



December 12, 2024

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Gentlepeople,

Founded in 2013, 350 Seattle is a grassroots group working for climate justice by organizing people to make deep system change: resisting fossil fuels; building momentum for healthy alternatives; and fostering resilient, just, and welcoming communities. We have an active mailing list of thousands of people, the great majority of whom are in the Seattle metropolitan area. This comment on the Environmental Assessment (EA) of the “Sustainable” Airport Master Plan (SAMP) for SeaTac airport (SEA) was written by volunteer members of the Aviation team, whose specific mission is to lessen the impact of air transportation on climate change.

We were very disappointed to see that our earlier rounds of comments on the SAMP have not been addressed. This plan for the expansion of SEA is anything but sustainable. The airport is not addressing the environmental harms it’s causing at its current size. Expansion will only increase the damage to our climate and to the health of people living near the airport and under the flight paths.

Here are some specific ways that the EA is insufficient. All quotes are from the EA except as noted.

#### Projections of aviation demand

- 1) The projected growth of aviation demand does not consider demand reduction as an alternative. Additional studies are needed to assess the impacts of ending Port of Seattle tourism advertising and dropping its recruitment of more carriers and more routes (including cargo flights). A tax on flyers should also be assessed.
- 2) There is no assessment of how robust the growth projections are given current economic pressures.
- 3) Studies are needed to assess the impact of more frequent passenger and freight rail service that is better connected to SEA. This is [now required](#) in some European countries.

#### Climate

- 4) The EA incorrectly claims that the “the anticipated increase in GHG [Greenhouse gas] emissions due to the Proposed Action in the context of the Airport’s sustainability efforts and climate goals is not anticipated to result in an adverse impact on climate.” It is [well-established](#) that GHG from aviation have net warming effects. There is no evidence that the Port’s cited goal (Appendix C, Section 21.2.3.1) of “... Scope 3 GHG emissions to carbon-neutral by 2050” can be met. It is wrong to cite a goal as if it will be achieved. A study is needed of the impacts of the increases in GHG due to the proposed actions.
- 5) The EA fails to investigate the ways Port actions could reduce scope 3 emissions, including the ideas mentioned in (1).
- 6) The climate section incorrectly claims that “the Action Alternatives, when combined with other past, present, or reasonably foreseeable projects are not expected to prevent King County or the State of Washington from taking actions to meet their climate goals.” The EA is missing any information on how the County or State could possibly meet their climate goals under the scenario of increased aviation. Indeed, all evidence is to the contrary:

On the County level, the 2020 Strategic Climate Action Plan (SCAP) uses 2007 GHG emission levels as a baseline year, and calls for a 50% reduction by 2030, and 80% reduction by 2050. The [Joint Aircraft Emissions Technical & Community Task Force Report](#) noted that aviation emissions are difficult to address, but “emissions from aircraft disproportionately impact frontline communities and it is critical for King County and its partners to develop strategies for both emissions reductions and air quality improvements”. They set goals of reducing the carbon from aviation fuel by 20% in 2030, which we are far from on track to do (the reduction was [0.1%](#) in 2019), and by 95% by 2050. They also set goals for reducing fuel use by **reducing** air travel. The County will “now more comprehensively track overall fuel consumption from flying and the additional warming effects that flying has on the atmosphere.” The **additional warming effects** are those from [radiative forcing](#), which means that the County now multiplies the carbon emissions by 3.0 to reflect the total GHG impact. This is a realistic measure of aviation impact but makes the County’s goals even more difficult to achieve. Factoring in radiative forcing, aviation was [53%](#) of King County’s 2017 GHG emissions.

Since the SAMP was proposed, the Washington State legislature has made more ambitious plans to reduce Washington’s GHG emissions. RCW 70A.45.020 requires the State to reduce GHG emissions “to 1990 levels, or ninety million five hundred thousand metric tons” in 2020. In each succeeding decade, the law aims to reduce Washington’s GHG emissions below 1990s levels. By 2050, the State’s GHG emissions should be limited “to five million metric tons, or ninety-five percent below 1990 levels.” Furthermore, the law requires the State to “achieve net zero emissions by 2050.” However, Washington is not meeting its GHG reduction goals; Washington’s emissions are [increasing](#). In 2019, CO<sub>2</sub> [from aviation](#) was over 6% of the state’s carbon emissions, 8.8% if you include international bunker fuel. This is not total GHG emissions, just CO<sub>2</sub>. There is no way to meet State goals if aviation emissions continue to increase.

Any claims that the SAMP is “not expected to prevent King County or the State of Washington from taking actions to meet their climate goals” need to be retracted and the proposed actions need to be changed to reflect the reality of the situation.

## Air quality

- 7) The assessment of air quality did not include the known health harms from ultrafine particles and other aviation emissions. Over 420,000 people live under the SEA flight paths. (Pollution from aircraft emissions spreads far from airports, see [study 1](#), [study 2](#), [study 3](#), [study 4](#), and [study 5](#), and infiltrates [indoors](#)) According to scientific research, here are some of the harms they face. The King County Board of Health evaluated numerous studies in their [2020 Community Health and Airport Operations Related Noise and Air Pollution: Report to the Legislature in Response to Washington State](#). They determined that aviation pollution **causes** disease, citing adverse cardiovascular, respiratory, cancer, reproductive and fertility, and nervous system outcomes. They also labeled aircraft pollutants as “**likely causal**” of increased preterm birth and metabolic problems. Since then, scientific studies have confirmed many of their conclusions (see, for example, recent findings on [asthma](#), [lung cancer](#), [preterm birth](#), and [hypertension](#)). Furthermore, there is now evidence that maternal exposure to aircraft pollutants is associated with [autism spectrum disorder diagnoses](#) in children. The scientific consensus on the damaging health consequences of aviation emissions is why the Port needs to do a **full health impact assessment** as part of an Environmental Impact Statement (EIS). These air quality harms are real and need to be incorporated.

## Noise

- 8) The impact of aviation noise must be updated based on current science. The EA used the 1976 noise threshold of 65 dB DNL. The Environmental Protection Agency has determined that [safe noise levels](#) are only 45 dB DNL for indoor noise and 55 dB DNL for outdoor noise. The [World Health Organization thresholds](#) are even lower: 40 dB at night.
- 9) Even using the 65 dB DNL threshold, the contour in the Environmental Assessment needs its data updated. It does not capture the range of people affected by SEA noise. For example, compared to noise measurements collected by the Port of Seattle for locations closer to the airport, loudness levels collected in 2018 on [Beacon Hill](#) were similar or louder than locations within 2 miles of the airport. More than half of the measurements exceeded the loudness level for which homes located adjacent to an airport would receive mitigation from the FAA. They also exceeded the Seattle City noise ordinance, sometimes by 800%.
- 10) Current science is clear that aircraft noise is more than an annoyance; it has demonstrated consequences for human health. The [2020 King County report](#) found aircraft noise to **cause** cardiovascular disease and also sleep disturbance, which has its own health sequelae. It was “likely causal” for school performance. Recent research replicates these [findings for cardiovascular disease \(study 6, study 7, study 8\)](#). In addition, recent scientific investigations of airport noise have found associations with many other adverse outcomes, even accounting for other health risk factors. These include more studies on [low student achievement](#), cardiovascular disease ([study 9](#), [study 10](#), [study 11](#), [study 12](#), [study 13](#)), and sleep ([study 14](#), [study 15](#), [study 16](#)) and new findings on metabolic health ([study 17](#), [study 18](#), [study 19](#)), [preterm birth](#), [depression](#), [Alzheimer's Disease](#), and [substance use and mental health emergencies](#). The scientific consensus

on the damaging health consequences of aviation noise is why the Port needs to do a **full health impact assessment**. The health consequences of noise are real and need to be addressed.

In a final point about noise, the EA notes that quieter aircraft will result in smaller 65 dB noise contours in 2037 compared to 2032. However, even with quieter aircraft, the EA projects that the area within the 65 dB noise contour will increase by 12% from 2022 to 2037. The phase-in of quieter aircraft should provide relief to those injured by airplane noise, rather than being more than cancelled out by an increased number of flights.

#### Environmental justice, equity, and vulnerable populations

- 11) The EA incorrectly concluded that “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.” This statement ignores the scientific consensus cited above about the adverse effects of aviation noise and pollution. Furthermore, the health impacts from SEA [fall disproportionately](#) on people of color, those with low income, children, and the elderly - people who already live in zones with [the highest level of health disparities in the state](#). In addition, socioeconomic factors may make it more difficult for affected residents to mitigate the noise or pay for medical care for the health impacts. A **full health assessment** is needed to address these risks and their equity implications. It should also include a focus on children and on the elderly.
- 12) The EA notes an increase in GHG but says no mitigation is needed on the basis of environmental justice because *climate change is a global phenomenon*. Yes, it is global, but climate change is already having a [disproportionate effect](#) on [people of color](#) and low-income communities . Any environmental justice analysis must include the unequal impacts of climate change.

#### Socioeconomics

- 13) The EA states that “The Action Alternatives ... would likely have a positive overall economic impact to the surrounding community”. This needs to be examined more closely. The EPA estimated [Social Cost of Greenhouse Gases](#) at \$190/metric ton in 2020. Just looking at CO<sub>2</sub>, according to Appendix C, it totaled 6,150,575 metric tons in 2022 and would increase to 7,757,291 under proposed plan in 2037, over 300 million dollars in additional social costs. These costs need to be incorporated into any socioeconomic evaluation.

#### Cumulative impacts

- 14) The EA quotes the Council on Environmental Quality, defining [cumulative effects](#) as “the effects on the environment that result from the incremental effects of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period time.”

Part of the SAMP ([Technical Memorandum No. 9](#)) stated that “As master planning efforts must balance conflicting goals and objectives, this is especially relevant for key sustainability categories such as energy and greenhouse gas emissions. For example, if the Port is to meet its

goal to double the number of international flights and destinations and, at the same time, reduce greenhouse gases by 50%, it will have to consider a broader range of options in addition to traditional capital development strategies in the SAMP.”

The EA fails to evaluate the SAMP with either of the above criteria. There is no big picture, no honest assessment of the cumulative effects of plans that enable an increase in aviation. The EA should have looked at the levels of pollution at the time of the SAMP (2017) and compared that to the future. Looking out to 2050 would be relevant to the Port’s climate goals. Such comparisons are needed to understand the cumulative impact of these projects.

- 15) The [Council on Environmental Quality regulations](#) go on to say “Effects also include ... climate change-related effects, including the contribution of a proposed action and its alternatives to climate change, and the reasonably foreseeable effects of climate change on the proposed action and its alternatives.” The Port must assess the cumulative climate effects of the proposed action, and that assessment should be based on a 2017-2050 timeline.

Our 15 points make it clear that a **full and cumulative environmental, health, and climate impact analysis** based on correct information requires many additional studies that only an EIS can provide. We also call for the **racial and economic impact analysis** under President Clinton’s Executive Order 12989 on Environmental Justice that was promised to community groups.

Sincerely,

Laura Gibbons and Brandon Bowersox, for 350 Seattle.