

Comments on the FAA EA

This project should not be approved for the following reasons:

- 1) The premise or purpose and need is false
- 2) Mortality and morbidity rates of those most affected by continued increases of pollution sources are already high, adverse and disproportionate
- 3) The air pollution calculations used for decision making surrounding the Clean Air Act and NAAQS compliance are untrustworthy
- 4) A completely inadequate cumulative impact analysis is presented that fails to account for the existing public health impacts
- 5) Missing a proper environmental justice analysis and engagement
- 6) Missing an analysis of children's health
- 7) Climate

THE PREMISE OR PURPOSE AND NEED IS FALSE

EPA Scoping Comments dated 9/28/2018 said:

“The proposed projects therefore would assist in accommodating that projected growth, which would also occur with or without the projects.”

However, FAA has said the following in 2020:

“However, airports with significant congestion and constraints can have firm constraints that preclude further operations growth. Firm constraints can include lack of gate availability to schedule new flights or demand that systemically exceeds runway capacity.”¹(bold and italics added)

Capacity

Accommodating the growth is the goal. Without the expansion program it may not be possible to host the growth in a safe manner. Congestion on runways and for landing and takeoff operations is managed to protect aviation safety, which is the primary goal of the FAA. We should not be required to accept the idea that a congested airport will occur while at the same time knowing FAA would never allow a level of congestion that would be unsafe. If aircraft safety were to be compromised in any way, that assumed growth would not be allowed. The airport has a demand and peak hour limit that allow for a certain



number of aircraft in a given time period to safely land and takeoff.² There is no need to believe that limit would be exceeded in any alternative without continued control of throughput. That control happens now, it has always happened and will happen in the future.

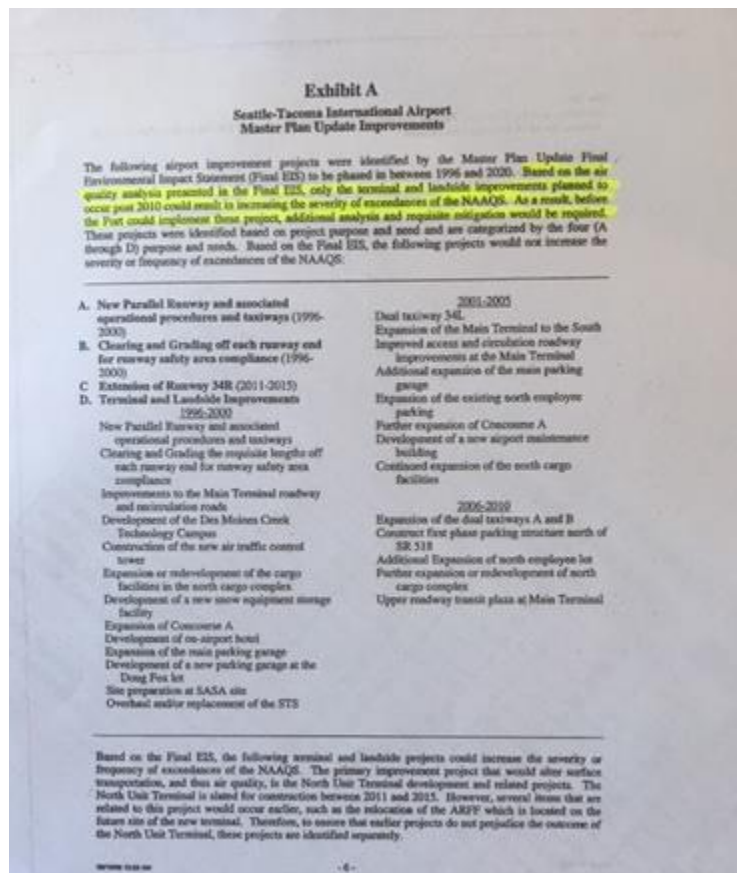
The greatest constraint at Sea-Tac is for arrivals in north flow in instrument landing conditions at 56 per hour.³ An average of all yearly conditions would be 78 but the higher number of 96 per hour in south flow in good weather conditions between peak hours of 7 am to 11 pm (FAA preferred hours of maximum takeoffs and landings in consideration of 8 nighttime quiet hours, Port of Seattle uses midnight to 5 am for quieter operations-just 5 hours) or a 16 hour day and happens most of year at Sea-Tac with prevailing winds, yields an annual capacity of 560,640 operations. Using Sea-Tac's busiest 19 hours in the higher modeled average conditions equals 617,215 annual operations which closely matches the 3rd Runway EIS capacity of 630,000. Using the average of all landing conditions of ATC reported 78 for 19 busiest hours is 540,000, the target number for the Port of Seattle SAMP.

The real reason for airport constraint is due to lack of gates and limited airfield area for parking aircraft waiting for a gate. Adding another terminal and 19 gates would allow the throughput to increase dramatically. As technology advances and things like wake recategorization can reduce spacing between landing aircraft, this maximum capacity and use can go even higher.

In 1996, FAA and Port of Seattle claimed capacity of 630,000 annually for the third runway EIS. That EIS plan included a North Unit Terminal which FAA dropped from the plan in a negotiation with EPA for clean air act conformity concurrence. FAA claimed separate utility for the terminal from the 3rd runway and dropped their capacity to 430,000 annually. See below Attachment A from the agreement between FAA and EPA. Please note that projects post 2010 were to include a thorough analysis to demonstrate compliance with the NAAQS which has not happened.

² [SEA-Airport-Capacity-Profile-2018 5.pdf](#)

³ Ibid page 12



They also used a higher peak takeoff for emission comparison as EPA requested (they had used 43.9 average yearly hourly takeoff) but changed the fleet mix from primarily jets to smaller regional jets with much lower pollution levels which has never happened and nobody believed would be the future case. As you can see from the Airport Capacity Profile, it is not reasonable to land more aircraft than what can also take-off in a similar time frame. In essence, the Port of Seattle never accurately modeled emissions in the 90's and now we have a lot of very poor and sick residents living near their facility.

Safety

Airlines would, rather than adding tens of thousands of operations to that throughput limit, be compelled to not exceed those limits if new gate facilities are not approved. It should not be assumed that added operations would occur with or without unless there is no need in reality for the "with project." The "with project" accommodates that growth such as

added gates which allows for added hourly operations per hour per gate, the terminal space to accommodate more passengers and the fuel tanks to fuel more aircraft.

The FAA and POS would like us to believe these added numbers of aircraft will come with or without these projects, which is not possible without compromising aircraft safety. All airport expansion programs are usually to accommodate peak hour arrivals. This is where the constraint happens because this is the slowest part of the flight needing the most separation. It can also happen as a result of airlines competing for these prime slots, airspace or other airport constraint, or when arrivals and departures are coming from or going to airports with nighttime or other curfews. In these instances of congestion, airlines are stalled from growing their fleet and destinations which can affect growth at other airports as well.

In the case of Sea-Tac, the need for added interim gates that violated NEPA'S prohibition on piecemealing projects, came as a result of the arrival of Delta Hub. Delta began to compete with Alaska for the peak hour slots and were adding flights beyond the airport limits for peak periods. The resulting constraint caused the Port of Seattle to push 14 of their gates from the SAMP planned 33 gate expansion to interim project status which received CATEx approval from the FAA even though they were aware of the NEPA prohibition.⁴

NEPA 1508.25(a)(i)

“Connected actions, which mean that they are closely related and therefore should be discussed in the same impact statement. Actions are connected if they; (iii) Are interdependent parts of a larger action and depend on the larger action for their justification, (2) Cumulative actions which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement.”

The theoretical maximum hourly peak hour landings are also constrained by limited airfield space. The acreage at Sea-Tac is a small fraction in comparison to other airports in the US with similar numbers of operations. The added operations don't have anywhere to go if the gates are full and would be forced to back up on the tarmac at some point which causes risk of incursion. Congestion, that causes risk to aircraft safety, is not acceptable within the limits provided by the constrained airport space. On the one hand, a reasonable person would assume that airport capacity should not be exceeded due to the risks posed by

⁴[NSAT SEPA checklist.pdf](#)

[FAA CATEx Hardstand 10Feb2017.pdf](#)

[SEPA ConcourseALounges Checklist 20210121 SIGNED.pdf](#)

[SEPA C-1 BuildingExpansion Checklist 20200316 SIGNED.pdf](#)

congestion, yet the FAA would like us to believe that controlling the number of operations is not a reasonable alternative. In reality, that is their only alternative albeit construction, and primary mandate which is to control safety. If they were to allow an unreasonable amount of airport congestion, it would be imperative to control this with limits on operations or demand system management (moving arrivals to off-peak times). Although this reasonable alternative to the project is absolutely necessary and already used in such circumstances, it is not considered since they do nothing assumes the growth which allows a false comparison in noise and emission data increases.

MORTALITY AND MORBIDITY RATES OF THOSE MOST AFFECTED BY CONTINUED INCREASES OF POLLUTION SOURCES ARE ALREADY HIGH, ADVERSE AND DISPROPORTIONATE

In 1998-2000 the State of Washington Department of Public Health evaluated public health conditions around Sea-Tac airport finding a number of statistically significant increases over average or expected of a number of serious illness rates, including cancer, higher death rate, lower life expectancy among those living near the airport and reported:

“RATIONALE FOR FURTHER STUDY Health Issues Previous reports have identified health issues of concern to the community (WDOH et al., February and December 1999). Scientific studies in other locations have associated exposure to air pollution with some of the same conditions that are high among residents in the SeaTac Airport area. **Specifically, in the SeaTac Airport area, there are statistically significantly higher rates of the following:**

- **lung cancer cases within one mile of the airport compared to the rest of King County and to Washington State;**

- **oral and pharyngeal cancer cases within one mile of the airport compared to Washington State;**

- **deaths from lung cancer and chronic obstructive pulmonary disease in an area approximately three miles to the west and north and one mile to the east and south of the airport (defined by census tracts) compared to King County; and**

• hospital admission for asthma and pneumonia/influenza in an area approximately three miles to the west, north and east and one half mile to the south of the airport (defined by zip codes) compared to King County.⁵ (bold and underline added)

And in conclusion recommended:

“The committee recommends an air quality study around SeaTac Airport for the following reasons:

- There is a lack of information on air pollutants around major airports, in general, and around SeaTac Airport, in particular. Specifically, major emission and evaporation products of jet fuels, including VOCs, carbonyl compounds, PAHs, PM2.5 and specific particulates have not been assessed in the vicinity of the airport.
- The airport and airport-related activities are potentially major sources of air pollution and environmental justice requires that one group of people not benefit at the cost of environmental degradation affecting the quality of life of another group.
- Because of the lack of information on specific air pollutants, we cannot rule out the possibility that air pollution around SeaTac Airport affects the health of the residents.

Goals of an air quality study

For an air quality study to be useful, it needs to answer the following questions:

- Are total amounts of specific VOCs, carbonyls compounds, PAHs, PM2.5 and selected particulates present at levels high enough to potentially cause adverse health affects?
- What portion of the air toxics of concern can be attributed to airplane emissions and airport operations?”⁶

More recently another community health survey has been completed by King County Department of Health finding the following:

“People living within 10 miles of SeaTac airport face disparities in health, resources, and risk factors compared to the rest of the county. They were significantly more likely to be living below 200% of the federal poverty level, to not receive needed medical care due to the cost, and not to have health insurance compared to the remainder of King County. They

⁵ Addressing Community Health Concerns Around SeaTac Airport Response to the question, “Is it possible to monitor jet engine exhaust emissions or to model their path using data on prevailing winds and takeoff patterns?” March 2000 Prepared by Washington State Department of Health Washington State Department of Ecology Puget Sound Clean Air Agency In consultation with Public Health – Seattle & King County SeaTac Airport Area Community Representatives United States Environmental Protection Agency University of Washington Washington State University page 7

⁶ Ibid page 9

were also more likely to have risk factors that increase their vulnerability to more serious health outcomes, such as a higher prevalence of smoking, obesity, physical inactivity and high blood pressure. A greater percentage of adults in airport communities than elsewhere in the county reported inadequate amounts of sleep. Airport communities are associated with higher rates of pervasive health concerns. Compared to the rest of the county, communities within 10 miles of SeaTac report:

- A greater percentage of infants born prematurely and/or with low birthweight;
- Higher hospitalization rates for asthma, stroke, chronic obstructive pulmonary disease (COPD), heart disease, and diabetes;
- Lower life expectancy; and
- Higher rates of death overall, as well as death from heart disease, unintentional injury, chronic lower respiratory disease, diabetes, chronic liver disease, and homicide. In several measures, the rates of poor health outcomes were worse the closer you are to the airport. For example:

- Higher hospitalization rates for heart disease;
- Higher rate of death from all causes;
- Higher rate of death from heart disease; and
- Lower life expectancy.

This examination of community health is a snapshot of health conditions experienced by people living within 10 miles of SeaTac airport. Findings demonstrate that disparities are present throughout the life course, beginning at birth.”⁷

An air quality monitoring study recommended in detail by the State Department of Public Health since early 2000 which had an accompanying project proposal from the Department of Ecology NWRO⁸ has never been conducted. In fact, in speaking about the level of analysis for the air pollution portion of the SAMP analysis the Port of Seattle staff wrote in 2018:

“Given that previous health studies have not found any significant impacts, the limited information regarding community interest and the high costs for modeling, monitoring,

⁷ [Community Health and Airport Operations Related Pollution Report.pdf](#) Community Health and Airport Operations Related Noise and Air Pollution: Report to the Legislature in Response to Washington State HOUSE BILL 1109 December 1, 2020 Seattle and King County Department of Health page I

⁸ [DOE Williamson AQ Workplan 2000.pdf](#)

and health studies, we recommend **Option A** below. We also provide a cascade of additional recommendations in order of preference, should community concern begin to build or new information emerges.

A. Do Nothing/Monitor Community Concerns (\$0 + in-house work)

It is our recommendation to summarize all air quality and health research conducted to date at Sea-Tac Airport and other airports in North America, and demonstrate how new studies are unlikely to provide different outcomes or air quality exceedances. This work could be done in house. We will then monitor community concerns and decide if we need to move to option B in Q3 or Q4 2015.

B. Dispersion Modeling Ahead of NEPA or community triggers (\$350K to \$650K)

Developing the necessary input files to conduct dispersion modeling for 2014 or 2034 scenarios requires 3 to 6 months, and can only be done after a scenario is fully developed (airside, landside, terminal emission sources). The cost to prepare these input files is also high (\$300K for first scenario)."

Port of Seattle staff discussing a situation with a Port Commission member letter:

"If you want to put in language about airport growth, we could help with some edits, but our planning is not going to address most aircraft emissions, and I don't want to give that impression. Meeting our Century Agenda goals could result in reduced aircraft emissions in the long term, and perhaps we could shift the emphasis to that message.

The federal intervention reference raised alarm bells for me. It reads to me as "if the UFP study finds a problem, the feds may need to intervene to restrict growth and/or change flight paths." If that's what you meant, I'm opposed to making that point. At a minimum, it implies that there could be an aircraft-UFP issue (and we're not aware of evidence of that to date)."⁹

In direct contradiction to the Port of Seattle comments and recommendations, a health study has been done and found extremely poor health. In addition, UW ultrafine research has found that people are exposed to a large plume of aircraft related ultrafine particles not only in their neighborhoods but also infiltrating living and school spaces.

Recommended air quality monitoring programs have not been done. There are unknown risks along with a large amount of air pollution and noise pollution happening 24 hours per day adjacent to densely populated areas surrounding the airport. These residents are

⁹ Ibid Edmiston PDR quote from POS email

already experiencing significant health impacts which source or magnitude have not been disclosed, discovered or even studied. There seems to not be any plan to understand any of these issues with a credible risk assessment, epidemiology or studies on the horizon. EPA should enforce the provisions of NEPA 1508.27 (b)(5) and order studies of the sources of these illnesses to commence. Under “Significantly and intensity evaluation:”

“The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.”

Until reasons why such ill health exists within this environmental justice eligible community, growth at Sea-Tac should no longer occur. Health effects have been found in disproportionate levels in residents in a 5 to 10 mile area where over 670,000 residents are living around the airport. Many of the serious illnesses have been reported at statistically significant levels for decades. The death rate for people living near Sea-Tac is equal to the rate for the Covid pandemic which caused worldwide alarm. Where is the similar level of alarm or even any concern for the people living near Sea-Tac?

The air pollution calculations used for decision making surrounding the Clean Air Act and NAAQS compliance are untrustworthy

The table below reflects vast discrepancies within the modeling of airport emissions.

	CO	VOC	NOx	SOx	PM 10	PM2.5	TOTAL
1994 POS* L & B** EXISTING	1365.10	406.89	1378.30	54.67	.23**		3205.19
1994 L & B PREDICTED FOR 2020	1853.50	578.38	2008.60	68.88	.04**		4509.40
1991 DOE***	3121	1277	1874	162	61.44		6495.44
2014 L & B	1329*	242	1623	158	8	8	3368
2014 EPA	2156	448	2350	251	53	52	5310
2022 L & B EXISTING	1681	244	1977	175	12	12	4101
2016 EPA	6749	1124	3445	480	53	52	11,903
2032 L & B PREDICTED	2054	235	2675	225	14	14	5217
WA 2017****		1240		523			

*Port of Seattle

**L & B Landrum & Brown, consultant for the Port of Seattle/FAA on preparation of the current EA (.04 includes no jet particulate as it was removed from the model by FAA after 1993 claiming it was inaccurate. The consultant could have input data but chose not to do so. Emission factors input into the model for the third runway EIS were vastly understated)

***Department of Ecology - The large difference in tons per year particulate between DOE and L & B (1991, 1994) is due to the elimination of all jet aircraft related particulate from the model just prior to the EIS. FAA claimed the data was inaccurate so all defaults were set to zero. At 61 tons per year, Ecology had predicted violations of the NAAQS in their report.

¹⁰¹¹Current EPA estimates of 52 tons per year are much closer to the truth in comparing other independent airport pollutant inventories including Midway Airport in 1993. In 1996, leaving the data intact would have led to a de-minimus violation of the Clean Air Act for PM₁₀ if added to the 80 tons per year of particulate from dirt hauling and dumping for the 3rd runway plateau. Since the region was in non-attainment at the time for PM₁₀, going over the 100 tons per year would have violated the SIP and general conformity provisions of the Clean Air Act.

****Washington State 2017 Comprehensive Emissions Inventory. Although these figures include all airport sources and several airports within King County, Sea-Tac would easily be the lions share of these two categories of VOC and SO₂ but are listed as only a small portion, approximately a quarter of the King County total by the consultant where more than three quarters is more likely.

The tables above cover the years 1991, 1994 and 2014 where the EDMS (Emissions and Dispersion Modeling System), preferred airport FAA model 944 was used. In all subsequent years beginning 2014 the AEDT (Airport Environment Design Tool), the preferred airport FAA model was used.

Please notice the large discrepancies between these inventories. In many cases, EPA and Department of Ecology (DOE) estimates are twice as high or higher than the airport consultants' estimates. Ecology's 61 tons per year had a PM₁₀ violations in the dispersion analysis.¹² In 1994, the argument made against trusting the independent analysis by DOE over the airport consultants' work for the third runway EIS was that the airport consultants were far more experienced in using the EDMS model. It would be imprudent to ascribe that same faulty reasoning to the independent work by EPA since they had such direct involvement with FAA in the development and use of the AEDT model, run it themselves for major airports every 3 years and their results have not previously been called into question by credible independent researchers. Here are two examples of the airport prepared emission inventories in white for 2014 and 2017 compared to EPS's estimates in yellow running the same models, both the EDMS and AEDT:

¹² [1991 DOE Sea-Tac Air Pollutant Contribution 2.pdf](#) See Page 20 #7

EMISSION SOURCE	SHORT TONS OF POLLUTANTS (2014)									
	NO _x	NO _x	VOC	VOC	CO	CO	SO _x	SO _x	PM ₁₀	PM
Aircraft Engines	1,623	2,350	242	448	1,329	2,156	158	251	8	5
APUs	72	48	5	4	48	43	9	7	22	0
GSE	307	91	78	29	2,292	845	21	3	20	3
Stationary Sources	17		1		12		0		1	
TOTAL	2,019		326		3,681		188		51	

EMISSION SOURCE	SHORT TONS OF POLLUTANTS (2016)												CO ₂ *	CO ₂ EPA2017
	NO _x	NO _x EPA2017	VOC	VOC EPA2017	CO	CO EPA2017	SO _x	SO ₂ EPA2017	PM ₁₀	PM ₁₀ EPA2017	PM _{2.5}	PM _{2.5} EPA2017		
Aircraft Engines	1,775	3,446	261	1124	1,455	6,749	162	480	13	53	13	52	396,306	1,195,637
APUs	40	123	3	11	33	130	5	20	5	17	5	17	-	
GSE	370	135	94	42	2,759	1,187	19	6	25	6	25	6	-	
Stationary Sources	18		1		12		0		1		1		-	
TOTAL	2,267	3,704	379	1,177	4,841	8,066	190	506	48	76	47	75	396,306	1,195,637

● ● ●

There is no good explanation for these kinds of discrepancies. Some of or all of these figures are inaccurate. A third, independent analysis must be done. The FAA has a responsibility to answer to these issues and move the analysis to an EIS.

Between the state and EPA representing the only independent analysis besides the proponent and their consultants, there are such wide gaps that leave one to question the validity of any information to date. There are no current local monitoring of these criteria and toxic emissions available to compare to the modeled data and without trustworthy, accurate information, agencies, cities, regulators, researchers and the public have no way of knowing anything.

In 1994 EPA declared a halt to the progress of the third runway approvals for the Air Quality review because in that EIS process, predicted Clean Air Act violations for carbon monoxide and NO₂ standards were disclosed. None of that data included any jet produced PM 10 because FAA had eliminated all the data from the model around 1993. Since the air

pollution inventories of the EPA estimates for 2016 are several times higher than in 1994, and we have never had an accurate estimation of particulate, it would be advisable to halt the progress and begin anew with something trustworthy to help reassure the public that they have reliable data required for public health protection.

The fact that so many people living around the airport are currently experiencing statistically significantly more negative health outcomes compared to the rest of the county may be a direct result of the inaccurate data or missing data such as PM 10 that was provided for the air quality analysis for the third runway in 1996.

From the 1996 SEIS Draft Conformity

Attachment A - Comments on Draft Conformity

As indicated on page D-38, a separate analysis also confirmed that even if the average annual fleet (i.e., all aircraft types in use) and the highest peak hour level of departures, maximized peak hour departure queue time could occur at the same time, the change in pollutant levels would be minimal. This analysis was also conducted for the future annual aircraft fleet. Except at South 154th Street, all pollutant concentrations would still be below the AAQS.

The test case analysis indicated that increased departure queue time would result in increased CO levels, while increased aircraft departures would result in increased NO₂ levels. However, as observed by historic FAA data, peak hour departures and peak hour queuing are mutually exclusive and do not occur at the same time. Nonetheless, the analysis indicates that all concentrations except at South 154th Street would be below the AAQS.

Comment 14: Commentor questioned the time-in-mode/taxi and requested a clarification of these assumptions.

Response: Appendix D, page D-5 discusses the determination of taxi-in and taxi-out times. Actual field observations were used to estimate the amount of time an aircraft spends in different modes, such as apron idling, taxiing, and idling at the end of the runway. Taxi-in and taxi-out times were based on a determination of existing airfield taxi distances and aircraft speed for seven different points on the airfield. The addition of the South Aviation Support Area (SASA) and the proposed terminal improvements were modeled in combination with the proposed third parallel runway. The average taxi distance was then calculated by applying the existing or future runway end use based on a constant aircraft taxi speed of 15 knots.

The use of the proposed new parallel runway for departures is expected to be limited for the reasons discussed in the Final EIS. Accordingly, taxi times are not expected to be substantially different over existing conditions (i.e., taxi times take into consideration runway use). For the existing conditions, each aircraft operation is expected to experience approximately 8.11 minutes of taxi-time (for both arrival and departure operations).

Comment 15: Commentor stated that the EDMS write-up in the EIS should have noted that all particulate data for jet aircraft had been removed.

Response: As stated in the EIS in Appendix R, response to comment R-10-2, the aircraft emission rates included in the EDMS for particulates was revised by the FAA to include only that data for which reliable particulate information is known. Accordingly, the most current EPA approved version of the EDMS model (which was used in preparing the analysis for the Final EIS) includes little information on particulates in comparison to older versions of the model. The FAA has not updated the particulate data because no reliable data on aircraft particulate emissions is available.

Comment 16: Requested an explanation of why the aircraft emissions in the Final EIS are less than those presented in the Draft EIS.

Response: As noted in Appendix D, page D-34, in re-evaluating the air quality analysis, all input assumptions used in preparation of the Draft EIS were re-examined. As part of that review, the hourly aircraft temporal factors used in the Final EIS analysis for the existing condition were revised to reflect hourly departure activity based on the FAA's Capacity Enhancement Study. The revised

And it was that document that disclosed air quality violations and failed general conformity with the Clean Air Act, which were primarily discovered in the dispersion analysis which we don't now have with considerably more emissions. Because fuel use at Sea-Tac has continued to rise since construction of the third runway, ground level emissions have also risen for every year except for extraordinary circumstances affecting all US aviation movements for 2001 (9/11), 2008 (Economic crisis) and 2020 (Pandemic). (See Climate comment for a table of gallons of fuel pumped per year). The fuel has not changed so the emissions are the same and growing as well.

This reworking of the model should include the cumulative impact in annual tons per year of emissions from the added numbers of vehicles using the 509 extension (will dramatically increase cargo truck traffic coming from I-5 and from the airport) and all jet increases accommodated by interim projects as well as planned development with its added numbers in traffic and aircraft (a minimum of 200,000 added aircraft). This must include a dispersion analysis using an accurate emission inventory to develop daily worst-case ground level emissions for comparison to the federal standards for all criteria pollutants. The re-working of all modeling must have a baseline prior to 2016 when the Burien Turn began and then compared to 33 added gates, new terminal and 509 freeway, new flight path in a study area that reflects the ground level impact area of aircraft takeoffs and landings below 3,000 feet off the north and south ends of the airport extending many miles away.

Since the inventory in 1996 found violations of the CAA for NO₂, CO and likely would have had particulate violations¹³ and with 5,000 tons per year of criteria emissions, this EA with 11,000 tons of criteria and toxic emissions (EPA from table 2016) would also and should include a dispersion analysis. This analysis must be independently done and verified due to the lack of valid data reporting for the past nearly 30 years by Port of Seattle and its consultants.

There are 14 gates that have been added since 2015 that have not been considered cumulatively in violation of the 9th Circuit Court order of 2019. Turnover of one aircraft movement per hour at each gate, dropping to 1 in 2 hours for international equals an added 200-266 aircraft per day or nearly 100,000 annual aircraft operations. Adding 19 more gates for a total of 33 new gates can push this number to over 228,855 more annual operations.

No reasonable person would ever believe that any airport with 200,000 annual operations would have a non-significant impact where people live within 3 blocks on all four sides in densely populated development let alone with a total of 630,000 annual operations (original capacity with a third runway from the 1996 EIS).

Sea-Tac is constrained with only 2500 acres. Comparing the kind of numbers of operations Sea-Tac envisions rivals some of the busiest airports in the US like Dallas, Atlanta and Denver which all have ten thousand + more acres than Sea-Tac and with a buffer from communities located much farther away from the airport. Adding the emissions from a 50% increase in operations would push another 6,000 tons of annual criteria and toxic emissions into the densely populated neighborhoods around the airport. Even the existing 11,000 + tons of toxic and criteria emissions needs to be closely scrutinized as significant health impacts are already evident and likely as a result of communities located too close to a major airport.

Projects that have proceeded under a separate CATEX by the FAA include 14 gates and the new flight path through Burien. Is there such a difference between those 14 gates and the 19 now proposed in the EA that 14 received a CATEX but 19 get an EA? Would 33 total get an EIS?

Although the air quality section discusses existing air quality impact of airport operations in tons per year, it has no information that can be related to the NAAQS in parts per million or micrograms per cubic metre. Instead, it relies on the regional monitoring located primarily many miles away from the airport impact area. It is also missing a site specific analysis, dispersion analysis, worst-case scenarios, public health and welfare consideration in environmental justice communities, childrens health.

for the people living close to the airport are much higher than elsewhere in the county, a huge injustice since the ones most harmed by the wealth generating facility are the least likely to benefit from its growth.

Public health is currently compromised with many different types of illnesses that are statistically significantly higher than county average according to a 2020 report;
Community Health and Airport Related Pollutants:

[Community Health and Airport Operations Related Pollution Report.pdf](#)

Many citizens suspect their ill health is due to a tremendous simultaneous impact of noise and emissions from Sea-Tac operations. In fact, it would be foolish to think that the highest emitting facility for toxic and criteria pollutants in the region would have a non-significant

impact, either in its current operations or future build. On top of that, this is the highest noise generating facility in the state producing high levels of noise 24 hours per day. The only relief residents can get is if they leave their homes for a period of time.

§1508.27(a)

“For instance, in the case of a site-specific action, significance would usually depend upon the effects in the locale rather than in the world as a whole. “

Air quality was determined to be within acceptable Clean Air Act and NAAQS limits based upon regional monitoring done **many miles away from the airport for only some pollutants of concern and elsewhere in the county and region for others**. Site specific air quality is unknown, may be in violation of the NAAQS and causing public health problems. We do not have accurate modeling and no validating monitoring so there are unknown dangers and risks due to the tremendous inventory of emissions and current health conditions. PSCAA analysis of potential NAAQS violations were based upon the unreliable data on emission factors provided by Landrum and Brown. This analysis needs to be re-done with reliable real world data that now must include monitoring for validation of model discrepancies.

In 2017, when the first draft air quality figures were provided and varied considerably from EPA's AEDT model run, the consultant asserted the EPA had used too high a number of aircraft operations in the range of 80,000 more per year. EPA defended their results pointing out they had used FAA published operations data for their calculations. However, the 80,000 (using 480,000 annual ops rather than 400,000) is not enough of a difference to account for an emissions inventory cut in half by the consultant and only a fraction for the particulate emissions. Clearly, something else is going on.

§1508.27 (b)(4)

“The degree to which the effects on the quality of the human environment are likely to be highly controversial (5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.”

The 9th Circuit Court has already determined that Burien has been injured by lack of a proper analysis, already determined that extraordinary circumstances exist and that the new flight path was highly controversial. That high controversy surrounded a community concerned about their welfare which has been going on for 30 years.

The EA document should contain a risk analysis for incremental cancer risk increase for a number of air toxics found in the past to be exceeding the ASIL (State of Washington Acceptable Source Impact Level). This has been requested by PSCAA in the past and not

done for the third runway EIS. EPA in their SAMP Scoping comments in 2018 requested a much more robust analysis saying:

“The potential effects from air pollutants, including air toxics, to airport personnel and users, ground crews, nearby residents, businesses, and any sensitive receptor locations, such as, schools, medical facilities, senior centers and residences, daycare centers, outdoor recreation areas e.g., parks) should be identified.”

Although the state new source regulation does not apply to airport operations as the airport is not considered a source, if it were to be considered a source it could not be permitted for operation without significant mitigation for benzene, 1,3 butadiene, PAH, acrolein, formaldehyde, hexaldehyde just to name a few that have been tested in the past and found to be above their respective ASIL. (McCulley Frick & Gilman 1993) A risk assessment can be produced and is needed for the large inventory of air toxics at over 1,000 tons per year (EPA 2016 data) and increasing into the future.

Additionally, in 1996 Puget Sound Clean Air Agency asked for a risk assessment in scoping for the Port of Seattle’s Third Runway EIS due to their concern about the cancer risk increase found around Midway Airport for 1,3 Butadiene by EPA. (Estimation and Evaluation of Cancer Risks Attributed to Air Pollution in Southwest Chicago)

The State Department of Public Health in 2000 and the State Board of Health in 2001 have called for an extensive air pollution study around the airport to help identify what is causing the historical health problems such as high cancer rates, including statistically significant glioblastoma brain tumors.

A completely inadequate cumulative impact analysis is presented that fails to account for the existing public health impacts

The City of Burien filed a legal action against the FAA to compel a more thorough analysis of the cumulative impacts of adding a new flight path. The 9th Circuit Court agreed with the city’s request and ordered the FAA to comply with NEPA 1508.27 for all past, present and reasonably foreseeable impacts.¹⁴ Instead of immediately complying with this order, the FAA continued to use the new flight path for many years and produced at least two CATEX decisions on interim building to add even more throughput. These interim projects have not

¹⁴ [9th Circuit Decision 27Nov2019.pdf](#)

been analyzed for cumulative impacts or air quality impacts in violation of NEPA §1508.25 (a)(1):

“Connected actions, which means that they are closely related and therefore should be discussed in the same impact statement. Actions are connected if they;(2) Cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement...(3) Similar actions, which when viewed with other reasonably foreseeable or proposed agency actions have similarities that provide a basis for evaluating their environmental consequences together such as common timing or geography.”

A great deal of money was spent by a very poor city who were injured by an “arbitrary and capricious” decision to turn all turboprops into a narrow corridor over the central part of Burien. The court believed the FAA made these poor decisions based upon a need to increase throughput at the airport and did so without proper consideration of NEPA requirements for a cumulative impact analysis. The airport is already acknowledged by nearly everyone to be an environmental burden to its neighbors with many in concurrence that what are serious negative health effects in relationship. Even if it were to be proven the airport is a great environmental steward of their own impacts, it is unreasonable to move forward without a more thorough analysis of what is causing such health disparities. The case has already been made that the air pollution factors are incorrect and far too low in relationship to every other independent look from EPA, the state of Washington and the Department of Ecology. If the state wishes to assure that all people in Washington are entitled to an inalienable right to a healthful environment, this public health problem needs to be addressed. EPA is the best agency to do so as the only oversight the citizens have.

The FAA delay of more than 5 years since the court ordered a “hard look” at cumulative impacts could or may have caused further harm to public health. A similar delay by FAA received a sharp rebuke from the same court (below)

Share this:    



Aviation & Airport DEVELOPMENT LAW NEWS

Barbara E. Lichman, Ph.D., J.D.

website | blog

LATEST NEWS AND ANALYSIS - AIR AND SURFACE TRANSPORTATION, ENERGY AND THE ENVIRONMENT

Court Decides That Its Decision in *Make UC a Good Neighbor* Does Not Unfairly Broaden the Scope of CEQA

By Barbara Lichman on March 16, 2023

Since our February 1, 2023 blog, concerning the California Court of Appeals tentative decision in *Make UC a Good Neighbor vs. Regents of Univ. of California, et al.*, that Court has taken the definitive step of confirming its tentative decision, on the critical ground that "UC Berkeley failed to assess potential noise impacts from loud student parties in residential neighborhoods near campus, a long-standing problem that the [environmental review] improperly dismissed as 'speculative.'"

Anyone who has ever been a student at a university, and lived off-campus (probably including the judges), understands the reality of the Court's conclusion. Nevertheless, the Regents continued to argue, unsuccessfully, that "social noise" is not an impact subject to CEQA. On that basis, the Regents continued to loudly excoriate the Court, saying, among other things, that the Court had armed "the NIMBY neighbors with additional weapons to obstruct development of all new urban housing."

On the contrary, however, the Court's argument is neither new nor does it "dramatically expand CEQA." As the Court responded "[t]he regents must analyze the potential noise impacts relating to loud student parties. Their decision to skip the issue, based on the unfounded notion that the impacts are speculative, was a prejudicial abuse of discretion and requires them to now do the analysis that they should have done at the outset." The Court reached that decision on a plethora of prior judicial decisions such as *Keep Our Mountains Quiet v. County of Santa Clara*, 236 Cal. App. 4th 714, 734 (2015) [substantial evidence exists that crowd noise might have significant noise impacts on surrounding residents].

In short, despite the Regents loud protests, CEQA has not changed as a result of the Court's ruling. What may have changed, however, is a strengthening of the will of the legislature to protect its new-found priority on the construction of housing in a State long, and increasingly, deficient in that asset. However, even their victory does not mean that petitioners reject the effort to increase the supply of housing. As stated by Petitioners, "we want UC to build housing, just not in a totally inappropriate location. Based on the publicity already surrounding this decision, that issue is still open."

Ninth Circuit Issues Unprecedented Order Against FAA

By Barbara Lichman on March 16, 2023

On March 9, 2023, the Ninth Circuit Court of Appeals granted the "Motion to Enforce Judgment" filed by co-Petitioners Cities of Los Angeles and Culver City ("Cities") in *City of Los Angeles, et al. v. Stephen Dickson, et al.* The Order found the Federal Aviation Administration ("FAA") in blatant violation of the National Environmental Policy Act, 42 U.S.C. § 4321, *et seq.* ("NEPA"), as well as the Court's prior Order of July 2021, requiring FAA to compensate for its original violation by performing environmental review of the newly established North Downwind Arrivals to Los Angeles International Airport ("LAX"), over heavily populated areas of the Cities.

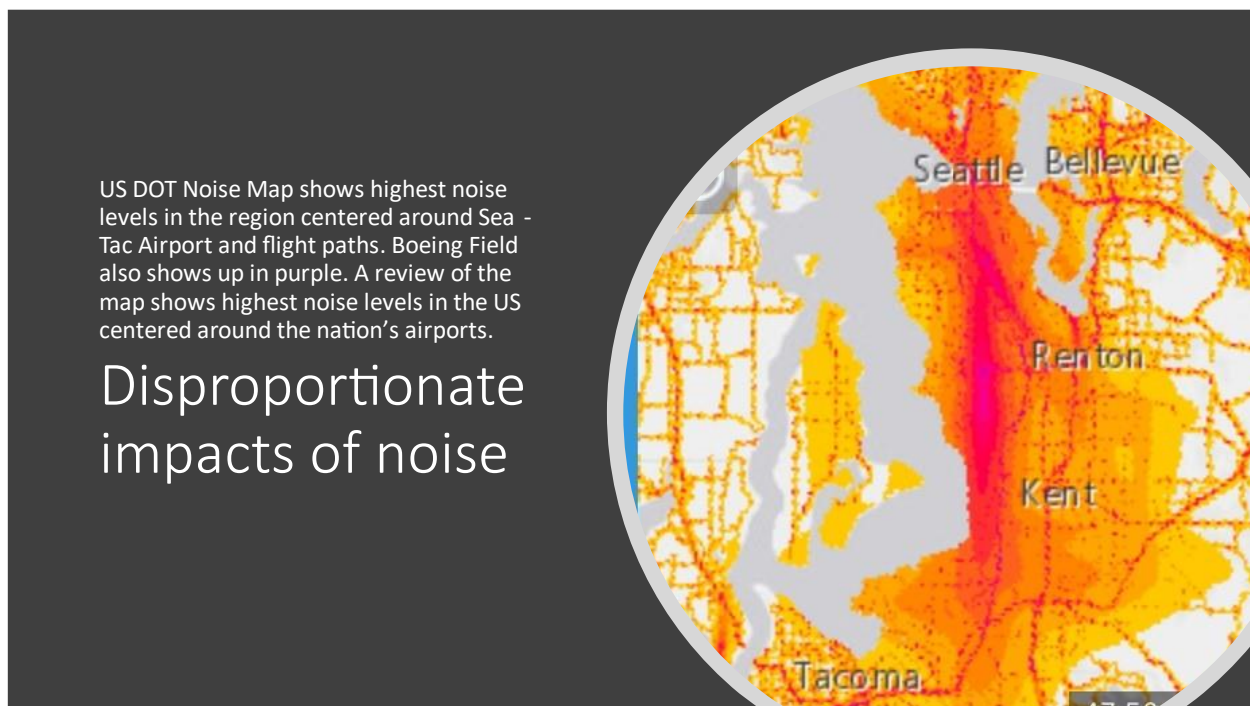
Normally finding FAA immune from judicial intervention on the ground of FAA's responsibility for "safety and efficiency" of aircraft operations, this time, the Court found FAA's "recalcitrance" in failing to initiate environmental review for more than five years after implementation of the procedures, and 19 months after the Court's original Order in July 2021, totally "unreasonable" on the ground that "human health and welfare are at stake." The Court's recognition of FAA's flagrant violations led to the highly unusual step of mandating that FAA: (1) immediately submit to Court a timeline for completion of environmental review; and (2) file a status report on FAA's progress every 90 days until it has fully complied with the Court's order.

This ruling may give impacted communities some hope that FAA is not immune from judicial oversight, and cannot get away with thumbing its nose at the law and court orders. It should be remembered, however, that, in this case, FAA displayed more than its usual hubris by failing and refusing to do ANY environmental review. The question remains open as to whether the courts will act similarly where FAA performs "inadequate" review rather than none at all. Stay tuned.

The 9th Circuit Court decision that favored Burien has very clear language on the type of analysis the court envisioned. However, the FAA has failed once again to not only consider the cumulative impacts in the spirit of the law and court order, they are also actively ignoring the statistically significant health conditions already evident in these communities.

The court even recognized a new flight path by itself could have significance, let alone the added 14 gates and 509 freeway which all had federal involvement without a proper cumulative analysis. (see attached)

It is no secret that noise levels around the airport are the highest levels of any facility in the state. and that 11,000 tons per year of toxic and criteria emissions rivaling or exceeding the greatest pollution sources in the state, will have an impact on public health. And these health impacts have been being documented since at least 1973 with an environmental monitoring study done by King County and finding high rates of a variety of chemicals above expected levels.¹⁵



Below are some of the categories from the FAA EA where they discuss the outcome of their analysis of impact categories. The study area is so small it excluded nearly all of the residential uses around the airport considered to be predominately environmental justice communities and identified by FAA in their Limited Update. Unfortunately these pictures (directly below) have the flights through Burien in light green on the wrong photo but it is evident these do cross over the purple or dark blue areas identified as EJ. What is more

¹⁵ https://seatacnoise.info/dw-esl_air_quality_0673_binder/?_rt=MXwxfGVzbHwxNzMyMjl2Njg5&_rt_nonce=6013368c7d

astonishing is that these residents are living next to a major international airport impact that was ignored in the Limited Update. These aircraft are able to fly below the 3,000 foot ceiling so all noise and emissions affect ground level. The areas in grey closest to the airport are business areas.



In the limited update, the FAA analyzed impacts as though the new flight path were a drop in a swimming pool and the swimming pool which is the airport, roadways, and all foreseeable impacts including the SAMP, which the court asserted was foreseeable, were continually ignored in their analysis. FAA even admitted that the noise levels from their

model used for the Limited Update were higher than those predicted from the third runway EIS. Residents living in these areas since that runway opening in 2006 were admittedly living in unhealthful noise levels for more than 10 years at this point in 2018. When you must consider that a large portion of the noise remedy area had failing noise packages and newly impacted areas had no mitigation, it is unconscionable people have been neglected by a lack of a proper analysis for so long.

It is unreasonable to conclude that an airport that predicted Clean Air Act violations in 1996 with less than half the present day emissions would now be compliant. And it is unreasonable to conclude that an airport that is simultaneously producing highest noise levels in the state would not have an overlapping or cumulative impact on public health from both noise and emissions considered together.

Below are excerpts from the EA regarding various impact categories.

5.1.7.2 *Environmental Justice*

Impacts to environmental justice populations from the Action Alternatives were evaluated in the context of relevant resource categories: air quality, biological, climate, noise, socioeconomic, and surface transportation. For socioeconomic and surface transportation, the analyses found no disproportionate and adverse impacts and no significant impacts as a result of the Action Alternatives with mitigation. For all other resource categories evaluated for impacts to environmental justice populations, no disproportionate and adverse impacts or significant impacts were identified. Therefore, the Action Alternatives would not result in disproportionate and adverse impacts to environmental justice populations.

There were no cumulative effects identified in the past, present, and reasonably foreseeable projects in the resource categories evaluated for environmental justice populations. In addition, there would be no anticipated cumulative impacts unique to environmental justice populations. Therefore, the Action Alternative, when combined with other past, present, and reasonably foreseeable future projects, would not result in significant impacts to environmental justice populations.

EPA's EJ Screen tool shows the majority of residential uses just outside the study area of this EA analysis which only covers primarily airport property, shows the community at some of the highest poverty levels, no access to healthcare, language barriers and ill health in the county. Additionally, The WTN shows similar disproportionate circumstances while the UW DEOHS health disparities mapping shows similar negative outcomes. See Attached

5.1.1 Air Quality

The Action Alternatives would result in construction and operation emissions. Construction emissions increases would result from construction equipment and fugitive dust generated during demolition and construction of the proposed project elements. Operational emissions would result from the higher level of Airport activity that the Action Alternatives would enable, and motor vehicle emissions from passengers traveling to or from SEA. However, the projected increases in emissions are not expected to create any new violation of the NAAQS. As a result, the Action Alternatives are not expected to produce significant air quality impacts.

Other past Airport, roadway, and development projects have resulted in construction and / or operational related air emissions; however, the combined effect of these actions has not reached a level of significance to prevent attainment of all NAAQS for the Puget Sound Intrastate Air Quality Control Region. The past projects are already considered as part of the current attainment status of the region. None of the present or future projects are expected to generate emissions above the de minimis threshold for individual pollutants, or cause pollution levels for any of the NAAQS to lose attainment status. The Federal Way Link Extension project and the SR 509 Corridor Completion Project would reduce existing criteria pollutant levels below existing levels through a reduction in vehicle miles traveled.

The Action Alternatives, when combined with past, present, and reasonably foreseeable future projects, are not expected to result in significant impacts to air quality.

5.1.2 Biological

The Action Alternatives either have no effect or may affect but are not likely to adversely impact any federally-listed threatened or endangered species or their habitat. Potential impacts to other non-listed species and migratory birds would result from the permanent removal of existing habitat areas such as wetlands, streams, and vegetated areas. These impacts would not be significant in nature, and the project would utilize BMPs, where applicable, to minimize the extent of impacts and would provide mitigation for impacts to stream or wetland areas in accordance with permit requirements.

Missing an analysis of Children's Health

Socioeconomics and children's health seem to be connected in this EA although they should be separated. The "socioeconomic" side of this analysis only discusses the positive impact of airport expansion; i.e., benefits of the project such as job creation and cargo movement. I cannot find the negative socioeconomic impact such as was predicted by HOK in 1996 from the third runway which tallied 2.95 billion in economic losses to cities around the airport. And I don't see children's health discussed. Again, the current state of the health status of the communities is not taken into account. Unfortunately there are not many studies of socioeconomic impact of added doctor and hospital visits for ill health due to noise and emissions such as for pre-term and low birth-weight births, hypertension, asthma, COPD, sleep loss due to noise, etc., which the King County Health Department

and UW Asthma study found as significant. One study from BWI outlined the cost burden due to noise and health effects:

“Results: Increased aircraft noise exposure was estimated to produce (discounted) incremental mortality costs of \$362 million, morbidity costs of \$336 million, and losses of 15,326 Quality-Adjusted Life Years (QALYs) over the next 30 years. Sensitivity analyses revealed the greatest uncertainty for CVD outcomes.”¹⁶

The EA ignores the existing poor health conditions in the communities surrounding the airport. The deficiencies in the development of analysis of impact include the following:

- 1) Lack of proper data and cumulative inventory added for 509 freeway, added operations at the airport, construction etc., on what emissions in tons per year might cause or contribute to any NAAQS violations
- 2) Lack of a dispersion analysis considering 11,000 tons per year of criteria and toxic emissions added to 33 new gates, traffic and 509 freeway extension
- 3) Lack of finalizing a better noise measurement standard from the FAA NES Survey and congressional input on inadequacy of the DNL to measure annoyance and health impact
- 4) Lack of a properly sized study area. Cancer cases from 1992-1995 from the State Department of Health found statistically significant glioblastoma brain tumors and other cancers in a 5 mile radius near the airport for years 1992 and 1993 prior to a removal of residences for noise mitigation. In 2020 the King County Department of Public Health found statistically significant health impacts in a 10 mile radius around the airport. The current study area only covers the acreage of the airport.¹⁷

Economic losses from early deaths and deaths from disease are known to be significant but are ignored in this document because the Port of Seattle claim nobody can prove a direct causation. Just because this has not been tested in court doesn't mean it is not happening. There is an environmental injustice and nobody would deny disproportionate burdens. If it is traffic caused illness, aircraft are worse the the community is exposed to both. If it is flying saucers, there are still thousands of daily jet emitters next to communities. If it is diet, lifestyle or genetics, there is still a major airport in the mix. Why

¹⁶ [Projecting the economic burden of health impacts of aircraft noise: a case study of Baltimore Washington International Thurgood Marshall Airport - PubMed](#)

¹⁷ Exhibit 3-2 Affected Environment FAA EA 3-4

add to it and make it worse before knowing more. Just the amount of emissions and noise concentrated in one place long enough, will cause health problems. So in my opinion, whether it is directly from aircraft or not, it shouldn't matter. It is a major source of pollution next to a lot of sick people, an injustice waiting for help.

In 1998-2000, the State Department of Health took seriously the complaints of citizens over a large number of people living close to the airport that were dying from Glioblastoma brain tumors.

Although the state DOH looked closely into these much higher than expected rates of brain tumors, they could never determine what exactly was causing them. Everyone was forced to move on because nobody had the will, financial support or access to answers to better understand what might be a relationship between proximity to the airport and the high case numbers. Nobody has looked at whether this is continuing, whether it is happening around other airports or whether it was a phenomenon that stopped. Every person in this state has a guaranteed right to a healthful environment and the State Board of Health has asserted that one group should not suffer for the benefit of another.

Chicago O'Hare community has noticed a large number of children with this type of brain tumor. A recent look at the area around LAX by a researcher has found higher incidence of brain tumors.

Brain cancer cases for 1998-2000 State Department of Public Health zip code data:

Juliet Van Eenwyk, Director
Page 2
May 8, 1998

The following table provides the results of those analyses.

Cancer in SeaTac Area, 1992-1995

	Area 1		Area 2		Area 3	
	Observed	Expected	Observed	Expected	Observed	Expected
All cancer	2,222*	2,011	3,577*	3,319	5,363*	5,096
Leukemia	55	48	89	79	140	122
Glioma	35	25	49	43	65	66
Glioblastoma	21*	12	28	20	33	31

* When we assess the range of statistical variation which we consider normal, we conclude that the number of cases is higher than expected.

UW has found that ultrafine particle emissions from jet operations from Sea-Tac are impacting an area 10 miles from runway ends. <https://www.deohs.washington.edu/hsm-blog/measuring-seatac-air-traffic-pollution#:~:text=UW%20researchers%20worked>

The plume of these tiny particles have been mapped through modeling depicted below to the north and south of Sea-Tac. These plumes cover an area many miles wide and for up to 10 miles out from each runway end.





These ultrafine particles have known health impacts and the number of people exposed is upwards of 670,000 residents. This area formed the basis for the health department look at health status in the 10 mile area around the airport. These ultrafine particles can also be directly sourced to the overflying aircraft by their uniquely small size.

It has been found these particles are small enough to enter homes. Mitigation for the expanded airport should include not only upgrading the failed noise insulation program which is a state mandate from legislation and now delayed for many years, but should also include in home and sensitive use buildings such as schools, day-cares and nursing and

hospital facilities the use of Hepa air filtration systems. These have been tested in local schools and found to dramatically reduce indoor infiltration of the aircraft sourced particles. Studies and testing of these mitigation methods have been a process carried on by the UW for many years.¹⁸

UW and the King County Department of Public Health have also been involved in looking closely at asthma rates around the airport and finding that this also is a rate higher than areas outside the airport impact area. The use of indoor air filtration and other asthma interventions along with education in the community have been ongoing.

It is not only usual but also required by NEPA that an industry who produce pollution to mitigate adverse impacts. NEPA also seeks to have the proponent to show their mitigation programs are successful. FAA and the Port of Seattle have never been compelled to show their home insulation programs have reduced impacts to healthful levels. And now, congress has even tasked FAA to find noise measuring methods that better match the much higher than expected numbers of complaints about noise in FAA's NES survey.

Meanwhile, some of the poorest people in the county have been tasked with not only carrying and paying for their own healthcare burden, but also the taxpayers are paying for and supplying studies on interventions and the cost of filtration systems. Homeowners have been paying for and affixing their own repairs to failed noise remedy treatments where mold and rot and even structural damage to homes around the airport have happened.

Climate

The only proposal from the industry to curb climate emissions into the future is use of Sustainable Aviation Fuels (SAF). However, from conversations surrounding the EA on use of SAF it does not appear to be a serious mitigation. FAA has said: "While SAF tanks and infrastructure are included in the Proposed Action, there is no requirement for the Port or tenants to utilize SAF. In addition, there are supply chain issues with obtaining SAF and

¹⁸ [Mobile ObserVations of Ultrafine Particles: The MOV-UP study | Environmental & Occupational Health Sciences](#)

isn't clear when these issues will be resolved. As such, any use of SAF in the future would be speculative for both the No Action and Proposed Action."

In 2007 the State of Washington in their first ever Greenhouse Gas Emissions Inventory calculated 4.2 million metric tons per year of CO₂ produced by jets at Sea-Tac and 4.7 million metric tons per year including the entire airport. The Port of Seattle determined this amount was 22% of the King County transportation total. Ninety percent of the airport total was for jets alone. Please notice that this amount went up by nearly 25% between 2007 and 2018 from the table below, primarily due to the introduction of Delta Hub in 2011-2014. The jet fleet of Delta included many more long distance Asia destinations using larger aircraft using more fuel. The expected increases in the future of nearly 200,000 jet operations will include added fuel and tanks at the airport which will easily push this CO₂ inventory increase to over the limit threshold of 50,000 tons per year.

The community side of the Task Force membership recommended reducing flights at Sea-Tac as the only viable means to reduce climate impact into the foreseeable future. As you can plainly see from the chart, the only time in the past 17 years that CO₂ has been reduced is during the Covid pandemic when fuel use was cut in half. History of fuel pumped, CO₂ levels and number of annual operations is depicted below:

Gallons pumped and CO2 impact 2007-2020

	Million gallons of fuel pumped	Million metric tons/year	Number annual operation
2007		4.2	
2014	487,707,528	4.8	350,000
2015		5.4	340,478
2018	636,975,446	6.1	436,816
2019	667,574,189	6.5	448,239
2020	385,312,040	3.8	

Attachment #1

509 NEPA Reevaluation

“Volumes on the SR 509 extension between I-5 and the 24th Avenue S/28th Avenue S interchange were forecast in the 2003 FEIS to be almost twice the levels shown in this Re-evaluation forecasts. The 2003 FEIS forecasts indicated 7,900 vehicles per hour (vph) total for both directions, while this Re-evaluation forecasts approximately 4,700 vph total in both directions. The 2003 FEIS did not assume tolling on the SR 509 extension, while this Re-evaluation did assume tolling. The Re-evaluation also indicates that traffic volumes on the existing section of SR 509 north of S 188th Street would increase between 500 and 1,400 vph in the 2045 Build condition. Traffic volumes on SR 518, S 188th Street, and SR 99 would decrease with the 2045 Build condition compared to the No Build condition as trips shift to the new facility.”

Table 7. Future (2045) AM and PM Peak Hour Traffic Volumes on Study Area Roads							
Measurement Point (Figure 5 shows each measurement point)		AM Peak Hour (vph)			PM Peak Hour (vph)		
		No Build	Build	+/-	No Build	Build	+/-
1	SR 509 (north of SW 146th St)	6,250	6,460	+	6,820	7,120	+
2	SR 509 (north of S 188th St)	3,470	4,930	+	4,590	6,100	+
3	S 188th St (west of 28th Ave S)	2,380	1,990	-	3,140	2,760	-
4	SR 99 (south of S 188th St)	2,150	1,600	-	3,110	2,820	-
5	SR 518 (east of North Airport Expressway/SR 99)	8,930	8,700	-	11,230	10,860	-
6	I-5 (north of S 188th St)	15,890	15,430	-	16,040	15,630	-
7	I-5 (north of S 200th St/Military Rd S)	14,510	13,600	-	16,030	15,300	-
8	I-5 (north of SR 516/Veterans Dr)	14,680	17,090	+	16,560	20,410	+
9	I-5 (north of S 272nd St)	14,490	15,270	+	16,760	18,620	+
10	I-5 (north of S 320th St)	14,230	14,660	+	16,480	16,840	+
11	SR 509 Extension (west of I-5)	N/A	3,700	+	N/A	4,670	+
Notes: Volume measurement points are displayed in Figure 5. Volumes are in vehicles per hour (vph) and include both the northbound and southbound directions. N/A = not applicable							

Please notice that column 11 depicts the added vehicles in peak hour utilizing 509 as a result of the build option and notice this volume increases by more than 1,000 vehicles from the airport south access from 188th most of which may be cargo trucks headed for Duwamish area. Although this may be a relief valve for I-5 it will be a pressure cooker for Burien which will experience significant traffic loss, added emissions and noise.

Because WSDOT did not do a site-specific analysis we do not know how the airshed will deteriorate as a result of added emissions. There has not been a thorough analysis of noise in Burien since 1996. The airport has expanded much more rapidly than expected from the time the last emission and noise analysis was completed and emissions and noise inventory was vastly underestimated at that time. FAA identified significant new noise in their 2018 CATEX for the new flight path and EPA modeled emissions for 2017 are almost three times higher than the highest level estimated for 2020 from 1996 third runway evaluation which included Clean Air Act violations predictions post 2010. There are other serious concerns about lack of analysis since the prior analysis failed to include particulate from jets at the airport.

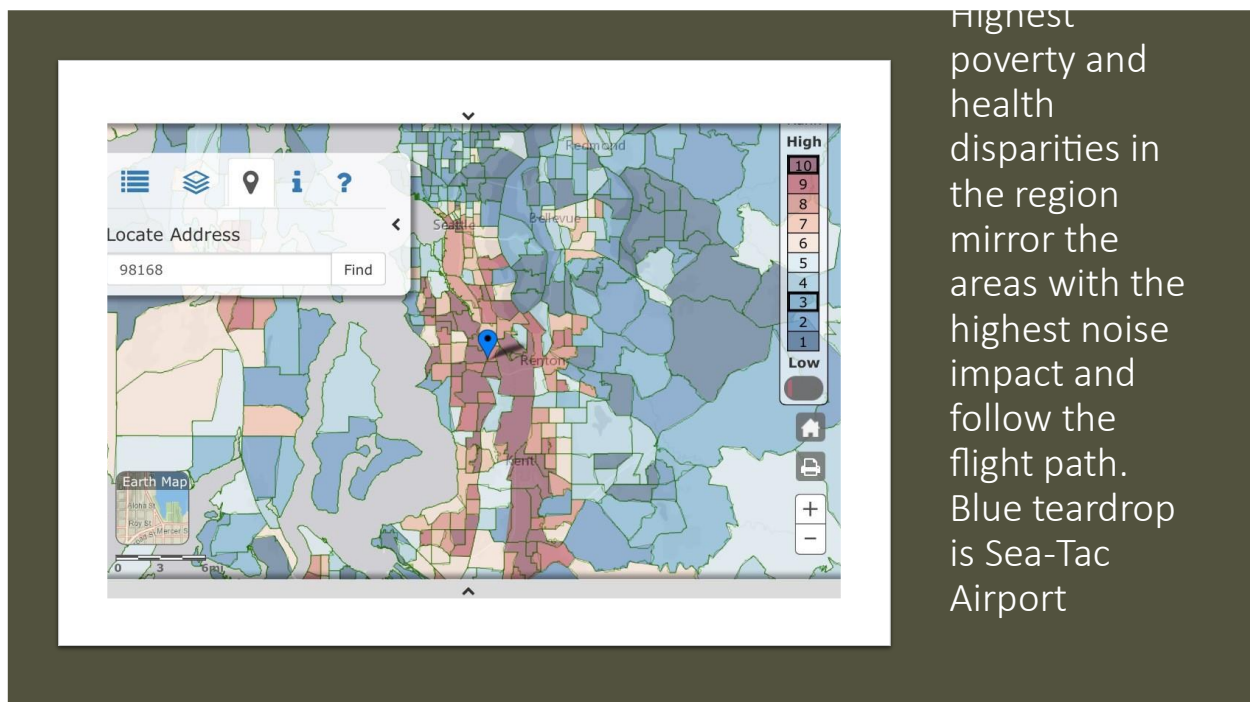
Additionally, both WSDOT and FAA identified environmental justice community throughout the two project areas, the 509 extension and CATEX but both agencies failed to consider cumulative noise and emissions on this population using a cumulative impact analysis of added traffic and aircraft operations.

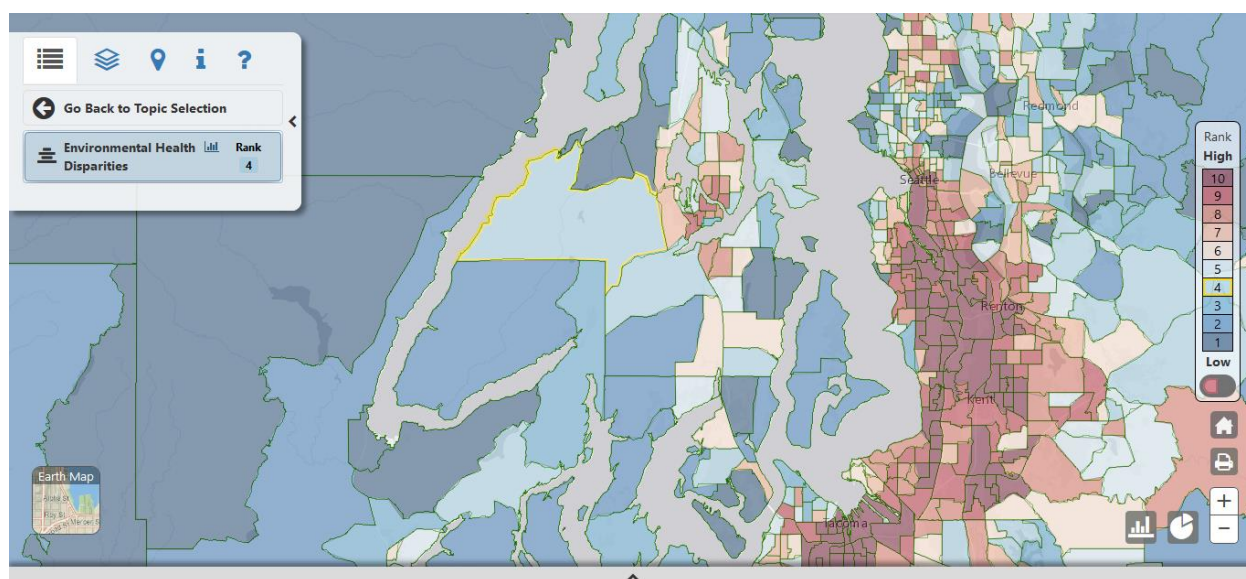
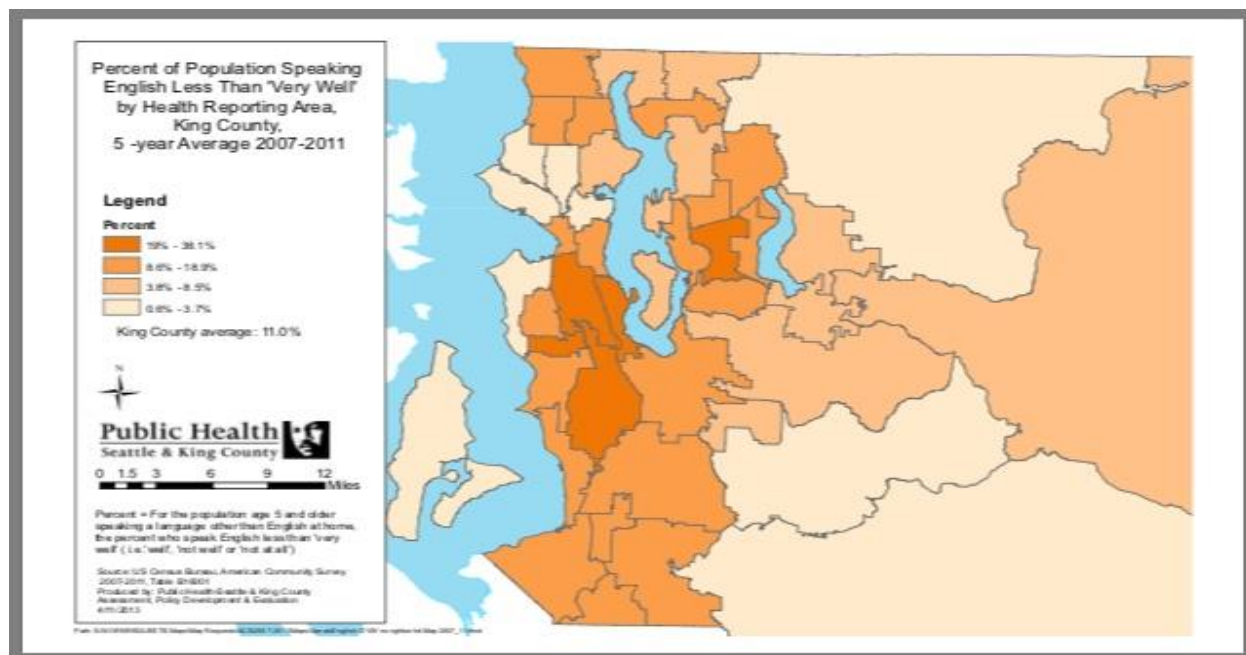
From the 9th Circuit Court decision on November 27, 2019, it should be clear that a proper cumulative analysis must be done not only to fully know the true impacts of these massive transportation sources concentrated in one geographic area, but to protect public health and welfare. We know enough about emissions and noise to be certain these combined impacts are a significant health hazard. We also know from the DEOHS health maps that the condition of this dense population center is severely degraded already.

From pages 17, 18

In 1996, the Port of Seattle predicted Clean Air Act violations of the CO federal standard along South 188th Street in an area of non-attainment. These violations were predicted based upon aircraft data that was far too low. The 509 freeway extension along with the North Unit Terminal build proposed in the third runway EIS were paused by EPA due to predicted air quality violations. FAA later conditioned the terminal based upon future air quality improvements which have never been analyzed or proven to be compliant since 1998.

Attachment #2





From: Krull, Kandice (FAA)
Sent: Thursday, December 7, 2023 2:55 PM
To: erics@pscleaseair.gov
Cc: Rybolt, Steve (Rybolt.S@portseattle.org) <Rybolt.S@portseattle.org>; Phil Swartzendruber <PhilS@pscleaseair.gov>; Kathy Strange <KathyS@pscleaseair.gov>; Sarah Potter <sarah.potter@landrumbrown.com>
Subject: Sea-Tac International Airport Preliminary Air Results

Hi Eric,

We have preliminary results from the air quality analysis for the SEA SAMP NTP EA ready for PSCAA review. We are hoping to get input from the PSCAA on the potential for the project to cause an exceedance of the NAAQS within the region. We are more than willing to have a call to discuss the results and get feedback if that would be easier.

We are requesting a response by Friday January 12, 2024.

Thanks so much,

Kandice

Kandice Krull
Environmental Protection Specialist
FAA - Denver Airports District Office
303-342-1261

From: Sarah Potter <Sarah.Potter@landrumbrown.com>
Sent: Wednesday, December 6, 2023 4:13 PM
To: Krull, Kandice (FAA) <Kandice.Krull@faa.gov>
Cc: Rybolt, Steve <Rybolt.S@portseattle.org>
Subject: FW: SEA SAMP - Preliminary AQ Operational Emissions Inventories

Alternative could include full electrification of GSE. So this section would need mention of a model or calculation method for electric GSE.

- **FAA Response:** The Port has installed over 400 charging points/stations for electric ground support equipment (eGSE) throughout the Airport across all terminals. While there is no requirement by the Port for airlines to utilize eGSE, several airlines have opted to utilize eGSE. The eGSE will be captured in the GSE survey and accounted for in the AEDT modeling for the existing conditions. Since there are no requirements for the implementation of additional electric GSE in the future by the Port or by the Proposed Action, any additional use of eGSE in the future than what is accounted for in the existing conditions would be speculative for both the No Action and Proposed Action. As such, no further alternatives, such as those including full electrification of GSE, as recommended for the purpose of this analysis.

SCAA Comment: The proposed Action includes SAF tanks and infrastructure, correct? So, there should be some semi-quantitative discussion (relative emission factor * fuel volume) of the potential GHG reduction that would be enabled. And, that the enabled (potential) SAF fuel volume is in excess (it is?) of the projected demand/use, such that the proposed tanks aren't the limiting factor (and thus GHG emission causing).

- **FAA Response:** While SAF tanks and infrastructure are included in the Proposed Action, there is no requirement for the Port or tenants to utilize SAF. In addition, there are supply chain issues with obtaining SAF and isn't clear when these issues will be resolved. As such, any use of SAF in the future would be speculative for both the No Action and Proposed Action. As such, no quantitative discussion is recommended for the purpose of this analysis. Qualitative discussions on the FAA's CLEEN program and the Port's sustainable fuel goals and how they could reduce future emissions will be included--see Section 2.2.

SCAA Comment: Are these then all "Full Throttle" emission factors, when most of the use isn't at "full throttle"? The issue being that the fuel-use/hp-hour (fuel efficiency) is probably fairly different across the range of "throttle settings". Same note applies to all the full throttle references above

- **FAA Response:** Yes--the use of the "full throttle emission factor" is based on FAA guidance.

These responses help explain why changes were or were not made in the Protocol. Please let us know if you have any questions or comments.

