

AGENDA

**AVIATION ADVISORY COMMITTEE MEETING
Des Moines City Hall
North Conference Room
21630 11th Avenue S, Suite C**

October 8, 2018 – 4:30-6:00 p.m.

1. Chair's Report:
 - a. Follow up discussion submittal of scoping comments
 - b. Distribution of binders regarding scoping comments from:
 - The Four Cities SEPA Officials/Consultants
 - The City of Des Moines letter regarding scoping comments
 - Sheila Brush letter regarding scoping comments
 - Mark Proulx letter regarding scoping comments
 - c. Appointment of Steve Edmiston to the Budget Proviso Steering Committee
2. Discussion regarding value and future of the Sea-Tac Stakeholders Advisory Round Table meeting.
3. Date and timing of next meeting.
4. Next Report to Council.
5. Public Comment (10 minutes).
6. Next Meeting Dates:
TBD.
7. Adjourn.

*Materials provided to the Committee are available for review in the City Clerk's Office.

MEETING SUMMARY

Aviation Advisory Committee Meeting
Monday, September 17, 2018
4:30 p.m. – 6:00 pm
North Conference Room

<u>Aviation Advisory Committee Members</u>	<u>City Staff</u>
Sheila Brush	Michael Matthias, City Manager
David Clark	Susan Cezar, Chief Strategic Officer
Steve Edmiston	Tim George, City Attorney
Wendy Ghiora	Tina Hickey, Permit Coordinator
Mark Proulx	

The meeting was called to order at 4:32 p.m.

1. Chair (City Manager) Report:

a. In regards to an FAA funding authorization bill in Congress, City Manager Matthias informed the Committee that the letter drafted to the Senate had not been sent, partly because there were different version of the bill in the House and Senate that would need to be reconciled in a conference committee.

b. The Committee discussed the scoping meeting with public agencies held by the Port of Seattle and the public scoping meeting at Highline College on September 10. Committee Member Brush expressed frustration with the way the meeting was conducted. There were more than 300 people who attended. City Manager Matthias agreed that the meeting was ineffectual.

2. Scoping for the Environmental analysis of the SAMP.

a. Chief Strategic Officer Cesar presented Draft copies of the ILA consultant baseline study and scoping comments in a document titled "Comments from The Cities of Burien, Des Moines, Normandy Park and SeaTac (The Cities) Concerning Seattle-Tacoma Airport (SEA) Sustainable Airport Master Plan (SMAP) NEPA Environmental Assessment (EA) / SEPA Environmental Impact Statement (EIS) Scoping", a draft cover letter, and the table of contents for the draft Seattle Port Authority SAMP Baseline Report and Scoping Comments.

3. Committee Review and Input

a. The Committee members discussed the draft documents. City Manager Matthias suggested the committee, in the future, meet with the Consultants. Committee Member Brush suggested using City Currents to better communicate with City residents regarding the SAMP and events related to the airport expansion plans. The Committee agreed that a letter with City scoping comments be presented to Council for signature on September 27, 2018 to meet the deadline of September 28, 2018.

4. Next Report to Council

September 27, 2018 – City Manager will present to City Council a draft of the proposed letter for Council to approve and submit to the Port of Seattle regarding input to the scoping process.

5. Public Comment

Larry Cripe – Burien Quiet Skies president reminded the committee of the Burien scoping meeting September 18. He suggested the Committee watch a video that is relevant to the plans that the Port of Seattle proposing at SeaTac Airport.

Rick Needles – Asked about the deadline for scoping comments, received or postmarked. City Attorney George had a copy of the Port of Seattle letter that said postmarked.

Roberta Needles – Expressed support for the Committee and Quiet Skies.

Ally Larkin – Read a document to the Committee.

6. Next Meeting Date

October 8, 2018; 4:30-6:00 pm

Adjournment. The Aviation Advisory Committee meeting adjourned at 6:02 pm.

Respectfully submitted by,
Tina Hickey, Permit Coordinator

September 27, 2018

To:

Mr. Steve Rybolt
Port of Seattle
Aviation Environment and Sustainability
P.O. Box 68727
Seattle, WA 98168

From:

Sheila Brush
24614 8th Ave S
Des Moines, WA 98198

Re: Comments on Scoping for Near Term Projects on Sustainable Airport
Master Plan (SAMP) For SEPA EIS NEPA EA

Dear Mr. Rybolt,

In addition to the comments I submitted through Quiet Skies Puget Sound, I also am submitting the following declaration to be added to complete my public comment process.

The Port of Seattle must no longer seek to expand until the pending Sea-Tac Airport studies regarding human health and environmental impact/risk of exposure being conducted by the University of Washington are completed, both phase 1 and the pending phase 2. In addition to the UW study, known as the "Ultra-Fine Particle Study" the Port of Seattle (PoS) must stop all expansion plans until the Department of Commerce conducts the budget proviso baseline study on the Cities surrounding Sea-Tac International Airport. These two critical studies will assess whether there is reason to believe that like the other global studies finding correlation between air traffic noise and emission from jet fuel, Sea-Tac International Airport does not have an adverse health effects and the mounting studies both internationally and nationally are not applicable to the communities around Sea-Tac International Airport.

Allowing the continued and increased air traffic to grow, while health and impact studies are in process is at the very least negligent and appropriately dangerous. The impacts of aircraft emissions and engine noise has a long detrimental effect on human physical, mental and emotional health. To inflame any part of our environment for the sole purpose of profit should be considered a criminal act.

To estimate the environmental burden of disease (EBD) due to environmental noise from aircraft and airport operations, a quantitative risk assessment approach has to be used and is lacking from both SEPA & NEPA identified discussion released by the Port of Seattle. Risk assessment refers to identification of hazard, the assessment of population exposure and the determination of appropriate exposure-response relationships. The EBD is expressed as disability-adjusted life years (DALYs).

DALY's are the sum of the potential years of life lost due to premature death and the equivalent years of "healthy" life lost by virtue of being in a state of poor health and or disability.

- How will the PoS provide guidance on the procedure for health risk assessment of environmental noise created by aircraft and Port of Seattle operations at Sea-Tac International Airport?
- How will the PoS review all evidence on the relationship between environmental noise and health effects created from aircraft and airport operations?
- How will the PoS provide exemplary estimates as to the burden of health impacts that are created from manmade environmental noise due to aircrafts and airport operations?
- How will the PoS provide its discussion of the uncertainties and responsibilities of creating an environmental burden to the surrounding impacted communities?

Assessment of exposure to noise requires consideration of many factors. How will the PoS address the following?

- The measured or calculated/predicted exposure, described in terms of an appropriate noise metric and based on frequency of aircraft operations?
- The distribution of the exposure of the population to noise? Population noise exposure in this cannot be based on the noise mapping mandated by the FAA's part 150 study, it should use the annual average metric of cumulative noise exposure due to frequency in past and present operations.

***Cardiovascular disease due to NOISE and STRESS exposure:**

The evidence from epidemiological studies on the association between exposure to road traffic and aircraft noise and hypertension and ischemic heart disease has already increased during the recent years of airport growth in operations. Both road traffic noise and aircraft noise increase the risk of high blood pressure.

Transportation noise has been linked to adverse effects on quality of life, wellbeing and health, due to factors such as stress, anxiety and raised blood pressure.

Road traffic noise has been shown to increase the risk of ischemic heart disease including myocardial infarction and risk of high blood pressure. The following questions must be addressed as the road traffic growth in and around Sea-Tac Airport is directly associated with the PoS own operations and planned growth in operations.

- How will the PoS track and report the growing health impacts due to increased operation's in both the construction phase, including current construction projects taking place outside of the SAMP and which should have been included into the SAMP as a whole. The capital projects underway are necessary to the long term and near term operations and overall growth as identified in your own long range plan. In other words if these project were not underway today, they would be in fact part of this scoping document, just because you managed to piecemeal them in, that should not exclude the impacts associated with current projects.
- How has the PoS studied the past and present traffic impacts in all forms of transportation for the sole purpose of airport business, including deliveries of cargo and support services and cargo pickups, passenger pickups and drop offs, parking garage at the airport and off-site parking facilities for all airport travel and operations?
- How has the PoS studied the noise impacts directly associated from road traffic due to past and present airport operations?
- How will the PoS address the ground traffic health impacts: noise, emissions, road rage, distraction caused by stress and stress related incidents due to overly congested road ways both in the construction phase and afterwards?
- How will the PoS mitigate the above impacts from ground movement of people and or goods in all forms of vehicular traffic?

- How is the PoS monitoring the past, present and future health impacts on the surrounding communities from increased airport operations?
- What agencies are providing supporting documents that assures the PoS that they are not responsible for the statistically high rate of the above mentioned health impacts from noise exposure due to airport operations?
- Will any such documents, studies, scientific proof be available for public viewing?
- In lieu of scientific documentation that current and increased airport operations at Sea-Tac International Airport will not impact the surrounding communities, what mitigations measures will be taken to give citizens assurances that their quality of life, interruption of sleep, lack of sleep, asthmas, airborne illness and all noise related diseases are not a direct result from current and increased airport operations?

***Cognitive impairment in children:**

The case definition of noise-related cognitive impairment is: the reduction in cognitive ability in school aged children that occurs while the noise exposure persists and will persist for some time after the cessation of the noise exposure. The extent to which noise impairs cognition, particularly in children has been studied with both experimental and epidemiological studies. To gain full assurances that the PoS understands its responsibility in contributing to such impairments in children, I ask the following:

- What such studies has the PoS done in cognitive impairment due to noise impacts from operations at Sea-Tac International Airport? Please provide all past and current data and the time tables for ongoing monitoring.
- Who are the Doctors and or experts the PoS has consulted, hired or staffed to assure that the current operations at Sea-Tac International Airport do not cause or contribute hard to the surrounding children 0-18 years of age?
- How will the PoS monitor cognitive impairments during the construction phase?
- How will the PoS monitor the cognitive impairments ongoing?
- How will the public view this reporting?

Please do not use the noise attenuation program in the schools, we need to be assured that the PoS realizes the impacts taking place outside and in their own homes. Where children are most vulnerable, where they play, socialize, sleep and develop into socially functioning adolescences.

Besides the cognitive impairment factor there is also high risk of loss of hearing due to noise exposure, associated in learning disruptions from noise impacts, long term memory impairment and reading ability.

- What is the mitigation plan for every parent/family who have children 18 and younger not only in the noise corridor but those living in every impacted area associated with noise from airport/aircraft operations?
- What is the lifelong mitigation plan for those children who are already showing signs of cognitive impairment factors due to airport/aircraft operations?
- What is the risk assessment plan for every child exposed to overhead aircraft operations departing and arriving at Sea-Tac International Airport?

There is sufficient evidence for the negative effects of aircraft noise exposure on children's cognitive skills such as reading and memory, as well as on standardized academic test scores. Further knowledge about exposure/effect relationships in different contexts would further inform decision-making. It may also be informative to derive relationships for a range of additional noise exposure metrics, such as the number of noise events, with the planned growth in Airport operations, the frequency of impacts will also contribute to sleep deprivations, ADD, ADHD, and other stress's in our most vulnerable.

- How is the Port of Seattle taking full responsibility for putting children at such a high risk due to airport operations?
- Has any of this been studied in full detail as to the lifetime impacts on children?

The FAA has done extensive studies on circadian rhythms in long distance flight, would it not be socially and ethically responsible for the Port of Seattle to partner with the FAA and do a similar study on sleep disruptions in the children who are impacted by the flight corridors'? Again, not the mapped noise contour but the actual flights over head due to increased operations in years past and planned growth under the Ports own long range plan and this SAMP.

If there are no plans to provide for or study impacts on children, I ask both agencies under SEPA and NEPA review to provide a detailed explanation as to why, especially when so many of these children fall under environmental justice protection and live in an environment that can only be classified as toxic soup.

***Air: Quality:**

- What are the plans to add additional air quality monitors closer to and around the Airport?
- Construction vehicle air quality analysis should be re-evaluated and the dispersion analysis should be redone to better predict potential air quality impacts prior to the start of construction.
- What is the current method to evaluate the current construction zones?
- Provide information on Master Plan Update implementation and conformity with the Clean Air Act.
- Provide information on the State of Washington's Certification of Compliance with Air Quality Standards and a copy of Governor's Air Quality Certificate.
- After 6 months of baseline data that has been collected at the new air quality monitoring sites, the area dispersion analysis must be re-evaluated for both the existing and future conditions, making results public.
- Conduct additional studies regarding long-term exposure to air toxins associated with Airport operations, making results public.
- Mobile Sources – Re-evaluate the existing and future roadway intersection analysis to confirm the accuracy of the evaluation in the EIS and to correct for inconsistencies discussed by EPA, making results public.
- All vehicles associated with Airport operations should comply with required vehicle emissions inspections and maintenance programs.

***Air: Both Air Quality & Odor:** This will fall under the role of Fireman/EMS professionals, quality in air will cause a rise in asthma attacks, heart attacks, heat stroke, lung damage and many other associated medical emergencies, this will result in higher call rates to the above departments and along with the apparent health danger and risk to the citizens, these emergency services will be at the taxpayers' expense.

- How will the PoS mitigate the surrounding Cities for these impacts?
- How will the PoS mitigate the affected citizens?
- How will the PoS monitor the air quality without any permanent air quality monitors placed in the impacted cities? I.e. Des Moines, Burien, City of Seatac, Federal Way, Normandy Park and Tukwila.

***Air: Ozone (O₃) Air Quality Standards:** The Clean Air Act requires EPA to set national ambient air quality standards (NAAQS) for ozone and five other pollutants considered harmful to public health and the environment (the other pollutants are particulate matter, nitrogen oxides, carbon monoxide, sulfur dioxide and lead). The law also requires EPA to periodically review the standards to ensure that they provide adequate health and environmental protection, and to update those standards as necessary.

- How is PoS compatible with the above statement without permanent air quality monitors?

Has the PoS completed the following:

- Assess the extent of pollutions and provide public report.
- Provide air pollution data to the general public in a timely and ongoing manner and how will that data be provided to the public?
- Support implementation of air quality goals or standards, provide data to public.
- Evaluate the effectiveness of emissions control strategies, provide data to public.
- Provide information on air quality trends.
- Provide data for the evaluation of air quality models; and
- Support and provide research (e.g., studies of the health effects of air pollution).

***Air: Odor:** Regulating odor is one of the most difficult processes, – odor is a highly complex and subjective issue and what is offensive to one person may not be offensive to another. How is the PoS defining “odor”?

- Odor is perceived by our brains in response to chemicals present in the air we breathe. Humans have a good sense of smell and can detect odor even when chemicals are present in very low concentrations.
- Although the main issue with odor is that it is a nuisance, it can also present risks to health and to the quality of the environment.

As such, it is vital to prevent or reduce offensive odors where possible and to regulate activities that may cause odors or make them worse.

- How does the PoS plan on managing the output of odors during the construction phase?
- What mitigation practice will be provided to nearby homeowners who are now at risk?
- What mitigation will be provided to nearby homeowners due to toxic odors from emissions and fueling?
- How will nearby residents be notified, immediately, of any toxic odor spills?
- Have there been studies on toxic odor impacts on nearby children?
- Have there been monitors in place at the nearby schools to capture the current odor standards, at the current operating levels, and how will samples be collected in the foreseeable future?

Ambient air pollution significantly increases both morbidity and mortality in the general population and there is strong support of the link between pollutant exposure and the risk of mortality. Removal of irritating and noxious gases and foul odors along with respirable particulate matter are major requirements for any air cleaning system to protect people and assure good indoor air quality.

- How will the PoS manage the output of odors from increased operations after the construction phase?
- Will the PoS be providing residents in the impacted area indoor air cleaning systems as they have in their own facilities such as Sea-Tac International Airport?
- What is the ongoing mitigation plan for impaired air quality due to increased pollutions and toxic jet fuel odor?

***Air: Climate:** New attention to this issue shows that airports around the world will be affected by climate change in various ways. Consider this past summer where planes could not arrive due to our local air quality because of forest fires both North, South and East.

A recent study by scientists at Lamont-Doherty Earth Observatory, at Columbia University, anticipates more troubles along those lines in coming years.

“There are a number of potential climate change impacts on aviation operations,” said Perry Flint, a spokesperson for the International Air Transport Association (IATA). Impacts range from “reducing the take-off performance of

aircraft, to increased storminess – meaning flights have to route around weather more frequently,” he said.

Each of those operational elements can directly impact the surrounding communities, from flight delays and cancellations, to ground congestion, to air congestions due to aircraft not being able to land on time due to unforeseeable restrictions on the ground. Clearly, not all airports will experience the effects equally, but what happens in one airport can easily affect flights and passengers traveling through other airports too.

- What is the PoS plan to mitigate the impacts to the communities from “Act of God” congestion as described above?

With the ongoing growth in dedicated cargo and cargo also going in the belly of both domestic and international flights, how rising temperatures will affect aircrafts take-off performance, finding that warmer temperatures will create weight problems for long-haul flights. Long haul trip require more fuel, creating more outgassing.

- What is the emergency management plan for all climate related impacts both known and unknown?
- How will the PoS operate under unknown climate stresses?
- How will the PoS mitigate the toxic outgassing impacts on the communities due to climate related ground congestion?

Strategic partnerships may be one key to the success of climate impacts:

- Explain what partnerships the PoS is developing into the new frontier?
- Has the PoS been actively preparing for future risks by partnering with local agencies to study threats to the region and local watershed, working collaboratively to develop a clear plan?
- What is the risk vs. reward assessment to date?

Also key will be deeper industry and third-party inquiry into the costs and consequences associated with aviation of human-caused climate change, i.e. more humans at Sea-Tac International Airport, workers, travelers, support services, buses, cabs, etc.

- What is the PoS mitigation plan for climate/airport/ground surface related impacts due to climate?

- Is there a current preparation of an adaptation report to consider and who will be involved in a comprehensive risk assessment of climate related risks to the direct and indirect operations of Sea-Tac?
- Will this report be available to the public, now and will it be available ongoing in the future?
- The adopted approach should be quantitative (where possible) incorporating climate modelling, literature review, and concerted consultation with all Sea-Tac's external partners. Has this been implemented? Please provide.

In particular climate modelling should be undertaken for two time periods: the short term (i.e. now to 2020) and the medium to longer term (i.e. 2020 to the 2050s) considering high, medium and low emissions scenarios. The assessment addresses uncertainties by adopting a precautionary approach and classifying the uncertainty of risks identified.

- What is the current climate modelling plan at Sea-Tac?
- Is it a two phased approach? Both near and long term?
- Will these reports be made available to the public?

Please address the subject of climate change without using Bio-fuels as a possible solution to the unavoidable climate impacts. Bio-fuels as it states today is not a measurable methodology, it has not produced nor has it provided enough clean fuel for a quantifiable test result to be considered.

Clearly, I could continue, the list of impacts is long and yet the mitigation plan is missing. The acknowledgement of social responsibility is missing. The Port of Seattle can no longer state it is a "good neighbor" to those living around the airport without first addressing the above concerns and the thousands more submitted by the citizens that you as a government agency should first protect.

The Port of Seattle must decide if Sea-Tac International Airport is too be the leader in environmental stewardship or only use the term "sustainability" as directed by Landrum & Brown. The Port of Seattle can be leaders too all, acknowledging that to grow will in fact not be sustainable to the communities and citizens that surround the airport, that sadly Sea-Tac is constrained and therefore cannot achieve the "unconstrained growth" they had hoped for.

To quote your own Port Commissioner Peter Steinbrueck, I submit this into public record:

“I have a lot of concerns about the growth of Sea-Tac airport. It is by far the single largest source contributor to GHGs in the region, 90 percent of which is due to aviation. Air and noise pollution, including ultrafine particulate, are severely impacting the health and wellbeing of surrounding airport communities, and it is likely to get worse with increasing air traffic. At Sea-Tac and surrounding communities in south MLKing County, nowhere are the social and cultural inequities and health disproportionalities more apparent (please see attached demographics map of King County that I showed at the forum). According to the 2014 Duwamish River Valley Cumulative Health Impacts/Just Health Action study and other health indicators, data collection, and geographic mapping by neighborhood throughout King County, far more people of color living in poorer neighborhoods, besides much lower incomes and educational attainment, have significantly lower life expectancy, rates of infant mortality, and chronic respiratory diseases attributed to far higher rates of exposure to air, water and historical industrial pollutants.

According to Port of Seattle Aviation Projects Director Wayne Grotheer, in a capacity report, gate availability at Sea-Tac is now at "maximum capacity several times each day." It's clearly time now, to begin studies for the siting of a second regional airport. It may take decades before decisions can be reached, and funding in place to develop a second regional airport, but it is clear with the extreme rapid growth of flights out of Sea-Tac (7th largest and fastest growing airport in the nation), that this is necessary. Some of the expected growth could come by expanding at another airport in the Puget Sound Region. We need updated information from the 2009 Long Term Air Transportation Study to look at all the options in planning for the region's future. All the expected growth in demand should not be assumed to be at SeaTac, without seriously studying other options and sites. The port can be a leader here.” Peter Steinbrueck email received September 23, 2017

All expected growth in demand should not be assumed to be at Sea-Tac, without serious studies. This Sustainable Airport Master Plan must be stopped until ALL serious and comprehensive studies are complete.

I thank you for the consideration and ask you to perform as the government agent that you are and First DO NO HARM in your decision making process.

Kind Regards,

Sheila Brush

Submitted by: Mark Proulx
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Des Moines, WA 98198
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Development Strategy – Summarized

With regard to Seattle-Tacoma International Airport (“SeaTac”), the long-term development strategy of the Port of Seattle (“the Port”) can be discerned from its behavioral history. This strategy can be summarized as follows:

- Make living conditions near the airport increasingly miserable, prompting those who can afford to leave the area to do so
- Wait for the remaining residents to die
- Expand the airport into the newly available area via land buyouts at a fraction of the value they would command elsewhere
- Repeat every twenty years or so

The Port will, of course, vigorously deny this, but true refutation of this perceived strategy will occur only through meaningful action. If the Port is serious about being a good neighbor, it will have to confront and embrace uncomfortable alternative strategies that will require it cede some of its control over aviation activities to other governmental entities in the Puget Sound region.

Remediation First!

Since the completion of the Third Runway, the Port has implemented numerous changes and has seen considerable growth in the annual number of flights and number of passengers. Any credible environmental review must assess the impacts of these changes on neighboring populations. This assessment, in turn, must lead to remediation proposals e.g., operational changes, that must be implemented *before* embarking on further development.

Air Pollution Assessment

The environmental review must include an assessment of the effects of airborne particulates and aerosols on nearby populations. To be of any benefit, this review must be completed before any projects proposed in the SAMP are started. There undoubtedly exists a variety of ways to conduct a credible and meaningful assessment; an example would include the following steps, conducted by an independent party in a transparent, publicly accessible manner:

1. Identify the “subject” study area surrounding SeaTac.
2. Identify a “control” study area away from the airport with similar land uses and population density.
3. Determine a statistically valid number and distribution of air sampling sites within each area.

4. Determine a scientifically valid method of sampling at each site.
5. Determine a statistically valid sampling regimen, e.g., time of day, frequency, atmospheric conditions, time of year, aircraft operations, etc.
6. Collect samples per items 3-5.
7. Assay collected particulates – size, concentration, chemical composition.
8. Assay collected aerosols – droplet size, concentration, chemical composition.
9. Develop relationships between airport operations and assay results.
10. Compare the analysis results of the two study areas.
11. If the findings reveal no statistically significant difference in size, concentration, and chemical composition between the study area and control samples, the study can be considered complete.
12. If the findings reveal a statistically significant difference between the two areas, use the best available science to *quantitatively* determine the likely health effects of the airborne pollutants on the populations in each area. These effects should include implications vis a vis:
 - Life expectancy
 - Incidence of chronic illness and disease
 - Birth defects
 - Child development
13. Using the best available science, extrapolate these results to reflect the increased airport activities projected in the SAMP.

At this point, the Port would have to choose between two alternatives:

1. Issue a public statement that clearly and unequivocally acknowledges the Port's acceptance of and endorsement of these effects as the price of continued growth at SeaTac.
2. Embark on a meaningful examination of alternatives to accommodating the projected regional growth in passenger air and cargo traffic. In this context, "meaningful" means embracing alternatives that:
 - a. Directly challenge the Port's hegemony in these matters.
 - b. Spread the impacts across the region so that no one limited sector shoulders them, e.g., construct one or more regional airports, linked by high-speed rail.
 - c. Consider alternatives to air transport, e.g., high-speed rail for coastal corridor passenger traffic.
 - d. Separate cargo transport from passenger transport.

Noise Pollution Assessment

Introduction. Flight path modifications introduced by the NextGen program have concentrated the noise inflicted on communities near SeaTac. This increased concentration has largely negated the benefits associated with the transition from Stage 1 and 2 aircraft to quieter Stage 3 and 4 models. It has been years since any meaningful noise exposure

assessment in the SeaTac has been conducted, yet the number of flights continues its relentless increase.

Aircraft noise isn't simply a nuisance; it is harmful.¹ No environmental review for the SAMP can be considered legitimate unless it includes a comprehensive mapping of noise exposure and analysis of the effects of said noise on the local population. No projects proposed in the SAMP should be allowed to begin until this analysis is complete.

Analysis Via Predictive Modeling. At the public meeting, a Port representative, introduced to me as an authority on community noise, mentioned that the Port proposes to use a predictive model to conduct the noise assessment, claiming that use of the model is mandated by the FAA. While this might indeed be the case, the use of a predictive model alone as the basis for this assessment and subsequent policy decisions is insufficient. **No model can be declared useful unless its predictions are confirmed with valid measurements, and there exists no reason why the Port of Seattle cannot acquire said measurements as part of the SAMP environmental review.** When I mentioned this to him, he stated that the Port does measure aircraft noise at twenty locations distributed about the airport. When I told him that this number of locations was comically insufficient to validate a predictive model due to spatial aliasing,² he quickly directed me to the comment forms, which seemed to be the stock answer to any question deemed uncomfortable.

Measurement System and Protocol. To be meaningful, the measurement system³ used to acquire the model validation data must be designed by an agency that is not only versed in the science of community noise measurement but is also an objective party. This means that:

- The Port must not be the principal investigator
- The FAA must not be the principal investigator
- The performing organization must not have a real or perceived conflict of interest with either the Port or the FAA

The same applies to the development of the sampling protocol – how often noise samples are measured, the duration of each measurement, and so on.

Analysis. Acquisition of valid data and authentication of the model, while necessary, do not comprise a meaningful noise assessment. The assessment will be meaningful only if their results are used to analyze the effects of the noise on the local populations. One can imagine all manner of deleterious noise-induced effects; it is certain that the science to determine if the existing and proposed airport operations would prove harmful is well established. The

¹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5437751/>

² <https://ieeexplore.ieee.org/document/4696048/>

³ The “measurement system” includes the equipment used to acquire the acoustic data as well as the analysis used to determine the number of measurement points and their locations.

Port must, as part of its environmental impact analysis, require such an analysis and that said analysis be conducted by neither the Port, the FAA, or any party having a real or perceived conflict of interest with either agency.

Deliverables. Once complete, the Port must make the analysis results publicly available and must clearly and unequivocally state their desire to accept these as an acceptable price to pay for the projects proposed in the SAMP.

Meeting Format; Absence of Commissioners

The “open house” format – as opposed to a “public hearing” format – diffused citizen participation and limited Port accountability, to wit:

- Notifications for the meeting were worded to imply that the “meeting” started at 5:30 pm, a time that is too early in the day for many people to attend. Absent a clear statement that one could arrive at **any** time during the three-hour window, attendance almost certainly suffered.
- The format made it virtually impossible for citizens to hear other’s comments and relieved the Port representatives from having to directly confront the people they ostensibly serve.
- The disgraceful absence of Port Commissioners – none attended – leads one to conclude that that they either don’t care about the affected communities or are afraid to confront the people whose lives are impacted by their relentless pursuit of growth.