Commercial Aviation Coordinating Commission

Meeting Summary

Location:	TEAMS Meeting
Date:	June 23, 2022
Time:	1:00 p.m. – 2:30 p.m.
Attendees:	David Fleckenstein, Tony Bean, Lois Bollenback, Jeffrey Brown, Lorin Carr, Rep. Tom Dent, Steve Edmiston, Tom Embleton, Arif Ghouse, Andrea Goodpasture, Warren Hendrickson, Robert Hodgman, Shane Jones, Sen. Karen Keiser, Larry Krauter, Stroud Kunkle, Jim Kuntz, Rep. Tina Orwall, Robert Rodriguez, Rudy Rudolph, Jason Thibedeau, Robin Toth, Bryce Yadon, and guests
Absent:	Mark Englizian, Senator Jim Honeyford, Kerri Woehler

Welcome

David Fleckenstein welcomed Commission members and the members of the audience, to the June meeting of the Commercial Aviation Coordinating Commission (CACC). He then reviewed the agenda before public comments were heard.

Public Comment Period

Jan Witt shared that last year over 11,000 scientists signed a report signifying their agreement that the world is facing a climate emergency. An emergency is a serious situation requiring an immediate response to an immediate threat. To address the threat, leading climate scientists have stated that greenhouse gas emissions must be cut by 50 percent by 2030. Similarly, the state of Washington has committed to greenhouse gas reductions amounting to 45 percent below 1990 levels by 2030 and 95 percent below 1990 levels by 2050. There seems to be a huge disconnect between the direction the CACC appears headed in and recommendations of leading climate scientists pertaining to actions that must be taken to avert a climate catastrophe. CACC meetings have included projections of growth in aviation. It is evident that the goal of the CACC is to promote and accommodate such unfettered growth in the industry. Particularly given such growth, it does not appear that technological advancements designed to reduce aviation related greenhouse gas emissions discussed during CACC meetings will offset the overall contribution of aviation to greenhouse gas emissions during the timeframes of 10, 20, or even 30 years. If this statement is incorrect, please provide statistics and mathematics that will explain why. If this is correct, then please include this information in any reports submitted to the legislature.

Presentation Considerations

David Fleckenstein reviewed the following.

- No decisions are being made today
- This is primarily an informational briefing from the Aviation System Plan consultant group, Kimley-Horn
- The Aviation System Plan work for WSDOT is independent of the CACC and the system plan is being used to leverage some of the information needed by the Commission to make decisions and recommendations
- This is the first look at potential greenfield sites using technical analysis

- Additional analysis on the most feasible sites such as airspace, infrastructure requirements, and cost estimates will follow
- Two virtual public meetings and an online open house will also be made available in August

Washington Aviation System Plan

Introductions: David Williams, Project Manager and Pam Keidel-Adams, Project Principal from Kimley-Horn; and Laura Holthus, Senior Aviation Planner, Jeff Stanley, Air Service/Forecasting, and Joe Huy, Senior Advisor from Ricondo.

Jeff Stanley started the presentation by sharing the 2019 and 2021 Federal Aviation Administration forecasts for the Puget Sound Region. The aggregate, unconstrained forecast of demand for the Puget Sound Region was selected from a range of forecasts that had been developed by the Puget Sound Regional Council, the FAA, and airport sponsors through their master planning efforts. The term, "unconstrained forecast" or "unconstrained demand" or other variations of that really means passenger volumes that we might expect assuming no limits on capacity of airport facilities, airspace, or available airline seats necessary to accommodate those passengers. He stated 'MAP' means 'million annual passengers' which is used throughout the presentation and is a measure of airline passengers arriving and departing Puget Sound airports. The project team used the forecast developed by the FAA in 2021 to reflect the shorter-term pandemic recovery period. Then used the forecast developed by the FAA in 2019, prior to the pandemic, to reflect the demand in the longer term. They show unconstrained passenger demand in 2050 to be approximately 107 MAP. In comparison, SeaTac and Paine Field in 2019 combined to accommodate just over 52 million annual passengers.

The blended, unconstrained demand forecast through 2050 shows an unconstrained passenger demand of 107 million annual passengers per year and a capacity assumption of 67 MAP to be accommodated over the planned passenger capacity of SeaTac and Paine Field combined. That leaves approximately 40 MAP to be accommodated. This information is taken from the latest master plan documentation and assumes several of those projects in the master plans necessary to achieve those passenger levels would be undertaken.

With the long-term aggregate forecast of passenger annual demand, the consultant has identified a forecast of specific passenger types that make up that aggregate. The details of these passenger types were critical to know to model how the airlines may serve that demand going forward. The unconstrained demand of 107 MAP is broken out in different ways; connecting passengers, origin and destination (O&D – to and from the Puget Sound region and do not connect), and geographic regions. One important observation is the majority of future demand will continue to be from O&D passengers and most of those passengers will also be on domestic itineraries. This is similar to what is seen in the region today. The consultant is analyzing and modeling the airline decision process in this work, how they can structure flying to and from the region to serve demand. It is important to note that airlines will not make decisions on a passenger-by-passenger basis so they will not be prioritizing O&D, connecting, international, or domestic passengers, instead they will be making decisions on a flight-by-flight basis considering profitability, competitive pressures, and operational efficiencies. A lot of the considerations the airlines will be considering hinge on the needs of the passengers on board those flights. So, they really needed to understand the passenger composition of flights to and from the region and not just the individual passengers themselves.

They have, through analysis, additional details attached to those passengers discussed in the broad groupings [*above*] including routings, airlines, and fares. They were able to identify which flights to and from the region (SeaTac and Paine Field) those passengers would potentially be choosing in an unconstrained situation. Then they subsequently categorized those flights to and from the region based on the characteristics of either the routing of those flights or the types of passengers on board they would expect to see. The categories the airlines would consider, when determining if a particular flight would be directed in part or in whole to another airport in the Puget Sound region, or if that flight be best suited to remain at SeaTac or Paine Field are:

- International – may require access to facilities to process international passengers, preference for "destination brand"
- High connecting component – depend on access to other flights
- High O&D component – strong ability to stand alone, supply connections to other flights
- Balanced O&D/connecting components – depend on access to other flights, more able to diversify than high connecting flights.

As they work through the airline decision process to model an airline industry route network in the region, the principles and assumptions shared here were maintained. They were mindful to preserve hub connectivity, maintaining the proper balance of flights and destinations at SeaTac to support connecting passenger demand. They assume connecting passengers in their analysis will only be supported at SeaTac and flights that are ultimately operated at airports other than SeaTac would not be structured to support connecting passengers. They have also considered that not all future connecting passenger demand will be accommodated in the region and that a portion of that connecting passenger demand could either be served by a connection over another industry hub or potentially on new non-stop service that may evolve over time between these various cities. International flights, especially those outside of North America, the long-haul flights, will likely be served from SeaTac for reasons previously described.

Back to the hub dynamics or hub connectivity concept. As we move on to the future network at SeaTac, Paine Field and other regional airports, we had to do so being mindful of the interdependency between flights at SeaTac and especially those operated by the airport's hub airlines Alaska and Delta as well as their airline partners. As they modeled the future route network in the area, they had to identify flights that could reasonably be served at other airports in the region. They modeled the future route network for each airline using an iterative process that looked at the impact of each flight movement to an alternative airport or airports. Evaluating the likely success of those flights and also the resulting effects on the flights that remain, for example, at SeaTac.

Approximately 27 million annual O&D passengers are estimated to potentially be served at other airports in the Puget Sound region. To help inform the site selection study, zip codes associated with those passengers were identified and the location of those passengers in the Puget Sound area were mapped. What is apparent from these maps is the greater Seattle area is where the majority of the demand is generated and that matches the population distribution. Another observation is that demand declines the further you get away from the Seattle/Snohomish areas.

Pam Keidel-Adams shared that they have identified the area where unaccommodated demand for air travel is generated in the region and their next step was to identify potential greenfield

airport sites. Their process, the technical analysis to identify those potential locations or representative areas started with looking at general geographic limits where they can search for sites. They looked for sites within approximately 100 miles from the Seattle population center as that is where the majority of the demand is being generated and they stayed west of the Cascade mountains. Some of the considerations in the selection of those representative areas; they looked at previous planning studies that have been conducted by the state and others, they included locations from counties throughout that region that are within that 100 mile distance, and they selected representative areas based on their team's knowledge of the region, understanding the cities, communities, the transportation network, and relying on the market analysis for where there is a higher probability for accommodating demand as well as a higher probability of developing a facility within the region. It is important to note that while the CACC was not directed to look at King County, the Washington Aviation System Plan was inclusive of all counties, and they did look in King County for potential sites as part of the technical analysis.

At the April CACC meeting, they presented the airport templates that were developed for different layouts to accommodate that future demand. Just prior to the April CACC meeting the FAA released an updated airport design advisory circular, mostly changing things about runway separation and some other minor elements so they made some minor modifications to these layouts. The one runway template is designed to meet both passenger and cargo aircraft length needs so this single runway is longer. With additional runways in the other layouts, they are shorter to accommodate primarily more of the passenger side. Each layout was evaluated for each greenfield site. The FAA was consulted on these layouts and has indicated general concurrence with the layouts developed but still indicated there is a need to justify development at the time if something is developed.

As the market analysis revealed, the unaccommodated demand for 2050 of 27 million annual passengers already exceeds the estimated MAP that layout 1 could accommodate in a 21 to 25 MAP. Therefore, that single runway could assist with contributing to serving those passenger and cargo needs but it would be beneficial for the site to accommodate a higher demand level.

Layout 1 – short term: 1 runway – 2,400 acres, annual operations of 195,000 to 230,000 operations (depending on aircraft types and sizes) and accommodates passenger traffic of 21 to 25 MAP. Layout 2 – long term: 2 runways – 3,100 acres, annual operations of 305,000 to 370,000, and accommodates passenger traffic of 33 to 41 MAP. Layout 3 – extended term: 3 runways – 4,670 acres, annual operations of 455,000 to 645,000, and accommodates passenger traffic of 50 to 71 MAP. These MAPs were identified and estimated on an average seating capacity of 146 seats operating at a 75 percent load factor. These are all airline terms but used generally to try and estimate how much traffic can be accommodated within each of these layouts.

The consultant recognized the CACC has done a lot of work on existing airport sites (Bellingham International, Skagit Regional, Arlington Municipal, Snohomish County – Paine Field, King County International, Renton Municipal, Bremerton National, Tacoma Narrows, Auburn Municipal, Norman Grier Field, Sanderson Field, Olympia Regional, and Chehalis-Centralia). An analysis was conducted of the existing airports and their ability to accommodate layouts 1, 2, and 3 and Kimley-Horn's results generally confirmed the CACC's prior evaluation regarding the inability of these airports to accept all the unaccommodated demand in the region. Also, important to note is that SeaTac and Joint Base Lewis-McChord were not included in the analysis.

Through the work they did, the consultant identified ten potential greenfield sites or representative areas. Not presented in any priority, starting geographically from North to South: Skagit County Northwest, Skagit County Southwest, Snohomish County Northwest, Snohomish County Southeast, King County Southeast, Pierce County East, Pierce County Central, Thurston County Central, Thurston County South, and Lewis County. These are generally within the borders of that 100 mile range from the Seattle population center.

As discussed, the focus was on the greenfield sites as the System Plan generally confirmed the CACC's analysis of the existing airports being unable to support any of the three airport templates (layouts). The future phases of the System Plan will examine the future roles of all the system's airports in the state. They will be looking at the ability of these airports to support passenger, air cargo, and general aviation forecasts as part of the CACC's responsibilities moving forward.

David Williams spoke on the evaluation of the greenfield sites. The evaluation process utilized a six-mile diameter for each potential representative site and located each facility template (1, 2, and 3-runway system) within the sites to conduct the analysis. They evaluated 16 preliminary elements among the five criterion categories. They do want to point out that this is initial work and analysis, and some of the factors will require additional analysis to understand them further. One of the factors specifically is airspace impacts. There is a lot of complexity associated with airspace in our region and airspace was not looked at in depth for all ten locations in the time they had. The consultants identified eight 'essential factors' to focus on in terms of identifying major impediments to implementation or factors which are harder to overcome to develop a new airport. For each site they identified positive features and major impediments, then compared/scored each factor within the criterion.

The criterion categories and the evaluation element within each includes:

- Operational capability and capacity potential
  - Minimum area
  - Airspace constraints
  - Terrain impact
  - Wind coverage
- Ground access
  - Highway access
  - Transit access
- Development costs
  - Order of magnitude costs
  - Property acquisition
- Environmental factors
  - Built environmental and social resources
  - Natural environmental resources (wetlands/floodplains)
  - Environmental justice
  - Incompatible land use
- Market factors
  - Population served
  - Air cargo access
  - Unaccommodated passenger demand
  - Impact to aerospace manufacturing

The eight evaluation elements reported on are: Terrain impact, Property acquisition, Environmental justice, Floodplain impact, Wetland impact, Incompatible land use, Population served, and Unaccommodated passenger demand. The ground access criterion, though important, was not included in the essential factors. Additional analysis will be conducted on ground access.

The description of the essential factors include:

- Terrain impact – percent of property +/- 200' of average site evaluation (data gathered from county Geographic Information System)
- Property acquisition – number of parcels to be acquired (county assessor offices)
- Environmental justice - percentage of population within 5-miles that are low-income, people of color, and limited English proficiency (U.S. Environmental Protection Agency's Environmental Justice Mapper)
- Floodplain impact – acres of floodplain within the facility template (Federal Emergency Management Agency maps)
- Wetland impact – acres of wetland within the facility template (U.S. Fish and Wildlife Service wetland maps)
- Incompatible land use – percentage of land that is residential, religious, or educational uses within estimated noise buffer two miles from runway end and one mile from runway edge (Washington statewide GIS)
- Population served – estimate of population within a 90-minute drive time (U.S. Census and GIS)
- Unaccommodated passenger demand – estimate of unaccommodated passenger demand within 90-minute drive time (WASP market analysis and GIS)

David Williams then shared the information gathered for all 10 potential representative greenfield sites to include information using each facility template layout and the essential factors mentioned earlier. He noted the consultant team noticed when looking at the unaccommodated passenger demand as they went through each site, the locations as you go further north and south of Seattle have more of a challenge in meeting that demand.

Before the meeting was opened for questions in the chat from the Commission members, David Fleckenstein responded to Ms. Witt's comments. The Commission does take seriously the potential impacts to the environment from greenhouse gases, emissions, and noise. Early in the Commission's process, the Commission made two recommendations. One was to advance the development and use of sustainable aviation fuel as a bridging strategy while more advanced aircraft capable of significant emissions and noise reductions are developed; and the second was to support WSDOT's role in advancing aviation's technology including the work of the electric aircraft working group. So, there are parallel efforts taking place, not only within our own state but across the country right now to try and develop ways to address the environmental concerns. One of the things we must remember is that whatever this Commission recommends, the development or construction of that airport or expansion is going to take place 15 to 20 years down the road. So, one of the things we are hopeful in achieving is these parallel efforts to address environmental concerns will come together at the same time so there are answers to the things Ms. Witt is suggesting. David thanked her for her comments.

Senator Keiser asked when the consultants made the determination on noise contours, schools, and religious organizations, etc., was there any scale (e.g. how many schools, residents, etc.) in that impact? She also was looking for more on-the-ground information for these locations.

David W. replied they were able to locate things such as schools and religious organizations and apply a scale using GIS mapping. That information is available to determine the percentage of impact. Regarding more information on each site location, they used general locations. They were looking at a larger area knowing that if an area is determined to be a potential location additional analysis needs to be conducted at that location. A site could shift slightly to accommodate those different items that were listed. They were trying to not pick a site, just understanding what the logistics of a location would be and what those impacts at the locations could be.

David F. added that there will be two virtual public meetings and an online open house discussing not only this meeting but also future work by the Commission as we narrow those sites down.

Representative Orwall commented that with the three different runway layouts it seems really significant to understand which greenfield sites could be viable. Her question is that she is still not understanding what our true capacity is and what the need is. What is the capacity of Paine Field in the future? Is that what you are going to factor in as you decide on the greenfield sites and how many runways are needed?

David W. said for this effort they looked at the capacity each airport and their sponsor has programmed out. They took information SeaTac has planned, programmed, and documented for their planned capacity and did the same for Paine Field. He also recognized that each jurisdiction and sponsor get to do the planning for their airport that is in their community and what their community needs. In the subsequent phases of the WASP work, they are looking to evaluate potential capacity increases, specifically at Paine Field. This is outside of what Paine Field may be doing with their planning efforts, but more of a look from the consultant's perspective on would there be a way to accommodate more capacity at that airport, and what those ramifications may be if they do accommodate that. Once that work is done, David will share it with WSDOT and the CACC.

Jeffrey asked if David W. looked at airspace capacity or constraints when evaluating any of these greenfield sites.

David W. stated that for the greenfield sites, looking at airspace was very cursory, it was on the ground, Part 77, it was not the airspace system. They need to get support from the FAA to understand those constraints with the complexity of the airspace.

David F. commented that looking at the airspace is one of the critical factors in the next phase of the work.

Robin asked, did you look at the transportation infrastructure around each of these sites yet, or is that later? When will we look at what the estimated cost would be?

David W. spoke about the 16 criteria, and of that they analyzed access to highway and transit. Today they shared the items with a larger potential impact (*in bold on the slide*) on the ability to

develop a site. They have generated and can provide the transportation information. As to the cost, they have not done anything on cost at this point with the exception of under the 'development cost', they have the assessed property cost based on the number of properties mentioned earlier. The actual cost will be a future work item.

David F. stated that as the consultants and WSDOT Aviation work to narrow down these options, they will be reaching out to other entities within WSDOT for all the different modes of transportation for any ongoing studies/projects/construction work that they know is going to occur in the future. They will also reach out to entities such as county public works departments to talk about challenges they would see on any particular site. There is a lot of work to do in that area as we drill down into it, and there will be a cost factor that comes with that analysis.

Jason commented that this question may be for next steps. These greenfield sites, with all of the criteria, and thinking back to the work done on the Aviation Baseline Study looking at existing airports, there were all sorts of criteria looked at with them as well as including things like added population benefit. So, these greenfield sites have all been evaluated independently. Will there be some cross referencing between these greenfield sites and the existing sites to establish some baseline criteria for them to stay on this list? If it is not living up to the potential benefits of some of our existing airports and airports in other places around the region, does it drop off the list? What point is it not worth pursuing compared to the expansion of an existing airport facility?

Rob replied that in previous work the CACC had identified Paine Field having a potential to grow to accommodate more passengers and air cargo capacity. The other airports really did not have that capability for one reason or another, so we have moved on past that with the exception of Paine Field and the greenfield sites. At this point it is culling the greenfield site list in order to focus the time and effort towards the sites that have a greater potential.

Jeffrey asked David W. if a new greenfield site is found, how does that new airport operate as a system with SeaTac and Paine Field? Are you going to influence the ability to draw passengers away from SeaTac to balance the use of the airports?

David W. said at this first stage they are not trying to determine what airports take from what location. They are trying to understand what that demand will be. They are looking to see if the analysis work shows we can get more capacity at Paine Field that helps accommodate that demand, then what is the demand for other locations. They are not looking to map that out at this time.

Jeffrey added that at some point you have to look at how all airports operate as a system.

Jeff Stanley agreed that airlines will schedule at the airports as market demand necessitates. There will be competitive forces and economic forces but ultimately the airlines will determine how the airports interact.

Senator Keiser asked if the assumptions in the presentation included the full buildout of SeaTac's Sustainable Airport Master Plan.

David W. assumes, as published by SeaTac, they are at full program capacity.

Senator Keiser then commented that SeaTac's current acreage, with three runways, is about 2,500 acres which is the amount shown for the one runway template. She suggested the templates could be adjusted to be a little less generous. If 40 MAPs can come from a SeaTac size airport, maybe 20 MAPs can be from a smaller runway layout.

David F. stated there are tradeoffs for using something like that. The more area around the airport that is available, the larger the buffer created. That buffer has a big impact on noise to the local population. That is one of the considerations which needs to be considered when trying to squeeze more into less space.

Senator Keiser acknowledged that she is well aware of that.

Next Steps

- WSDOT will work with the Kimley-Horn consultant group to reduce the list of greenfield sites to the most feasible sites
- As this list is reduced, more analysis and communication need to be done so that we can focus in on each of the areas
- Narrowed options will be provided to the Commission members for consideration by September 2022

Rob Hodgman commented that while much of what we have discussed today has focused on passenger demand, there is also a demand for 800,000 metric tons for freight that needs to be considered along with passenger demand in the greenfield site analysis.

David F addressed the comment in the chat by Ursula. The CACC's charge is to provide a single preferred recommendation that could include an existing airport or a greenfield site or a combination of both as part of the overall recommendations.

Warren commented that he will be leaving the Bremerton National Airport to assume the role of the airport manager for the Port of Olympia.

David thanked everyone and the meeting was adjourned.

Adjourned

Approximately 2:30 p.m.