

StART

MEETING SUMMARY

DECEMBER 8, 2021; 5:00 PM – 7:00 PM

VIA ZOOM VIDEOCONFERENCE

Agenda Items:

- School Resilience to Air Pollution Study Update Briefing on the Infrastructure Investment & Jobs Act
- Update on the Sustainable Airport Master Plan (SAMP)
- Public Comments

Meeting Summary:

- I. Facilitator welcome, introduction, and agenda, *Brian Scott, BDS Planning & Urban Design*
Brian Scott read the SEA Stakeholder Advisory Round Table (StART) Steering Committee's statement on retention of StART's membership structure.
- II. Opening Remarks, *Lance Lytle, StART Chair/SEA Managing Director*
Lance Lytle thanked the StART Steering Committee for recommending tonight's agenda items and expressed his appreciation to tonight's presenters. The StART Chair also thanked the services of those who won't be returning to StART in 2022: Eric Zimmerman (Normandy Park), Brian Wilson (Burien), Erica Post (Tukwila) and Tod Bookless (Tukwila). The Chair also expressed his personal thanks to Brian Wilson for the commitment he has made to StART since its inception.
- III. School Resilience to Air Pollution Study Update, *Dr. Elena Austin, Assistant Professor, University of Washington (UW) School of Public Health*
 - A. Goals
 - Understand the impact of outdoor air pollution on the air quality indoors
 - Are outdoor air pollutants significantly removed by current air filtration approaches?
 - Can indoor air quality be improved using a portable HEPA filter unit?
 - B. Study Methods
 - To determine the exchange of air from outdoor into indoor spaces a measurement method developed by the [Harvard T.H. Chang School of Public Health – Harvard Healthy Buildings Program](#) was used.
 - Visited five schools within the vicinity of the airport, on two separate occasions, and conducted measurements over a 48-hour period. Infiltration was measured in the first 24 hours using existing air filtration only, while in the second 24 hours, HEPA units were deployed to measure their impacts.
 - CO2 concentration was used to track air exchange between the classroom and outdoor air.
 - No one was in the classrooms during the study, therefore, normal use with opening doors, where there may be more infiltration, was not replicated.
 - C. Results
 - The main result from this study is that there is a lot of outdoor particle infiltration (~50%) and that HEPA is decreasing the infiltration.

- Ultrafine Particle concentrations were higher outdoors than indoors.
- There are several ways particles can enter and exit places, such as windows, doorways and through existing HVAC systems.
- Due to the age of the schools, their existing ventilation systems, their proximity to the airport and additional air pollutants, the results from school to school varied.
- HEPA filters can improve indoor air quality and, more specifically, MERV 13 filters might remove most particles.
- However, some schools are not able to install these filters because of the age of their ventilation system.
- HEPA filters can increase the outdoor exchange rate (three times an hour), which is especially important during COVID.
- Black carbon, typically a marker of diesel, showed a decreased total particle concentration indoors during the use of a HEPA filter.
- After deploying a HEPA filter, less than 10% of outdoor particles showed up indoors.
- Typical infiltration was approximately 50% before the deployment of a HEPA filter, which dropped the ratio to 10%, which is a significant difference.
- Ultrafine Particle infiltration is about 40% without a HEPA filter, and about 12% using a HEPA filter.
- This study is not a health study. There are associations, but there are no causations that can be made.
- Infiltration could be decreased more through engineering solutions.

D. Next Steps

- The UW will be engaging with a wide audience - parents, schools, community members in the participating cities.
- A follow up project to this pilot, funded by the state, will allow deployment of HEPA filters for the entire school year to assess the impact over time and to understand if there is an impact on student performance.
 - The goal of the upcoming project is to show a good estimate of annual air pollutant averages across different areas in this region and use those to look at health impacts that have been raised such as premature birth.
- The School Resilience to Air Pollution report will be out next week ([LINK](#)).

IV. Infrastructure Investment & Jobs Act Briefing, Eric Schinfeld, Federal Government Relations Senior Manager, POS

Infrastructure Bill: This historic bipartisan \$1.2 trillion infrastructure investment, signed by President Biden on Nov. 15th, includes \$550 billion in new money over five years.

A. \$20 billion in airport specific dollars are lumped into two buckets. While we know the general Congressional intent for the funds, the FAA will set more specific criteria in the coming months, such as project eligibility.

- \$15 billion for airport infrastructure grants distributed by formula
 - This includes an estimated \$240 million directly to SEA.
 - Airports would likely be allowed to use these funds for any “PFC-eligible projects” except debt service.
 - We do not know yet whether the funds can be used for ongoing projects or only for new projects. However, the legislation does talk about multi-year projects therefore the Port could

get multiple grants for the same project.

- \$5 billion for a new “airport terminal program” distributed via competitive grants
 - 55% of which is reserved for large hubs like SEA to compete for

Any unobligated funds will be made available in the fifth fiscal year as competitive grants. These are very flexible and community focused, but we do not know what amount, if any, will be left.

B. Other interest to the Port

- \$500 million for energy efficiency and renewable energy improvements at public school facilities, including investments that “lead to an improvement in teacher and student health, including indoor air quality”.
 - This is a good example of a competitive grant where the Port and community could collaborate on.

C. What Can & Can’t the Airport Money Do?

- Nothing in the legislation talks about new airports, the intention seems to be to fund existing airports.
- It seems possible that the airport could spend some funds on community projects like environmental investments, but we don’t know yet what the rules around it will be.
- In addition to airport-specific funds, the IJA contains other pots of money that could involve Port-community collaboration. For example, electric charging stations near the airport seems like a good investment as it would be benefit to the airport and airport communities.
- The Port wants to have ongoing conversations on what we can apply for from these funds.
- Everything depends on FAA rule making.

Build Back Better Act: On November 19, the U.S. House passed the Build Back Better Act, which would invest approximately \$1.75 trillion over five years in a wide variety of health care, childcare, education, immigration, and climate priorities. As of right now, the bill has a highly uncertain future, but if passed, the airport and airport communities would be able to benefit from some of its funding dedicated to reducing pollutants at ports and airports, reducing diesel emissions, environmental remediation, etc.

V. SAMP Update, Arlyn Purcell, Director of Aviation Environment & Sustainability, POS

The Port of Seattle is actively working with the FAA and is still hoping for an early 2022 NEPA publication date, however, there isn’t a specific date the Port can offer at this time. The publication date will be shared, along with more detailed information about the opportunities for public comment, and the length of the comment period whether 45 or 60 days. In response to requests made during the meeting, the Port agreed to again relay to the FAA the public request to have a 60-day public comment period rather than the -45-day period currently anticipated. Justin Biassou, Community Engagement Officer at the FAA, commented that the agency will continue the conversation with the Port, but that this process can’t necessarily be lobbied, and questions should continue to be funneled through the Port. Justin also said that while the final document needs to meet FAA standards, the level of engagement is a Port decision.

VI. Public & Written Comments

A. Public Comments

- Bernadine Lund: I am hoping you would help support a study to assess airport economic drivers. Without a cost-benefit assessment of airport growth, we do not know if airports support or hurt our health.
- David Goebel: The Steering Committee’s decision to not allow Vashon to become a member of

StART seems a squandered opportunity with a very engaged community. It's ridiculous. He urges the Steering Committee to consider allowing Vashon to attend working group meetings. We have been responsible for a long time.

- Anne Kroeker: I underscore Vashon's responsibility and the information they bring to the discussion. I encourage that even though I am not on Vashon. Statistics I heard ill us. We need to talk about taking this opportunity through the infrastructure funding to think what equitable transportation looks like. 100,000 people die due to excess heat directly attributable to climate change and carbon emissions.
- Richard Barr: I see how you don't want to expand and include other communities on StART. But as an alternative, I'm hoping that our input could have some effect in some other way. We were ill-treated with the flight pattern and we'd like our voice heard now.

B. *Written Comments*

- Richard Harmon: Vashon overflight pattern must end.
- Virginia Louise Friend: Though a rural island, Vashon, has become a low altitude path for outbound and inbound SEA traffic. It's relentless and daily.
- Susan Helsell Kutscher: Please include Vashon Island as a formal member in StART's internal Steering Committee meetings. In addition, please include Vashon in SAMP, NEPA EA noise modeling. We have hundreds of flights going over our houses every day at low elevation at high noise levels. Sincerely, Susan Helsell Kutscher (and her entire family right in the flight pattern).
- Rob Briggs: Vashon Island must be included in the SAMP, NEPA EA noise modeling and Vashon needs to be added as a full member to StART for the SAMP EA to have any legitimacy given the distribution of complaints the Port receives and the injustice of NextGen.
- Richard Bard: Justifying the concentration of flight paths over Vashon Island because the existing ambient noise there is quite low was illogical and should be revisited.
- Mary Woodring: Living under a firehose of noise and pollution because of the NextGen changes is negatively affecting my wellbeing.
- Bernadine Lund: *See attached.*

MEMBER	INTEREST REPRESENTED	PRESENT
AMY ARRINGTON	NORMANDY PARK - CITY	✓
ARLYN PURCELL (ALT)	PORT OF SEATTLE	✓
BILL VADINO	FEDERAL WAY – CITY	✓
BOB LEONARD	DES MOINES – COMMUNITY REPRESENTATIVE	✓
BRANDON MILES	TUKWILA - CITY	✓
BRIAN WILSON	BURIEN – CITY	✓
CARL COLE	SEATAC – CITY	✓
CHRIS HALL	FEDERAL WAY – COMMUNITY REPRESENTATIVE	✓
DAVE BERGER	FEDERAL WAY – COMMUNITY REPRESENTATIVE	✓
DAVID LASHLEY	NORMANDY PARK – COMMUNITY REPRESENTATIVE	✓
DAVID SUOMI	FAA (EX-OFFICIO)	✓
DIANA SMITH	BURIEN – COMMUNITY REPRESENTATIVE	✓
ERIC SCHINFELD	PORT OF SEATTLE	✓
ERIC ZIMMERMANN	NORMANDY PARK – COMMUNITY REPRESENTATIVE	✓
ERICA POST	TUKWILA – COMMUNITY REPRESENTATIVE	✓
GARMON NEWSOM II (ALT)	BURIEN - CITY	✓
JEFF HARBAUGH	BURIEN – COMMUNITY REPRESENTATIVE	✓
JUSTIN BIASSOU	FAA (EX-OFFICIO)	✓

LANCE LYTTLE (CHAIR)	PORT OF SEATTLE	✓
MARCO MILANESE	PORT OF SEATTLE	✓
MICHAEL MATTHIAS	DES MOINES – CITY	-
PETER PHILIPS	DES MOINES – COMMUNITY REPRESENTATIVE	✓
ROBERT AKHTAR	SEATAC – COMMUNITY REPRESENTATIVE	✓
SCOTT INGHAM (ALT)	DELTA AIR LINES	✓
SCOTT KENNEDY	ALASKA AIRLINES	✓
SHAN HOEL	AIR CARGO	✓
SUSAN CEZAR (ALT)	DES MOINES – CITY	✓
TEJ BASRA	SEATAC – COMMUNITY REPRESENTATIVE	✓
TOD BOOKLESS	TUKWILA – COMMUNITY REPRESENTATIVE	✓
TONY GONCHAR	DELTA AIR LINES	-
NON-MEMBERS	TITLE	
ALEX STONE	OFFICE OF U.S. REPRESENTATIVE ADAM SMITH	✓
ANTHONY HEMSTAD	FEDERAL POLICY WORKING GROUP/DES MOINES	✓
BETH FREILING	PUBLIC	✓
CHRIS SCHAFFER	FAA	✓
DAVE KAPLAN	PORT OF SEATTLE	✓
DAVID TOMPOROWSKI	AVIATION NOISE WORKING GROUP/SEATAC	✓
JACQUELINE IVY	PUBLIC	✓
JC HARRIS	COUNCILMEMBER	✓
LAURA HOLTHUS	PUBLIC	✓
LINDA REMMERS	PUBLIC	✓
MATT MAHONEY	COUNCILMEMBER	✓
MARILYN FOULKES	PUBLIC	✓
OMO ESEMUEDE	PUBLIC	✓
ROB BRIGGS	PUBLIC	✓
ROB HARMON	PUBLIC	✓
ROXANNE THAYER	PUBLIC	✓
STAN SHEPHERD	PORT OF SEATTLE	✓
TIFFANY LAI	PUBLIC	✓
TIM TOERBER	PORT OF SEATTLE	✓
TOM FAGERSTROM	PORT OF SEATTLE	✓
VIRGINIA FRIEND	PUBLIC	✓
PRESENTERS		
ELENA AUSTIN	UW SCHOOL OF PUBLIC HEALTH	✓
NANCY CARMONA	UW SCHOOL OF PUBLIC HEALTH	✓
TIM GOULD	UW SCHOOL OF PUBLIC HEALTH	✓
TIM LARSON	UW SCHOOL OF PUBLIC HEALTH	✓
CONSULTANTS		
BRIAN SCOTT	BDS PLANNING & URBAN DESIGN	✓
DORI KRUPANICS	BDS PLANNING & URBAN DESIGN	✓
VINCE MESTRE	CONSULTANT	-
PUBLIC COMMENTS		
ANNE KROEKER	PUBLIC	✓
BERNADINE LUND	PUBLIC	✓
DAVID GOEBEL	PUBLIC	✓
RICHARD BARD	PUBLIC	✓

NEXT MEETING: FEBRUARY 23, 2022 - TENTATIVELY 5:00 PM - 7:00 PM

LOCATION: ZOOM VIDEOCONFERENCE

StART meeting Dec. 8, 2021, Public Comment by Bernedine Lund, resident of Federal Way and volunteer for 350 Seattle Aviation Group

Demand for Growth in Aviation

Please support a study to assess the cost-benefit assessment of aviation and airport growth. Without such a study, we really do not know if airports support or hurt our economy.

As a reminder, at the Aug 2021 StART meeting I advocated for challenging the need for growth of the aviation industry based on public demand. (See Attachment 1.) More than ever, we need an independent study to assess the economic benefit/costs in having aviation growth. Such a study could be done by, for example, the UW Public Health dept as they did for the PSRC Final Report of 2021 estimating the increase in number of flights.

In Nov I sent a qx to Adam Smith's Town Hall asking about possible funding for such a cost/benefit study of airport growth. (See Attachment 2.) Later I also found a few more references on the average costs of a stroke^{1,3} and heart attack^{2,3} and cost to the environment of a flight from Europe to New York⁴. These estimates, along with the estimated number of events reported in the US Public Health Dept report would just be the beginning of information used in a cost-benefit study of airport growth.

References

1 - <https://www.ahajournals.org/doi/full/10.1161/01.str.27.9.1459>

Life time cost of stroke: *Results* The lifetime cost per person of first strokes occurring in 1990 is estimated to be ...\$103 576 averaged across all stroke subtypes. Indirect costs accounted for 58.0% of lifetime costs. Aggregate lifetime cost associated with an estimated 392 344 first strokes in 1990 was \$40.6 billion...Acute-care costs incurred in the 2 years following a first stroke accounted for 45.0%, long-term ambulatory care accounted for 35.0%, and nursing home costs accounted for 17.5% of aggregate lifetime costs of stroke.

2 - According to an article from the [National Business Group on Health](#), the average total cost of a severe heart attack--including direct and indirect costs--is about \$1 million. Direct costs include charges for hospitals, doctors and prescription drugs, while the indirect costs include lost productivity and time away from work. The average cost of a less severe heart attack is about \$760,000. Amortized over 20 years, that's \$50,000 per year for a severe heart attack and \$38,000 per year for a less severe heart attack.

3 - <https://uphelp.org/the-costs-of-surviving-cardiovascular-disease-its-enough-to-give-you-a-heart-attack/>

"Dr. Polly Galbraith, vice president and chief medical director at Assurant Employee Benefits, an insurance provider, says the lifetime cost of treating less severe heart attacks can reach \$760,000. For a severe heart attack, the cost can reach \$1 million. The figures include indirect costs, such as lost productivity, as well as direct costs, such as hospitalization.

The costs of treating strokes vary more, depending on the length of care required, Galbraith says. If a long-term stay in a nursing home is necessary, the lifetime cost could reach \$2 million."

4 - <https://www.theguardian.com/environment/2021/sep/06/climate-crisis-transatlantic-flight-global-economy-gdp>: Climate impact of a transatlantic flight could cost global economy \$3,000

Adam Smith Activities on behalf of the airport and surrounding communities.

On Nov 24th, Alex Stone sent out the following information about the work Adam Smith was addressing on aviation noise and emission mitigation:

Stone, Alex <alex.stone@mail.house.gov>\

Wed, Nov 24 at 12:12 PM

"As you may already be aware, Congressman Smith recently introduced the Aviation Noise and Emissions Mitigation Act. For more information on the bill, please see [here](https://adamsmith.house.gov/press-releases?ID=D5AD4A27-7862-459F-9D50-6E177DF53409). (https://adamsmith.house.gov/press-releases?ID=D5AD4A27-7862-459F-9D50-6E177DF53409) Additionally, the Congressman wrote an op-ed in the Seattle Times on aviation noise and emissions as environmental justice issues. This article can be found [here](https://www.seattletimes.com/opinion/aviation-noise-and-emissions-are-environmental-justice-issues/)." (https://www.seattletimes.com/opinion/aviation-noise-and-emissions-are-environmental-justice-issues/)

Alex Stone

District Representative

Congressman Adam Smith (WA-09)

StART meeting Aug 25, 2021, Public Comment by Bernedine Lund, resident of Federal Way and volunteer for 350 Seattle aviation group

Growth of the aviation industry

Each of you need to consider what 'growth' of the airline industry really means and if this is what the county and world needs in this time of global climate change.

The PSRC Final Report of May 2021 predicts that flights will increase from 400,000 per year to over 800,000 per year by 2050. This is based on projected population growth and demand for flights. In making this prediction, the PSRC did not take into account the negative impacts of such growth, and has not provided the leadership that was needed. The PSRC also made this prediction before seeing the result of this unlimited growth as described in the Aug 11, 2020 report by the IPCC (International Panel on Climate Change).

The PSRC cited the public's demand for flights as the reason for the growth in the number of flights. Everyone here and others related to aircraft flights need to challenge the reason for that growth. This will not be the first time that the public demands for particular product or service is limited. For example, in the past there was greater and greater demand for smoking products; however, when the dangers of smoking were made known to the public, limits were placed on advertising and where one could smoke, tax increases on tobacco products were increased, and smoking (in the US) decreased. Similar limits were put on other things dangerous to the public, such as opioid use, asbestos use, leaded gasoline for vehicles (though the FAA still allows lead in piston driven aircraft), and many other activities that were not initially limited or controlled.

The same can be done for airline flights, such as replacing a flight with electronic business meetings, using non-polluting modes of transportation such as electric cars for shorter trips and hyper-loop for long trips. Note that money is included in the infrastructure bill for hyper-loop. The costs of building new infrastructure can replace the need to cover the increasing costs of climate disasters.

You have to take action now to prevent the worst outcome described by the IPCC report. Not expanding the airport is one step in the right direction.

Qx for Adam Smith's Town Hall 10-13-2021

Question: Can state legislators or other appropriate groups fund a study to measure the overall costs of airport growth, rather than automatically assuming it is positive to have the airport grow?

We have two conflicting priorities for growth at the airport – one to increase growth because of assumed positive economic factors and one to decrease or limit growth due to negative impacts on public health and the environment. More questions are being raised about the pros and cons of a local airport and how to measure the effect, especially now when climate change costs may shift the balance. One study was conducted around Schiphol Airport in the Netherlands – see <https://www.uecna.eu/economy-does-not-grow-due-to-schiphol-expansion/>. Being a major country with airports for travel around the world and with about 10% of the population living within 10 miles of an airport, we should be looking at the cost-benefit ratio too.

Comments:

The Dec.1, 2020 'Community Health and Airport Operations Related Noise and Air Pollution: Report to the legislature in response to Washington State House Bill 1109' was very informative. One of the reasons for not curtailing the growth at the airport is the idea that growth is good and the airport is an economic driver. However, it seems almost no one has looked at the health, social, and economic costs of having an airport.

A few studies are coming out challenging the idea that growth is always good. We live in a closed system and there are times when growth creates chaos. The effect of using fossil fuels and the negative effect on climate change is a very real and pertinent example. Evaluating the real costs of an airport is not possible unless the health, social, and economic data are evaluated at the same time.

The Dec 1, 2020, Community Health mentioned above includes some of the information needed for such a study, such as the number of excess health events within a 10 mile radius of the airport. There are estimates available that give the average costs for various outcomes, even an outcome like not finishing high school or college where the costs extend for decades. Others will have to comment on data about economic impacts. There may be others too who are looking at the average cost of climate change events like fires, flooding, etc.

Can we ask the appropriate agency to fund a study looking at the pros and cons of living near an airport, including the overall economic impact of the airport in social and economic terms? Note that such an evaluation would also have to remove the subsidies the airlines receive for fuel and other costs.