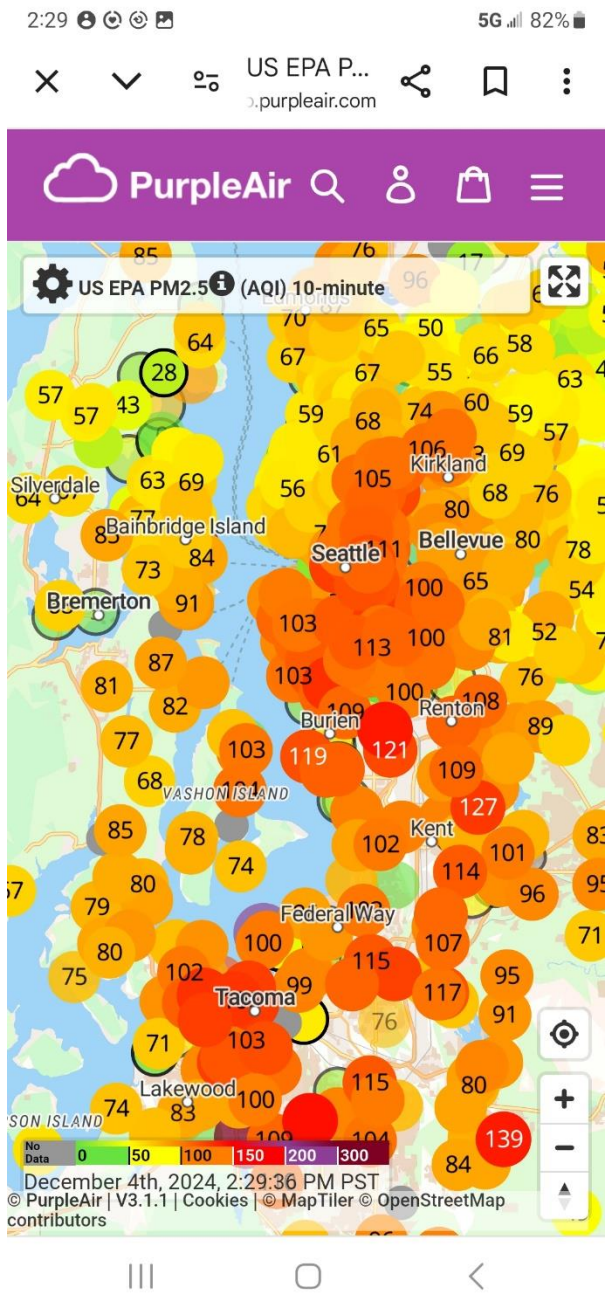
3-8 air quality – how are we doing compared to the standards?

The field of study is too small. The only maps shown are the airport vicinity. The air pollution goes over a much wider area. This is a screen shot from Purple Air, on a day when there was an air inversion: December 4, 2024.

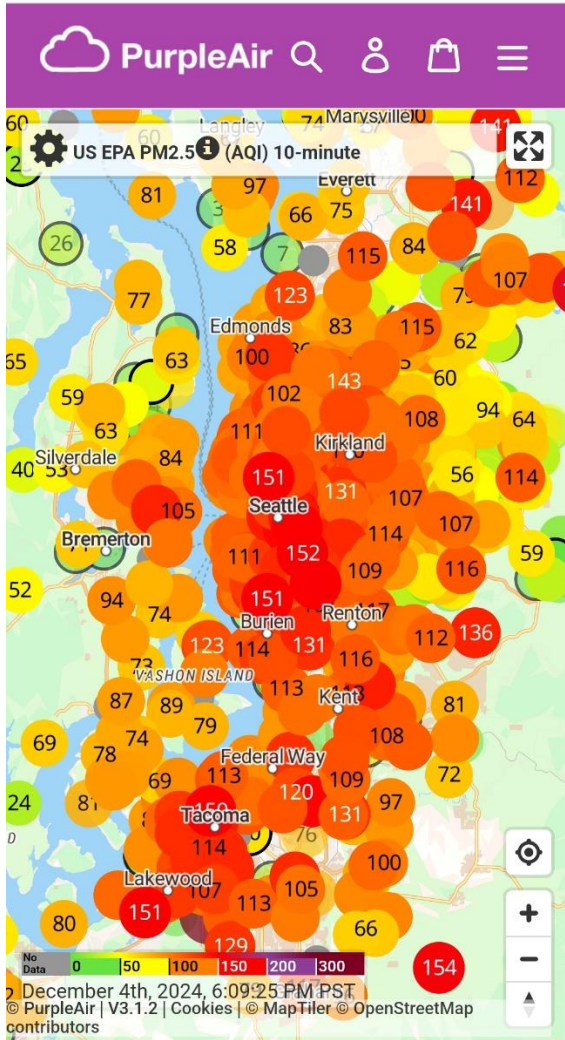
You can see the air quality readings: **they have the same shape as the contour maps for noise**. The air quality is much worse in the areas of the flight paths than in non flight areas. This particular day, the air quality in Normandy Park was very poor. The air tasted like jet fuel at locations near First Avenue South and 178<sup>th</sup>.

Purple Air only captures some data. I don't think they have Ultrafines. So this is a starting point.

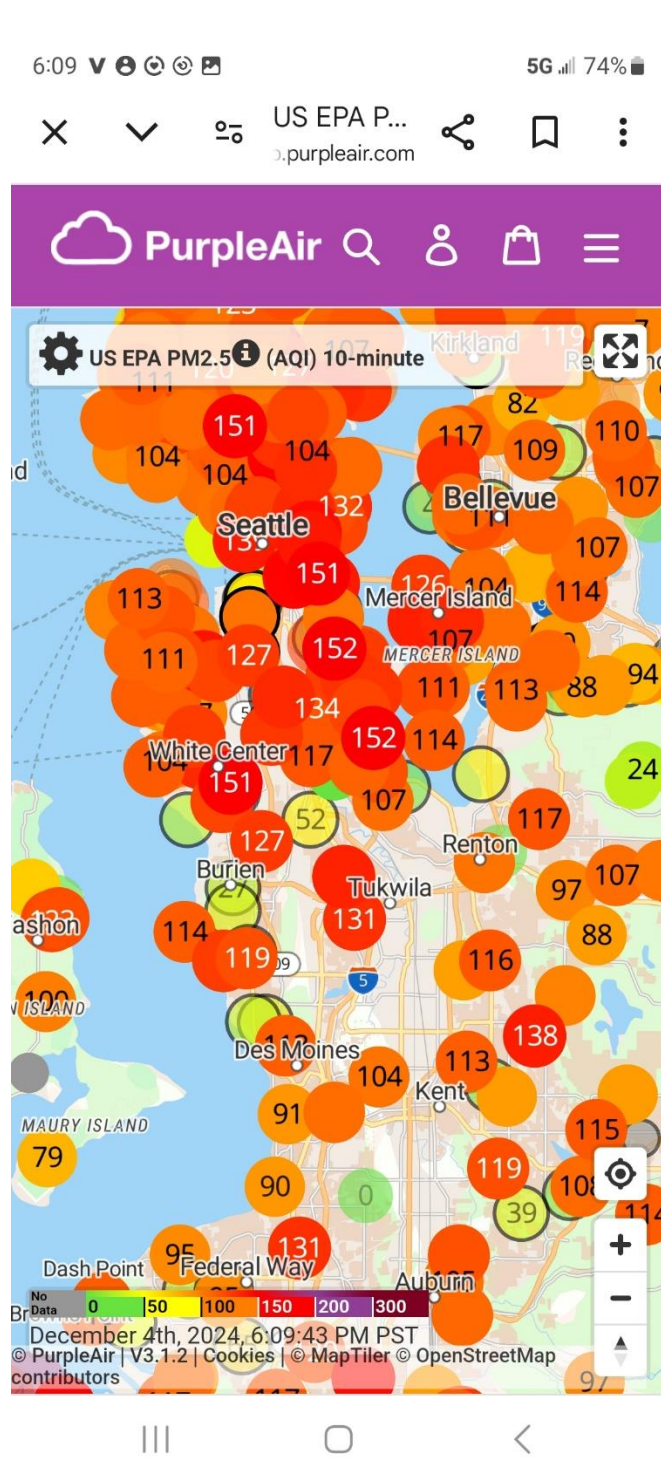
2 29 pm



6 09 pm – two screen shots







Read here about the superinversion on Dec 4. This is what fixed the pollution, making it much easier to see where it is located than we could usually see.

<https://cliffmass.blogspot.com/2024/12/when-will-superinversion-end.html?m=1>

There's a table of existing conditions. How does this compare to futures? Impossible to tell or find.

### Demographics

I have some later content on demographics on page 31 or so of this document. Sorry, not enough time to edit in the way I would like.

This is another example of the SAMP documents having tons of data that obscures a key point: the income of people who live near the airport is at the bottom level of incomes in the Seattle area.

Census blocks – page 56 and following – far too small an area to consider. Look at the demographics of the Highline School District. 70% Free Reduced Lunch. That's dramatically poorer than the rest of King County. That's the minimum size of the region that should be considered.

These residents are not the users or beneficiaries of air travel. It is completely irrelevant to them that they will have more options to fly to Tokyo or Seoul via Alaska.

See this chart from a story in the Seattle Times posted on Dec 12, 2024

<https://www.seattletimes.com/seattle-news/data/these-are-seattles-highest-and-lowest-income-neighborhoods-2/>

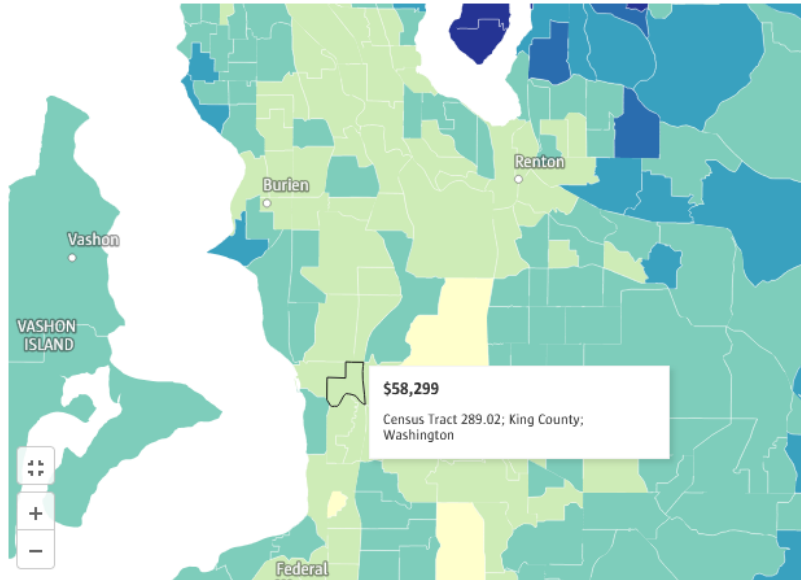
Here's a close up of the airport area. You can see nearly all the nearby census tracts are in the bottom or second from bottom category. Air travelers are much more likely to come from the north Seattle, and eastside areas because simple: that's where the money is. Or the travelers are tourists, or people passing through Hub Seatac. If people are spending thousands on a trip, they can afford to kick in a little more for real mitigation.

## Wide range of incomes across King County neighborhoods

In 15 of the nearly 500 census tracts in King County, the median household income exceeded \$250,000, according to new census data. In 15 tracts, the median was below \$50,000.

### MEDIAN INCOME

<\$50K \$50K-\$100K \$100K-\$150K \$150K-\$200K \$200K-\$250K >\$250K

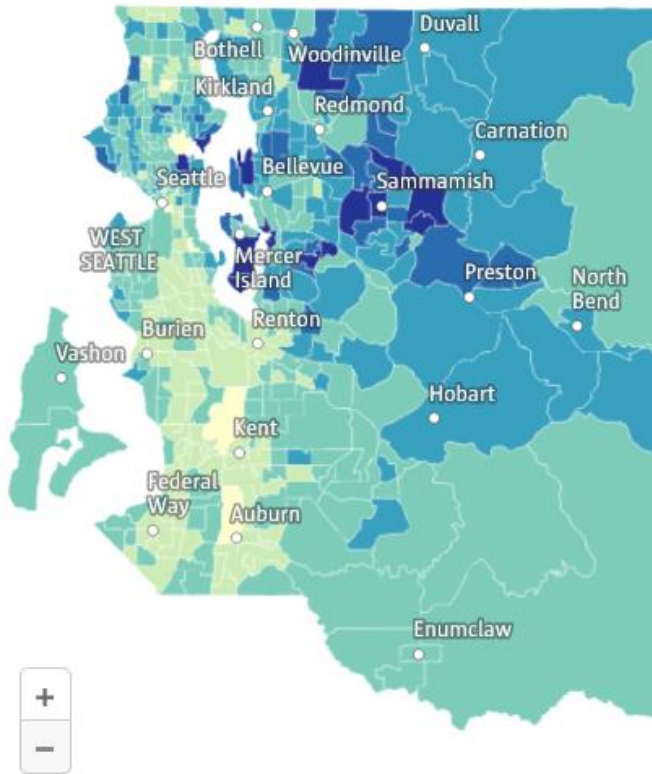


Here's the bigger picture:

below \$30,000.

**MEDIAN INCOME**

Yellow <\$50K Green \$50K-\$100K Teal \$100K-\$150K Dark Blue \$150K-\$;



U.S. Census Bureau (Elena Martin / The Seattle Times)

Appendix K

<https://www.airportprojects.net/sampenvironmentalreview/wp-content/uploads/sites/45/2024/10/Appendix-K-Socioeconomics-Environmental-Justice-and-Childrens-Health.pdf>

page 4 - low income definition is too low. Free reduced lunch is a better proxy for poverty. Use those income levels. The Highline district is over 70% FRL. Schools closer to the airport are higher. \$3975 per month from here

[https://www.dshs.wa.gov/sites/default/files/ESA/csd/documents/Basic%20Food\\_Q\\_and\\_A.pdf](https://www.dshs.wa.gov/sites/default/files/ESA/csd/documents/Basic%20Food_Q_and_A.pdf) adds to \$47,700 / year. That's a lot higher than \$41,625. By using a lower number, you undercount the number of people in poverty who are impacted, and thereby make the projects look like they don't disparately impact lower income residents. There are various definitions of poverty, and I think 47K is probably too low.

Following pages: by using only the dnl contour, you miss a lot of others who are also impacted.

I see tables of ethnicity, but where's the data on income? MISSING.

Then somehow we jump to a report about all the "wonderful benefits of the Airport" created in 2018, using data from 2017. So, what has happened in 2018, 2019, 2020, 2021, 2022, and 2023? Why not have current data? Maybe because the data doesn't matter? Or because there have been zero positive outcomes since 2017 for residents of the area even though the numbers have increased for travelers, which should mean fewer area residents in poverty?

There are lots of big numbers. Hard to know how they were computed. But focusing on numbers I do have some experience with, let's look at Normandy Park.

Page 38 has the number of passengers, but not number of flight operations. That's one thing I ran out of time to find on the Port's web site since the site was down for many weeks.

Missing: any analysis showing how the near doubling of passengers has led to any type of benefit to nearby neighbors. Did incomes nearly double? No. Jobs? Can't tell. Page 45 capital spending – did it happen? Did it create long term lifts in income? By now we should be able to tell.

Page 49 shows cherries are the leading export. Presumably they come from eastern Washington on roads. Why not fly them out of Moses Lake or Spokane? Well, I once heard that the Port blackmailed the cargo companies that the cherry producers use and said if they didn't ship out of Seatac, they would encounter difficulties in accessing other Port services. I don't know if that rumor is true, but the guy who told it to me knew a lot.

Page 52 of 69 – nearly 2/3 come by car (personal, rental, ride share). But this is visitor mode. There are also all the workers. What's the combined figure for people coming to the airport?

All these numbers, very hard to figure out what the point of them is in the context of SAMP. There are certainly no assertions that building 31 projects means bigger dollar figures. As if dollars are the only outcome that matters.

Page 60 – tax revenue, missing: property tax. It must be rolled into "other." So, what's the impact? Well, for one, the hotels near the airport do pay some tax. So that's a plus. But, the houses and apartments within several miles all have depressed values relative to comps farther away. So, that's a minus. To get a net, we need to have the plus minus the depressed values. Then we have a total – a net total.

So, this section is at best incomplete, more accurately, it is misleading and does not give the full picture.

Also, one wonders. When the Port built the rental car structure, the car companies had to move from locations where they paid tax to the facility that is tax free. The income actually DROPPED from property tax. So, why doesn't the Port acknowledge this? There's no income from the garage to the Highline School district, fire, city, police, anything.

Same is true for the warehouses on buy out land. No tax revenue, but the cities, fire district etc have to provide services. If there's a fire at the Outdoor Research warehouse, the Port won't send over a fire truck from the airport. The South King fire district has to do the job, even though the Port doesn't pay them a nickel (source: a city council member in the area).

Page 61 – city of residence

It is laughable to read “real benefits to neighboring Communities” because of the lack of supporting evidence. The claim is there are 100 workers from Normandy Park at the airport. Where? What are their jobs? The estimated labor force for Normandy Park is 3710. NO WAY that’s true. Look at Census quick facts

<https://www.census.gov/quickfacts/fact/table/normandyparkcitywashington/PST045223>

6,527 population. The census states that the “labor force” is 59.2% or 3,864. But not everyone works. Being in the labor force is not the same as actually having a job. There are a lot of parents who are full time parents. There are a lot of part time parents/ part time workers. And there are a lot of people of working age who simply don’t work for whatever reason.

So it makes it hard to take the assertions seriously.

Page 62 – I have no idea how this is calculated: “Of total jobs in Normandy Park, 18% were supported by Sea-Tac.”

Then page 66 is even more confusing. It says 200 jobs in Normandy Park. 200? Or 100? \$0.1 million in local taxes? HOW? Normandy Park is mostly funded by property tax, with a tiny amount of sales and B and O.

1 in 17?

This whole study seems to throw out a whole bunch of contradictory numbers in the hope that something will stick with readers.

Then the closing comment on the Normandy Park page about new signage attracting visitors from the airport for recreational attractions is also laughable. But has it worked? Do tell.

The overall conclusion follows from the 2017 study, but completely ignores the part of Appendix K on socio economics.

If a student turned this in as a thesis at a college, I think they’d flunk. Deservedly.

#### **Chapter 4 - Environmental consequences**

<https://www.airportprojects.net/sampenvironmentalreview/wp-content/uploads/sites/45/2024/10/Chapter-4-Environmental-Consequences.pdf>

This is very frustrating to read.

First, there should be baselines to past and current years, not just 2032. The port staff at meetings asserted “there are no higher impacts if we build or don’t build.” Well that assertion is NOT supported in the data – for one, there’s no information about how operations would possibly work if there were the current number of gates, vs 19 more. But also, it is impossible to tell how the projection for 2032 is

arrived at. What percent growth per year from 2022, or 2023, or 2024? Or from when the Third runway opened in 2008, or when SAMP planning kicked off (whenever that was).

Page 8 – environmental justice. “not significant” – “with mitigation.”

Not defined here. Not sure what mitigation they’re talking about. HEPA filters for 10,000 residents? Indoor filtration that’s the same as what the airport staff gets? We heard once that the port staff has much better air filtration than passengers in the airport get.

I think the writers missed a contradiction. Will there be mitigation or not? Alt 2 (and 3) say mitigation is needed. But then the mitigation column has “none” for mitigation! Ooops. Looks like someone else needs more time too.

**ENVIRONMENTAL IMPACTS (CONTINUED)**

Alternative 2: Proposed Action (compared to No Action)	Alternative 3: Hybrid Terminal Option (compared to No Action)	Mitigation
<p><u>Socioeconomic</u> Two business (Doug Fox Lot and PACCAR Aviation) and one intersection (24th Avenue South from S. 150th Street) would be closed. No adverse impacts to economic resources are expected.</p> <p><u>Environmental Justice</u> Environmental justice populations would be exposed to increased air emissions, noise, socioeconomic impacts, and roadways that do not meet mobility standards as a result of the Proposed Action. However, none of the impacts were found to be significant with mitigation and none are considered disproportionate and adverse.</p>	<p>Same as the Proposed Action.</p>	<p>None</p>

Significant to residents is very different than significant to consultants from Ohio who are not impacted. Maybe they should move their offices to 200<sup>th</sup> and 16<sup>th</sup> south, then see what they think is significant.

“no impacts to children’s health?” NO WAY. Ask any pediatrician about childhood asthma in the Seatac area. Ask what the impact is of disturbed sleep. There’s no supporting evidence for this assertion.

Then there's more on mitigation. I have no idea what an NTP is. But overall, it sounds like the Port is going to try to shift the bill to some other entity, likely a city, and get them to pay for the traffic coming to/ from the airport. I can't tell how much of this is due to cargo, how much to passengers.

But isn't it interesting there are not efforts to reduce trips in the first place?

**TABLE 4-2: SUMMARY OF POTENTIAL ENVIRONMENTAL IMPACTS (CONTINUED)**

Resource Category	Alternative 1: No Action	Alternative 2: Proposed Action (compared to No Action)	Alternative 3: Hybrid Terminal Option (compared to No Action)	Mitigation
Surface Transportation	In 2032 / 2037, 10 roadway intersections would fail to meet mobility standards. These degradations would be due to background growth in traffic and / or travel pattern changes unrelated to the Proposed Action.	In 2032 / 2037, 26 roadway intersections would be impacted (all of which could be mitigated). With implementation of mitigation, these are not considered significant impacts.	Same as the Proposed Action.	Mitigation includes bringing the impacted traffic intersections in line with the mobility standards and may include installation of traffic signals, intersection approach modifications, and the addition of turn lanes. Proportionate share payments of improvement costs equal to percentage of total intersection trips generated by NTPs to jurisdictions.

Water resources

Hey guys, did you know there are wells near Seatac that are used for drinking water by the Highline water district? I would assume some people at the Port do, since they are paying money to clean up a mess from fire fighters. But maybe this part was written by the Ohio people who don't know the area. To brief them: the wells have been around a very long time, since before the airport. The wells are for drinking water, and also, there are storage facilities, maybe even the wells, that are used for backup by the Seattle water system. I do not see the word "well" or any mention of aquifer recharge in table 4.2, page 10 of 92. "Well" this is why we need an EIS, so we don't miss key details like drinking water.

Air quality

Pages 11 to 15.

Ahem, cough cough, what about the long term impacts? Not just construction, but whatever happens in 2032, 33, 34 and so on? What's the amount we're locking into for the air pollutants in 2040? 2050, the year when supposedly we go carbon neutral?

I don't know if the list here is complete or not. In an EIS, we'd have professionals who can double check.

This is extremely hard to check. There's no supporting data of what the car mix will be for example, or again, whether the Port could pay people not to drive.

But, IF car emissions are going to drop, it will be because of electric vehicles. EVs need chargers. Chargers? Oh, those things. Where are they going to go at SEA? There's no plan.

So, you assume one thing, but don't have the enabler needed to get there.



Page 22 – 25

How computed?

The whole premise is all this construction reduces delays, which means less idling of engines, which should mean fewer emissions, right?

Or am I missing something?

But the tables show that emissions are going up. Something seems off.

Is SAF going to have any impact? You want to build SAF facilities, but it looks like they are irrelevant.

Page 26 – where's the sustainability? Hard to know if SAF is actually going to do any good. See previous comment earlier in this doc about SAR. Main focus of the paragraph seems to be construction, not longer term operations.

At this point, the numbers and words all start blurring together. They seem very very very very repetitive, and it is hard to tell what's realistic, what's fantasy, what's in between.

Page 38 – PSRC – talks about neighbors not encroaching on airports. How about the reverse: is it a goal that airports not encroach on neighbors? Would that perhaps mean not shoving a 7 story parking garage in a residential neighborhood?

Re the cities, such as Burien and Des Moines: there's more to impacts than where the activities occur. The reality is more warehouses may not be in SAMP. But they are a major part of the Port's expansion, and they have a major impact on traffic, land use opportunities and more.

This page is mediocre.

39 – natural gas

Aren't we trying to get rid of natural gas? King county and Seattle are suing in order to get the state initiative about natural gas thrown out.

Page 43

With no action, night time arrivals go down in 2037 compared to 2032? But daytime go up? Doesn't make sense.

No data to see how this compares to the present, or to the past.

assumptions.

**TABLE 4-31: ANNUAL-AVERAGE DAY OPERATIONS**

Alternative	Arrivals Day	Arrivals Night	Departures Day	Departures Night	Total Operations
2032 No Action	531.98	108.88	542.11	92.21	1,279.18
2032 Action Alternatives	544.56	108.31	550.04	100.25	1,303.16
2037 No Action	552.22	99.62	548.85	100.34	1,300.96
2037 Action Alternatives	587.38	112.49	588.93	108.16	1,396.96

Notes: Totals may not sum due to rounding.

Daytime = 7:00am – 9:59pm, Nighttime = 10:00pm – 6:59am.

Source: Aviation Forecast Update, prepared by Port of Seattle / Leigh-Fisher, 2023, Sustainable Airport Master Plan – Near-Term Projects, Constrained Operating Growth Scenarios, Seattle-Tacoma International Airport, Landrum & Brown, July 2023.

This part is massively confusing. Who says? Why 1.5? How about 0.9995, or 1.67? How is this level arrived at?

And what about the people who are at 63.2 currently moved to 64.7 with the 1.5 increase? These numbers are arbitrary, hard to evaluate, and difficult to take seriously. This is why an EIS is needed. See NY Times stories earlier.

Next section:

Landrum & Brown, July 2023.

**4.3.10.1 Significant Impact Threshold**

According to FAA Order 1050.1F, a noise impact is significant if the alternative would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the No Action for the same timeframe.

Why the conditional of “would”

There would be a total

Would be in 2032? Would be in 2025? What’s the date? Or would be if the comp plans are adjusted, as they must be per state regulations to have more housing in the urban areas? Another confusing sentence by the Port.

This is stunning:

There would be a total of 9,855 housing units, of which 4,694 are sound insulated,

I thought all the houses in the noise contours were insulated by now. Or maybe some were, but since the insulation has failed, they no longer count as “insulated?” More confusing numbers. SHAMEFUL.

So is the fact that only 2 of 10 schools are insulated. How many children are in the 8? Are they private so not eligible?

See page 22 above – this info is related.

Page 52 – Tax Base

This has a lot of wild conjectures that fall apart under a close review.

As mentioned earlier in this writeup, more noise = lower property values = less tax base. The Port does not pay any property tax on land it owns, such as warehouses in Des Moines. They may pay lease hold excise tax, but if they do, none of that flows to the school district, fire, city or county. It only goes to the state. And a “user fee” that the Port collects at the rental car facility is not lease income, is it? Is the Port perhaps structuring payments from tenants so that the income is not called lease income, and therefore doesn’t result in a payment to the state?

54 – what are the air quality standards? How close are we to exceeding them? If they are exceeded, does the EPA plan to cancel flights? At what year do we exceed them? And what’s the level at EACH of the contours: 76, 70, 65, etc.

How many days per year can the levels be above the limits without saying it is a problem?

This section is long on conjecture and short on detail. Need EIS to dig into this.

55 – again we have this straw man that no action 2032 can be achieved without the 19 more gates, blast pads, taxi shortcuts and all the other projects.

Table 4-34 has got to be one of the most confusing tables in the entire document.

How can low income population of 58K be more than the total population of 31K?

Where are the 6K projected to go under no action 2032 and 2037? How can the population for low income go from 58K to 52K? MAKES NO SENSE.

Page 58 – disproportionate, significant threshold – was this section written by the former Harvard President who couldn’t tell whether antisemitic words on her campus violated speech codes? I can just hear her saying ‘it all depends on the context.’ No, there are absolutes. I can hear doctors saying “your child has asthma.” That’s what results from airplane emissions.

Needed: EIS. Hopefully then we can get medical facts on the table.

I have no idea if the traffic mitigation is reasonable. But it sounds like the Port is only going to pay a portion of the traffic impacts that in reality are entirely due to the airport expansion. In other words, you’re creating unfunded mandates and re prioritizing the transportation spending of three cities by creating a situation where you create a problem but don’t pay for it, indeed won’t pay a dime unless the cities pony up. At least that’s what it sounds like.

Light pollution – hard to assess. The light from the airport means we have much brighter sky 24 hours a day than the rest of the area.

71 – impacts on neighbors: very hard to tell if these assertions are valid. But reality check: removing trees does reduce absorbed CO2. Too bad the port isn't looking into trip reduction instead of building an 8 story garage (7 plus basement). This sounds significantly taller than the Boeing parts warehouse. Again, it is really hard to evaluate these conjectures and assertions. Needed: scale model, not just drawings.

72 – there are other impacts to aquifers besides contamination, including recharge. The plans do not explain impacts that could interfere with aquifers.

73 – wetlands recharge wells for drinking water. This is totally ignored. Need EIS. Or if there isn't one, and there are damages to the wells and water, then there will no doubt be lawsuits. I hope this warning in this write up is used in court as evidence that the Port willfully disregarded warnings and is therefore liable for building a desalination plant or whatever else is needed to keep the Highline Water District operational. Maybe 2055-65 or so?

79 – well impacts are on the south too

81 – very hard to understand west side impacts

88 – no mention of Highline Water district

90 – impossible to evaluate. Need EIS. Need to look at impacts of water onto 509. This section seems to require going back to page 86, then to 81.

Page 91 – oh, finally we get a mention of the Highline wells. Ignored: cumulative impacts of weight, vibration from operations on the aquifers, recharge of the aquifers etc. There's more to this than contamination. EIS needed.

So next I have to look at Appendix G, on historic resources, for other environmental programs?

Appendix G is 132 pages and does not seem to relate to environmental programs. I guess the hope is no more sloths turn up.

2021 – you've had this for three years+, why wasn't it released earlier?

## **Appendix J**

<https://www.airportprojects.net/sampenvironmentalreview/wp-content/uploads/sites/45/2024/10/Appendix-J-Noise-and-Noise-Compatible-Land-Use.pdf>

307 pages???

This is all about models. It is not about the real world.

Needed:

--Real noise monitoring (preferably not placed next to metal roofs, the way Landrum and Brown did a few years ago on Vashon, ruining the noise readings in a Part 150 study).

--data on time above 55 db. See earlier stories, 55 db is the point at which noise starts to be a problem. How many times per day, per week, does this happen?

Page 65 – (or 74 of 307) – looks like the Port is going to renege on the voluntary agreement limiting use of the third runway in the night time hours. When the planes are landing from the south heading north, I see 25% of commercial jets and 8% of cargo are going to land on 34L. For planes coming from the north heading south on 16L, I see 63-64% of commercial, and 15% of cargo, will be landing on the third runway. At least there won't be night time departures, if this table is to be believed.

66 – runups – in what? Don't see any mention of a hush house.

Skimming through, looking for 2037 departures and arrivals. How much will be on the third runway?

Looks like someone left off a line on page 99.

What's missing? COMMERCIAL JETS . I guess the commercial jets only take off, but never land? They aren't in the table! So that means no landings?

Makes me wonder what else is missing, what else is mis stated, what else is just plain wrong in the 5000 pages you expect us to make sense of, 12 years of your work, in 45 days /scratch that , 53. ]

Maybe this whole thing is written by AI? That hallucinate? There certainly seem to be a lot of hallucinations in the SAMP plans.

Rows sum to 100, but there are no sums for the vertical columns.

**TABLE 7-30: GENERALIZED RUNWAY END UTILIZATION SUMMARY – FUTURE (2037)  
PROPOSED ACTION**

Aircraft Category	Runway End 16L	Runway End 16C	Runway End 16R	Runway End 34L	Runway End 34C	Runway End 34R
<b>Daytime Arrivals</b>						
Regional Jets	5.00%	1.00%	65.00%	26.00%	1.00%	2.00%
Cargo Props	23.86%	1.45%	45.70%	26.45%	1.00%	1.55%
General Aviation	26.00%	1.50%	43.50%	26.50%	1.00%	1.50%
Other	14.41%	1.22%	55.37%	26.22%	1.00%	1.78%
Military	26.00%	1.50%	43.50%	26.50%	1.00%	1.50%
Missed Approaches*	--	--	77.33%	22.67%	--	--
<b>Daytime Departures</b>						
Commercial Jets	45.64%	25.36%	--	--	0.94%	28.06%
Cargo Jets	58.00%	13.00%	--	--	0.50%	28.50%
Regional Jets	44.00%	27.00%	--	--	1.00%	28.00%
Cargo Props	35.47%	32.84%	2.69%	1.80%	13.12%	14.08%
General Aviation	34.50%	33.50%	3.00%	2.00%	14.50%	12.50%
Other	39.78%	29.88%	1.33%	0.89%	6.99%	21.12%
Military	34.50%	33.50%	3.00%	2.00%	14.50%	12.50%
Missed Approaches*	--	--	77.33%	22.67%	--	--

Page 117 – all the inputs. Where is the double checking with real world noise monitors? With air pollution monitors?

Then page 125 – we jump to a doc from Sept 2023? What's the context? How does this fit?

Page 117 mentioned updates to AEDT released in December. September is before December. So how does this fit together?

I am not going to waste your time trying to make sense of contradictory documents that are jammed together. I skimmed to page 190 of 307. There's nothing that shows validation with actual readings or that explains why something written in Sept is not obsolete because of December model updates and evidently some substitutions of other planes.

The content that follows is very technical. I can't evaluate whether there are major omissions, like the missing Commercial Jets, or whether it is all valid. I can't evaluate in particular whether there's something missing, where after things are done, we find out there was something we missed, and you then say too bad, so sad, you losers didn't do your homework, you trusted us and sorry.....

Then we have yet another document thrown as, with no context. It appears to be about construction.

And then another one on construction.

Nothing on roads. Nothing on operations. Nothing on ways to reduce noise from operations through design choices.

### **Appendix C**

<https://www.airportprojects.net/sampenvironmentalreview/wp-content/uploads/sites/45/2024/10/Appendix-C-Air-Quality-Climate.pdf>

I see ultrafines are 'not known so not considered.' What a wimpy excuse. This is one of the biggest reasons of all why an EIS is needed. Excerpt:

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#### 1.4.5 Ultrafine Particles (NEPA)

UFPs are defined as particles with a diameter less than 0.1 micrometers (PM0.1). The existing science is not fully mature, and the measurement and understanding of UFPs and their related health risks has not been clearly defined. Currently UFPs are not regulated by the USEPA or the state either through rate of emissions or concentrations (other than being a subset component of PM 2.5) and are therefore not typically considered in formal environmental assessments or reviews.

Furthermore, since UFPs are not specifically listed as a criteria pollutant, air toxic, or HAP, an analysis of UFPs will not be considered a requirement of NEPA or the CAA. Therefore, no analysis or discussion of UFPs will be included in the NEPA evaluation.

Reality: first, you have no citations. Second, just like PFAS, something not regulated can turn out to be a big problem. Hagens Berman, are you checking to see if the Port has filtered UFPs inside the terminal for

workers and for travelers? If yes, then the statement above in the Appendix C is a fraud. If not, then the Port is negligent at not protecting health and safety. I can hear the TV ads now “if you traveled at Seatac airport in such and such a time, you may be eligible to join a class action lawsuit because just like the shipyards that used asbestos knowing there were health risks, the airport is ignored the health risks of ultrafine particles.”

From Wikipedia:

[https://en.wikipedia.org/wiki/Ultrafine\\_particle](https://en.wikipedia.org/wiki/Ultrafine_particle)

some notable sentences:

Although they remain largely unregulated, the [World Health Organization](#) has published good practice statements regarding measuring UFPs.<sup>[3]</sup>

Owing to their large quantity and ability to penetrate deep within the lung, UFPs are a major concern for respiratory exposure and health.<sup>[5]</sup>

Exposure to UFPs, even if components are not very toxic, may cause [oxidative stress](#),<sup>[14]</sup> inflammatory mediator release, and could induce heart disease, lung disease, and other systemic effects.<sup>[15] [16][17][18]</sup> The exact mechanism through which UFP exposure leads to health effects remains to be elucidated, but effects on [blood pressure](#) may play a role. It has recently been reported that UFP is associated with an increase in blood pressure in schoolchildren with the smallest particles inducing the largest effect.<sup>[19]</sup> According to research, infants whose mothers were exposed to higher levels of UFPs during pregnancy are much more likely to develop asthma.<sup>[20]</sup>

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All the rest

Overwhelming.

Need more time.

You will reap what you sow.