June 13, 2017

THE DOCUMENT

Federal Aviation Administration “FAA” has issued a “preliminary assessment”/“summary document” “document” for the action and no action alternatives for a west turn “turn” of turboprop aircraft from Sea-Tac Airport over the city of Burien, WA.

I am not aware FAA has provided any statement regarding full version documents therefore I reserve the right to comment on other documents besides the summary document should they be made public at a later time.

It is unclear to me what this document represents. I do not see anything in EPA’s discussions of NEPA compliance on an “environmental analysis” only Environmental Assessment or Environmental Impact Statement.

Mr. David Soumi, FAA’s current regional administrator recently told the Burien Interim City Manager that this document may or may not represent the complete analysis, may or may not be the final document, depending on comments. It is the duty of the agency to disclose the impacts, thoroughly evaluate those impacts and provide mitigation plans if necessary and provide reasonable alternatives to the proposed action. It is also the duty of the FAA to provide reasonable comment periods, proper notification and help the community understand the action, its effects and consequences.

Instead we have a misnamed, preliminary summary without proper notice and unusually short comment period of 15 days without knowing if this is the real document, complete or only document.

Besides implementing the new procedure without properly following their own guidance, FAA now publishes a strange document without following any rules of doing so. It appears to me to be another abuse of public trust and any confidence we might have in the agency’s ability to deal clearly and fairly with the public is greatly diminished.

COOPERATING AGENCY

The Port of Seattle is clearly involved in the decision making because the two agencies are involved in the same operation of the same transportation system. Even though the roles are slightly different, what the Port does or draws for carriers has an effect on how FAA manages those carriers in the airspace and how FAA is managing or needing to change the management of those carriers has a direct effect on the Port’s plans and activities.

40 CFR Part §1501.6 (1) Request the participation of each cooperating agency in the NEPA process at the earliest possible time.

The Port is undertaking a Sustainable Airport Master Planning process “SAMP” and in the process of preparing an environmental impact statement. The FAA is obligated to use the information within that environmental analyses to help inform their decision making process and refer the public to those documents in accordance with § 1501.7.

NEPA also requires that actions which are closely enough related to other actions be analyzed together in the same document. That should include impacts of past, present and reasonably foreseeable future actions. It is apparent that past actions may be resulting in environmental health impacts.
The EJ community areas identified in the document have 90 to 100 percentile risk, exposure and negative health outcomes for respiratory illnesses and include high percentile poverty and minority groups. There are no readily identifiable sources of this widespread community impact area. It appears it is more typical of local impacts rather than others like workplace impacts since they are concentrated together in residential use areas. Past actions of the agencies, both FAA and Port may have been a direct contributor to these outcomes. There is no way to know without a thorough EJ analysis, epidemiology, air quality measurements, noise monitoring, biological assessment, hospital admission records, etc. This has not been done for this community in the past and is not currently planned for the future. Baseline analyses relied on for this document are severely lacking in information, science, testing, evaluation and historical documentation. SAMP may or may not include this information but it would be helpful in evaluating past, present and reasonably foreseeable future actions and mitigation.

In my opinion, the basis for the need for an EIS have been made. The turn will have adverse environmental impacts that require evaluation together with the SAMP. Today’s sporadic use may turn into a need for greater use in the future especially considering the current growth rates, presently 10% per year.

It is not only the responsibility of the agency to provide an analyses of the environmental impacts but to also evaluate where improvement, restoration and enhancement to the environment can be achieved. There is a need to identify the source of impact affecting the EJ community to aid decision making on what those improvements might be, especially in light of irreversible future consequences.

**Because the reasonably foreseeable consequences of the turn along with the SAMP may have serious environmental and human health consequences, the FAA has a responsibility to list the amount of information that is available to make a determination on the source, rate, and outcome of impacts and what scientific methods might be needed to make a more thorough evaluation. A requirement to determine whether the consequences are unknown, known, foreseeable and can be mitigated are contained in 40 CFR § 1502.22.**

There are several projects going on simultaneously at the airport which may have a direct effect on this project, future impacts, past actions and cumulative effects that should be analyzed together. For example, current gate construction by Delta will allow more large body aircraft to arrive and be managed on the airfield. This may have an effect on the types and frequency of arrivals and departure capabilities. The FAA and Port are co-lead cooperating agencies on the SAMP. Acknowledging these two agencies are frequently cooperating agencies is critical to a robust and transparent planning and building project analyses. This project should be included and analyzed together in the SAMP, current gate expansion project, etc.

The 509 extension will have impacts on noise and air emissions that are contained in the same airshed as the turn and SAMP. The 509 project is in the same geographical area and NEPA requires the agencies coordinate plans, projects, mitigation etc.

When the FAA initiated this new procedure, the Port claimed they were not notified and had no idea FAA had implemented the turn. The necessity for the turn however, was a direct result of the increased use of the airfield by carriers that had recently been invited by the Port to HUB at Sea-Tac and create new international destinations. Clearly, there is a lack of communication between these two agencies that are causing critical operational difficulties that precipitate closed door meetings at FAA scrambling
to come up with new ways to accommodate these additional movements. Close cooperation and collaboration is necessary for each to understand operational limits and set guidelines that control growth that cannot be safely managed.

It makes no sense they would be closely collaborating on planning future SAMP gate construction to accommodate increased operations but not current operational capacity constraints. All of these are closely enough related to be considered together. The two agencies actions are closely enough related to be analyzing projects in the same document. Again, a clear indication that FAA is making arbitrary and capricious decisions without proper involvement and notification. The public may wonder at the safety issues that may be involved with this disconnected process more than the alleged safety need for the turn.

PURPOSE AND NEED

FAA has not provided justification for the purpose and need for the turn besides safety. The safety requirements have not been explained. Airspace safety is very important to everyone and FAA is using the word safety to justify the need for this west turn but they have not provided any reasoning whatsoever for this assertion. And in fact, I assert this turn is less safe for many reasons and was not originally instituted with safety as the primary concern.

Efficiency was the primary need when KC Yanamura, Northwest Mountain Region FAA Administrator ordered the automatic turn over Burien in a meeting on July 26, 2016. Safety may have been discussed, but so far, the Quiet Skies Coalition “QSC” public information requests for documentation from the meeting discussion, or alternatives proposals provided at the meeting have not been fulfilled.

Paramount in the discussion were two things:

1) The compressed corridor and how to provide relief which is an efficiency issue not a safety issue and the real problem may be trying to force too many arrivals into peak hour which is a demand issue, and

2) Finding the path of least resistance using Burien since it is less likely this EJ community can resist (KC Yanamura was reported saying to turn all the aircraft over Burien because they don’t have the money or stamina to fight us).

If Safety is the primary concern, they would not be using a much lower west turn maneuver over Burien than what is being used for an historical east turn over the city of SeaTac. One or the other must be more safe or less safe than the other. It is irrational to say that the west turn is for safety if east turns at 40 degrees and west turns at 90 degrees. West used to turn out in a scattered fanned pattern. Was this less safe? It is similar to the east turns at 40 degrees. Is 40 degrees less safe than 90? The argument doesn’t have reasonable justification. Turns at low altitude are less safe for engine and plane, with much less room for correction since the ground is so close. It is common knowledge with the members of QSC who have decades of experience in aviation as Air Force and commercial pilots, that turns at 500 feet are less safe than turns at 3,000 feet which has been and is the standard operating procedure. Special training is required to prepare for emergencies for planes turning at 500 feet which has not been offered to Sea-Tac Q400 pilots. This need is not applicable to the east turns over SeaTac city since they are initiated at a higher altitude without the sharp bank.
Another argument for safety could be that this is the exact relief needed to keep planes separated. Separation distances are governed by FAA Advisory Circular. I must assume this is the safety issue they are talking about because the turn at 90 degrees itself is not more safe. But if this is the true concern, management of numbers of planes arriving and departing must be a reasonable alternative. If there are too many planes compressing the corridor, less planes may be the best alternative. And it may not be an overall operational condition, it may only affect peak hour demand. Then it may be a demand management issue where peak demand management is another reasonable alternative. In a recent meeting with the Port Noise Management, a representative said that if planes cannot land and receive a gate in a reasonable amount of time, they may decide to alter airline scheduling. Apparently it is possible to alter scheduling so it should be considered as another reasonable alternative.

REASONABLE ALTERNATIVES TO THE PROPOSED ACTION

Since 1989 the Puget Sound Region has acknowledged the need for greater aviation capacity. To this end Puget Sound Air Transportation Commission with appointees by the State of Washington was formed and provided a report that included a draft and final EIS in 1991. The recommendation to meet the today and future regional air transportation needs were threefold:

1) Add a third dependent runway at Sea-Tac
2) Open Paine Field for commercial service
3) Build an airport to the south in Pierce or Thurston counties.

Twenty five years later, this still looks like an ideal plan and Paine is now being pursued. Despite these recommendations however, the only option that went forward was the most expensive short-term shoehorned 3.3 billion dollar single dependent runway at Sea-Tac. Nearly one billion of the cost was devoted to dirt, the hill, embankment and pavement. This single runway was the most expensive in US history. This major investment expected to serve the regional needs through 2030 or longer bought only 9 years of additional capacity. The problem with further expansion is that it provides ever less in years of life and even more in cost. Ten billion for the current SAMP plan could build a new airport. We are at the same crossroads we have been at three times, once in 1970 with the second runway, again in 2008 with the third and again in 2016 with the SAMP. Maybe we’ve learned to not keep investing in a plan that provides such little return.

At the same time the third runway was being built over the course of 11 years on a mere 2500 acres, Denver International was built in half the time for 4.8 billion with 6 runways, room for 12 on 33,000 acres that included an adequate buffer and room to grow. Today DIA handles 525,000 operations, provides 64 million in economic benefit and thoroughly dispels the myth that a new airport built away from the dense population center will be unable to attract carriers, business or be successful. The Port continues to remind people of the tremendous economic benefit it brings to the region including prosperity, jobs, tourism, goods and services worth billions.

In 2005 the Legislature passed Long-term Air Transportation System Study, “LATS” and formed a working group, sought input and by 2009 issued their final report. The interesting findings of the group were that there are dozens of airports throughout the region and over 100 statewide that could be expanded. Cost of expansion at the time was estimated between 80 and 160 million each. The region might pursue a hub and spoke system with a new airport similar to DIA built away from population and use commuter planes for a more destination orientation at many of the state’s expanded regional
airports for a much lower cost than expanding Sea-Tac especially in light of the small return in meeting future demand the SAMP provides. Although completing NextGen may lend more hourly operations and save some money in fuel, the cost to the communities health, welfare, quality of life and risk of property value and use losses across the country is enormous. Externalizing these costs provides for a false sense of cost benefit.

Another solution could be to move JBLM to Moses Lake and open up the airport to commercial service. There are also joint use agreements for movement of cargo and/or passenger traffic through military airports in other places in the country so it is possible. **Shared use of JBLM** might fulfill the need to provide service to Pierce and Kitsap counties utilizing Paine, Sea-Tac and Boeing field for a combination of passenger/cargo operations as a **multi-airport system**.

Utilizing the existing regional and statewide assets for the increased growth in operations is a more reasonable solution than concentrating all flights into constrained Sea-Tac which will demand new and increased use of flight patterns. These alternative solution possibilities have been recently submitted during the current State of Washington Aviation System Plan “WASP” public comment process.

Reasonable alternatives that should be considered § 1050 1E 6a

1) The 5 to seven other proposals considered by FAA in July 2016 that have not been disclosed
2) Historical scatter pattern
3) Turn proposals similar to what is used for “east” turn (40 degrees)
4) Turn proposals that may be used that include 20, 30, 40 degree turns alternately
5) Demand management
6) Airline scheduling
7) Hub and spoke system to handle statewide demand
8) Multi-airport system to handle regional demand
9) JBLM joint uses
10) JBLM relocation
11) New airport in Pierce or Kitsap counties
12) Continued use of Paine Field to handle regional demand

**There are potentially sixteen to eighteen other potential reasonable alternatives listed above besides “no action” that have been used elsewhere, considered, researched, carried EIS to a final, but not mentioned in the current document.**

Putting away the justification, purpose and need for safety which has not been clarified, explained, documented or proven, documented with reasonable guidance, FAA AC’s, history or any facts whatsoever, we can move on to alternatives. I need to know what alternatives to the proposed action were available. The FAA has only offered a “with-project” and “do-nothing” alternative for analysis. The historical scatter pattern should be a consideration because that provided safe and efficient operation at Sea-Tac for decades.

My understanding of the meeting where KC Yanamura said to turn planes west over Burien is that there were five to seven other proposals being considered. Why has the QSC coalition information request on these proposals been delayed? We are aware they exist so what is the FAA trying to hide? These are relevant to the current assessment and **NEPA requires consideration of reasonable alternatives.**
Quiet Skies Coalition members have requested those working documents from the FAA since last October 2016 and have not received them. Either they were destroyed which cannot be justified since they are government documents that carry prohibition on destruction or FAA is in violation of the open public records act with unnecessary delay in releasing them. FAA have failed to provide any reasonable explanation as to why these documents have yet to be disclosed.

NO ACTION AND WITH PROJECT ALTERNATIVES

Long term community members living to the west of the turn are making the claim this procedure is new and not historical as the FAA claims. I have lived here for 20 years, moved here purposely to be protected from being overflown and moved away from Airport impacts twice in my life. I know what it is like to live in a flightpath as I first moved away from the flightpath in Des Moines in 1995 having lived there for 15 years. I moved due entirely to the unmitigated damaging environmental and human health effects of living in a flight-path.

I am keenly aware of the noise, vibration, soot, odors, respiratory illnesses, cancer, sleep disturbance, anxiety, depression, outdoor plant effects, fallout of waste, unburned fuel leaking from engines and fuel dumping from tanks, loss of salability/value of my home to name just a few. For the FAA to claim there is no impact and that this turn is historical is completely false and insulting to our intelligence. A resident living near me has been in this community under the path of the new west turns for 80 years. Her residency predates the construction of Sea-Tac Airport. She is directly affected by the new west turn and has no memory whatsoever of this procedure predating July 2016.

The FAA wants there to be no difference between the no-action and with-project alternatives because admitting a “new” impact requires an analysis between a no impact and a new impact and is harder to analyze and stay within NEPA, EJ, CAA rules. It is easier to avoid an analysis if there are no additional impacts. This is the reason for asserting the turn has always happened even though this is not the case.

This was the same problem with the third runway proposal. Somehow the same number of planes would come with an additional runway whether they built it or not. Never mind that runways are usually built like freeway lanes, to accommodate more cars. Apparently planes would be stuck in holding patterns or on the tarmac wandering aimlessly in circles looking for a runway or a gate so the new runway would allow more efficient operation of the same number of operations thereby reducing overall emissions. I didn’t fall for this false narrative then and I’m not falling for it now. New flight paths have significant impacts that are difficult to justify within the purpose and need which are often only ultimately benefiting airline profits.

After FAA initiated the turn, north flow operations persisted during cold winter northerly winds for a period of three weeks. I experienced a debilitating sleep interruption, became sluggish, tired feeling, my work product suffered, and my neighbors also experienced similar deleterious effects. This is the first experience I have had of this in the 15 years living at this location.

The FAA and Port are cooperating agencies on actions that benefit their purposes and needs, and are the only source available to produce the maps to prove their claim these turns are historical. Decision makers must rely on the accuracy of those maps. I am not aware of available alternative sources for maps that are independent of the agency. Since the agency should be considered biased in the decision
making process due to their need to initiate this turn for efficiency, I am asking the agency to rewrite their assessment based on a no action that evaluates no turns with an action that includes turns. I am asking for the re-write based on the many letters citizens have written stating there is no history of these turns and other reasons below. New noise of new turns and new air quality impacts and cumulative past, present and reasonably foreseeable future effects and cumulative effects of noise and emissions combined devastating for a community. Nobody should argue about that fact. But the fact FAA and the Port are now engaged in providing information that makes the claim these turns are historical is again, another breach of the public trust and the agency trying to avoid admission of “new” and significant effects on both the human and natural environment. The law is to avoid impacts not disclosure of impacts.

Prior to the legal action by the city of Burien challenging the process initiating the turn, the Port provided a set of maps that show no or very few lines heading west. It is impossible to know which of these few lines are general aviation, turboprops or missed approaches. Again, long-term community members in the impact area have no recollection of turboprop overflights over west Burien.

Below are pictures of one day operations before the action of the new west turn procedure and after July 2016 received by QSC before the legal action by the city of Burien and are representative of the experience of the community members who have voiced concerns and written letters since July 2016. The non-automatic turns that predate the automatic procedure initiated in July 2016 were fanned over a wide area.
Pictures below on page 2 of 9 Figure 1 and 2 of the before and after of “random” 60 days of turboprop flights over west Burien provided in the FAA’s summary may be including the three days in August each year when Blue Angels practice and perform. During that time all planes in north flow are turned directly west for a few hours per day to avoid airspace conflicts. This is an unusual event but historical. We do not know if these two comparisons are the same random days or what those days are.

Comparing pictures with two different colors of lines and backgrounds as Figure 1 and 2 presented (below from the summary) is not appropriate. The reddish brown lines placed over reddish brown terrain in Figure 1 (below left) that represent the before the automatic turn cannot be discerned. The picture where the bright green lines in the “after” picture over grey terrain (below right) can be easily seen. Why would the agency provide comparisons that cannot easily be compared unless desiring to confuse the reader? Again, we do not know what these flights are, whether during Seafair, turboprops, missed approaches, general aviation because no details have been provided for what days or operations these are. Additionally, the before picture disagrees with before pictures provided to QSC prior to the legal action by the city of Burien.

I believe a case has been made for reasonable doubt as to whether the FAA has provided proof of a historical west turn over Burien. If the history of the turn is not thoroughly established as FAA claims, then a comparison between a no-action and with project may be significant and warrant an EIS. If all reviewing parties wish to accept the basis of a historical use then there are still “additional” impacts
related to frequency of use, potential increased future use, random changes of pattern, additional aircraft types, etc. There is also a history of impacts that predate this turn, predate frequency of use and a future action by the Port of Seattle that will increase the intensity of impacts.

ENVIRONMENTAL JUSTICE

If historical turns are not proven, if purpose and need for safety is not justified, if comparison of no action to the action are dissimilar because of these considerations, then there is a significant impact to the human population both past, present and foreseeable future.

FAA has identified an EJ community within the area that will be most affected by the turn. This community has not received proper notification of the proposed action. Requirements for the type of communication methods needed to facilitate a complete understanding of the project and the impacts must be completed prior to agency approvals. This area meets and exceeds the requirements under Title VI. Just one of the many census tracts which will be affected by the turn has poverty income levels, speaks 26 languages, 20% have no access to healthcare and are predominately minority. In comparison to King County, there are double the average children per household. There are greater levels of concern expressed in EPA guidance for EJ communities for children. EPA MEMORANDUM dated 4/4/1996 states:

Section 309 EIS reviews...”should consider whether there is a possibility of disproportionate impact on children related to the proposed action.”

FAA must consider that it is not just the duty to inform but to also educate people on how they can protect themselves, property, and children, provide adequate consideration, mitigation, and enhancement of the past damage where possible. It is incumbent upon the agency to openly disclose the significant impact aviation cumulative noise and emissions has on the human environment and take responsibility for any damage it may have and will cause to human health and the environment using the most up to date scientific methods available.

The State Department of Public Health has developed a Washington Tracking Network mapping device based on reported health outcomes for use to determine where significant risk, exposures and negative health outcomes are occurring. The map below shows clearly that health damage follows the flight path and stretches into the Kent, Auburn valley. The blue dot is the airport.
The State Board of Health writing in 2000 in a report on environmental justice writing on behalf of findings of the State Department of Public Health regarding negative health outcomes in the Sea-Tac Airport communities:

“EPA explains that “fair treatment means that no population, due to policy or economic disempowerment, is forced to bear a disproportionate burden of the negative human health or environmental impacts of pollution or other environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, and local and tribal programs and policies” (U.S. Environmental Protection Agency, 1998).

Of particular interest to the Committee is the specific claim that disproportionate exposures produce adverse health outcomes that are also borne disproportionately by these populations. It has been well documented in the State of Washington that low-income and minority populations have poorer health status than the overall population and have higher rates of a variety of diseases, including cancer and asthma. Many complex factors interact to produce health disparities among populations. Environmental and occupational exposures, access to medical care, nutrition, behavioral choices, and genetic variability, all contribute and are related. Where one lives and works is often less a matter of choice than the result of socioeconomic status. It is usually the case that people in the lower socioeconomic strata are more likely to live in
the most hazardous environments and to work in the most hazardous occupations (Olden, 1998). [page 7]

Community Health Concerns around SeaTac Airport Community members living near the SeaTac Airport identified several concerns related to air pollution from operations at the airport (Washington State Department of Health et al., February and December 1999). These reports can be accessed through [page 7] http://www.doh.wa.gov/EHSPHL/Epidemiology/NICE/HTML/nicepubs.htm. A March 2000 report prepared jointly by DOH, the Washington State Department of Ecology, the Puget Sound Clean Air Agency, Public Health—Seattle and King County and several other agencies and community representatives found that, in the SeaTac Airport area, there are statistically significantly higher rates of the following conditions:

- 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.

**The March 2000 report recommended that an air quality study be conducted around SeaTac Airport. This recommendation was, in part, forwarded because of environmental justice concerns.** The report states, “fundamental to the concept of environmental equity is the value that one group of people not incur environmental exposures from commercial activities from which another group benefits. Those who use SeaTac Airport often derive great financial and other benefits from worldwide travel. The extent to which these benefits come at the expense of environmental degradation affecting the people who live around the airport is unknown, since a comprehensive air quality study has not been performed at SeaTac Airport to determine the impacts attributable to airplane emissions and airport-related traffic” (Washington State Department of Health et al., 2000, p. 8). [pages 14, 15] (emphasis added)

**Significant Impact of Aviation**

Q400 turboprops are jets with the fan on the outside of the engine rather than inside and are powered by jet fuel. Jet fuel odors, residues, sooty fallout, unburned fuel droplets, aerosols, metals, toxics, criteria pollutants, are dropped from overhead aircraft and have a ground level impact below 3,000 feet.
altitude\(^1\). Tens of thousands of people live below this flight path, there is no buy-out buffer and no insulation or past mitigation for this population.

FAA asserts this project has less or no impact compared to flight paths to the north and south of the airport they have in the past acknowledged have an impact. In fact, there is a buffer, insulation and programs worth 400 million that have been previously applied to mitigate this impact on residents.

This document does not discuss any mitigation plan because FAA does not acknowledge either:

1) There is an impact
2) There is any greater impact than what has been experienced in the past

They do however acknowledge increased frequency which should require a new FAR 150 program. Port plans to dramatically increase operations at Sea-Tac will necessitate an even greater degree of need for more turns. Past practice of the Port to injure people and their property first and then mitigate after damage has occurred is unacceptable.

There are no current studies available that I am aware of considering the effects of cumulative noise and emission impacts on human health. The document FAA has issued assumes either that living below aircraft operations has no effect on the environment or that the effects are so minor that increased use of a certain flight path will create no additional impacts. This contradicts reason and logic. Aircraft, like cars, trucks and busses, use fuel and create emissions. Their engines create noise. These should be considered together.

Ultrafine particulate emissions from aviation sources that have a unique small size and ground level impact from overhead sources has become a large concern. The small size of the particle once inhaled allows penetration through the membrane barrier, can travel into the bloodstream reaching the heart and brain. A study similar to one done near LAX that found an unusually large amount and rate of ultrafine in the flight paths has been planned for the area around Sea-Tac. The FAA should wait on approving any new flight paths until the research is completed. Port representatives have spoken in favor of the legislation proposal and are also interested in the results.

The FAA is aware of the EJ community. I believe there is nothing more arbitrary and capricious than ordering all the damage and disruption to go over people FAA already knew were living in extreme poverty and suffering with health problems. EO 12898 was written for this very purpose, to keep powerful agencies from abusing the disproportionately disadvantaged.

**AIR QUALITY**

The document assumes no further impact but the basis for no impact has not been established. It is possible the FAA has failed to model emissions of the operation of this plane properly. The noise data used in the model is based on operation of the Q400 that is not typical of the low flying full power turn needed for flying through Burien airspace. Emission profiles might be based on this wrong data input. However, there is no current inventory for this plane at Sea-Tac because it was not predicted to be used

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\(^1\) EDMS see 1994 FAA/POS Appendix D Air Pollutant Methodology page D-15,
when the last thorough study of aviation emissions was done in 1996. There are similar aircraft types but no emission inventory that comes close to the numbers of Q400 operating today.

The future maximum numbers of turboprops predicted for peak hour air quality emission impact in 1996 for 2020 was 13.55. Currently the Port reported 52.83 per day for May 2016. Total operations are increasing by 10% per year. At this rate there would be 77.34 per hour by 2020 and the baseline of 25 year old data is nonexistent now, and used wrong predictions. We are currently experiencing four times the level predicted and it is five years early.

The FAA has no basis to determine there is little or no additional impact because they have not done air measurements or modeling of the local airshed to determine if it is at its limits for impacts. There are no close regional monitors that PSCAA operates and the closest state monitoring station is at Beacon Hill. So there are no historical data, current modeling or monitoring to assure anyone that the airshed can stand thousands additional polluters driving through the neighborhood. The analysis in 1996 is outdated and obsolete. The predictions for future compliance with all applicable air quality laws cannot be assured without a new evaluation. This is another reason the turn should be evaluated together with the SAMP which will include a new and revised inventory.

The certification of air quality compliance included a need for reevaluation in 2010 and a general conformity update. I am not aware this has occurred.

Air quality impacts around airports have been documented by independent experts in the past and I would like to provide a brief explanation of relevant topics an a link in case the reader would like to reference what might be major AQ problems around airports in need of further study:

“Lung illnesses more likely near Logan Airport”


NJIT “...people living, working, or simply within nine square miles of airports are exposed to air pollution that is 10 times higher than areas outside this zone.” [http://graduatedegrees.online.njit.edu/resources/msce/msce-infographics/deadly-airport-toxins/](http://graduatedegrees.online.njit.edu/resources/msce/msce-infographics/deadly-airport-toxins/)


Symposium on health effects of transportation related air pollution: [https://www.youtube.com/watch?v=2RuxN0Tvzyg&list=PLFD3C97820F0483A6&index=5](https://www.youtube.com/watch?v=2RuxN0Tvzyg&list=PLFD3C97820F0483A6&index=5)

Study of ultrafine particulate at LAX found levels equal to an entire freeway system concentrated in flight paths for 10 miles from the runway ends. Ultrafine particulate has been studied and much of this research is well known. Among other effects, particulate is known to cause and or contribute to heart and lung function effects. See: [https://news.usc.edu/22663/Air-Pollution-Found-to-Pose-Greater-Danger-to-Health-than-Earlier-Thought/](https://news.usc.edu/22663/Air-Pollution-Found-to-Pose-Greater-Danger-to-Health-than-Earlier-Thought/) Premature deaths have been associated with particulate pollution in major US cities. Sampling at properties in flight paths has found sooty debris including PAH. (1994 Sea-Tac Master Plan Update Environmental Impact Statement Appendix D – 93) The photo below
shows the results of the ultrafine particulate monitoring for LAX. See article: http://www.latimes.com/local/la-me-0529-lax-pollution-20140529-story.html

In conclusion I would like to summarize the comments I have made:

1) FAA has failed to provide a proper document
2) FAA has failed to coordinate with the Port as a cooperating agency
3) FAA has failed to provide any purpose and need for the action
4) FAA has failed to produce any reasonable alternatives to the proposed action
5) FAA has failed to communicate with and evaluate the ej community impacts
6) FAA has failed to provide reasonable assurance of no additional or future air quality impacts.

Sincerely,

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