



Commercial Aviation Coordinating Commission 2020 Report

DECEMBER 2020

EXECUTIVE SUMMARY

In response to growing concerns about Washington State's long-term ability to meet projected air transportation demand, Substitute Senate Bill 5370 directed WSDOT in July 2019 to administer and staff a new State Commercial Aviation Coordinating Commission ("Commission") to develop recommendations for meeting Washington's long-range commercial aviation facility needs, including a new primary commercial aviation facility.

After conducting two in-person meetings, two virtual meetings and three workbook sessions the Commission recommends four (4) near-term and two (2) long-term recommendations as part of the overall strategy to address air transportation demand.

The four near-term recommendations are:

1. Provide the Legislature with a preliminary list of six (6) potential sites to consider for a future major airport.
2. Propose a phased implementation to meet near-term demand at two to three existing airports.
3. Adopt legislation to adjust the timeline of the CACC from 2022 to 2024.
4. Authorize the continuation of the revolving airport loan program and the Community Aviation Revitalization Board.

The two long-term recommendations are:

1. Advance the development and use of Sustainable Aviation Fuels (SAF) as a bridging strategy while more advanced aircraft capable of significant emissions and noise reduction are developed.
2. Support WSDOT's role in advancing aviation technology, including continuing the work of the Electric Aircraft Working Group (EAWG).

The adoption of the package of the near-term and long-term recommendations will enable the Commission to make more informed recommendations for implementation.

The Commission intends to narrow the field of options to meet forecasted demand through a multi-pronged and resilient strategy as detailed below in Section V.

A critical next step is to engage the larger public to gain their input into how the state should address Washington's future air transportation demand.

I. Charge to the Commercial Aviation Coordinating Commission

In response to growing concerns about Washington State's long-term ability to meet projected air transportation demand, Substitute Senate Bill 5370 directed WSDOT in July 2019 to administer and staff a new State Commercial Aviation Coordinating Commission ("Commission") to develop recommendations for meeting Washington's long-range commercial aviation facility needs, including a new primary commercial aviation facility.

Current modeling projects that demand at Seattle Tacoma International Airport (Sea-Tac), Washington's primary commercial airport, will exceed capacity by 2027. For example, PSRC's recent *2050 Forecasts for Aviation Demand* states that, "regional demand for enplanements (passengers boarding for departure) is expected to grow from 24.0 million in 2018 to between 49.3 million and 55.6 million by 2050." In gross terms, this equates to a need to either construct another Sea-Tac equivalent or add enough capacity at existing airports to meet passenger demand. The Commission must also consider the growth of air cargo and general aviation over the same timeframe.

To address these demands statewide, the Commission was charged to recommend a short list of no more than six locations by January 1, 2021; identify the top two locations from that list by September 1, 2021; and identify a single preferred location for a new primary commercial aviation facility by January 1, 2022. The Commission is also charged with projecting a timeline for the development of an additional commercial

aviation facility that is completed and functional by 2040. Options for a new primary aviation facility in Washington may include expansion of an existing airport facility. Options may not include expansion of a facility within a county that has a population of more than two million people or adjacent to a military facility if it would impact operations.

The Commission, which began meeting in December 2019, is comprised of fifteen (15) voting members (one position remains unfilled) and twelve (12) non-voting members representing a range of interests that include the airline industry, freight and trucking, planning organizations, airports, legislators, the Washington State departments of commerce and transportation, members of the public and Joint Base Lewis McChord. Members of the Commission were able to meet twice in person before COVID-19 curtailed face-to-face meetings. Since that time, the Commission has met twice virtually and participated in three rounds of workbooks to provide feedback to staff between Commission meetings.

One of the Commission's first orders of business was to adopt guiding principles that commit to the values of public benefit, economic feasibility, environmental responsibility, and social equity. The Commission continues to refine its thinking about how to operationalize these principles during each phase of its decision making through ongoing discussion and consultation with speakers and subject matter experts on these topics.

The 2020 COVID-19 crisis has disrupted traditional patterns of travel and commerce and created widespread economic uncertainty. In the face of this uncertainty, the Commission has chosen to pursue a strategy that builds greater resilience into our aviation system. This strategy includes adding aviation capacity in the near-term by accommodating demand at two to three existing airports, while continuing to pursue the complex task of building a facility (new or existing) that can address the demand anticipated by year 2050 and beyond.

II. Historic and Current Context

Since the early 1990's, policy makers in Washington State have grappled with the challenge of how to best meet the public's needs for commercial passenger, air cargo and general aviation services. All aviation demand forecasts have indicated that the Puget Sound region, where most of Washington's residents and businesses are located, is nearing its capacity limits.

Over the last few decades, there have been many efforts to develop strategies that can accommodate growing demand. As the Puget Sound economy has flourished, the rate of aviation demand has increased significantly. Sea-Tac expansion has largely been able to keep pace

Guiding Principles

Very early in its process, the Commission adopted four fundamental planning principles to serve as the foundation of any recommendations it makes

1. **Public benefit:** defined as benefiting the greater good, or the broader public, over an individual entity or group.
2. **Economic feasibility:** defined as the degree to which the economic advantages of something to be made, done, or achieved are greater than the economic costs. Can we fund it?
3. **Environmental responsibility:** defined as the responsible interaction with the environment to avoid depletion or degradation of natural resources and allow for long-term environmental quality. The practice of environmental sustainability helps to ensure that the needs of today's population are met without jeopardizing the ability of future generations to meet their needs.
4. **Social equity:** defined as fair access to opportunity, livelihood and the full participation in the political and cultural life of a community.

Studies informing CACC Analysis

- *The Flight Plan Project*, Puget Sound Regional Council (PSRC) and Port of Seattle, January 1992
- *Long-Term Air Transportation Study*, WSDOT, July 2009
- *Washington Airport Investment Study*, WSDOT, August 2014
- *NextGEN Airspace Optimization Study*, PSRC, May 2016
- *Washington State Aviation System Plan*, WSDOT, July 2017
- *Washington State Air Cargo Movement Study*, Joint Transportation Committee, December 2018
- *Sustainable Airport Master Plan Seattle-Tacoma International Airport*, Port of Seattle, May 2018
- *Washington Aviation Economic Impact Study*, WSDOT, May 2020
- *Washington Electric Aircraft Feasibility Study*, WSDOT, November 2020
- *Aviation Baseline Study* PSRC, ongoing.

with the demand, but is ultimately constrained by its geography, small footprint (2,500 acres), ground transportation accessibility, airspace congestion, and concerns about community impacts.

To that end, the Washington State Legislature has authorized a number of initiatives to better understand and meet Washington's diverse future aviation needs, including establishing the Commercial Aviation Coordinating Commission. At the time the Commission was established, studies indicated the need for facilities that could accommodate demand equal to another Sea-Tac Airport. Those studies could not have anticipated the global COVID-19 pandemic.

The COVID-19 pandemic has had significant and immediate impacts on aviation demand in Washington, and its long-term impacts have yet to be determined:

- In March 2020, Sea-Tac reached 4,000 daily enplanements, or approximately 4 percent of 2019 levels for the same period. Since that time, by the end of November 2020, even with COVID-19 cases climbing, air passenger service has increased somewhat, but is still at one-third of 2019 levels.
- Air cargo operations initially slowed with the beginning of the pandemic, but now have risen to even higher levels for all cargo domestic operations. International air cargo, in terms of total tonnage, is roughly 75 percent of what it was the same time last year ending in September.
- Although business aviation as part of general aviation, generally mirrors the trend of commercial passenger service, private aircraft operations have seen increases in part due to a pilot's ability to fly alone.

Airlines now forecast that air passenger service will not return to 2019 levels before 2024. The area of greatest uncertainty relates to future business travel demand, especially as video conferencing and teleworking have become the norm for millions of people worldwide. Travel is a large expense for many businesses and the ability to reduce that cost while maintaining the same level of business operations will certainly become a consideration as safe travel returns.

The disruption of the COVID-19 pandemic extends to the pipeline of aviation jobs. Highly specialized jobs within the airlines such as pilots and aircraft maintenance personnel will require longer lead times to rebuild the workforce pipeline once demand returns. Pilot and aircraft maintenance training programs forced to reduce their operations or even close will further exacerbate the workforce supply issue.

COVID-19 may have reduced the need for additional airport capacity in Washington in the near term, but it is projected that demand will eventually return and exceed current and planned airport capacity. The hiatus in demand resulting from the global pandemic provides some breathing room to explore opportunities for how airport operations could be conducted differently in the future. Notably, re-training airport and airline workers who were furloughed as a result of the pandemic, and the loss of existing workforce to early-out retirements, will make recovery more difficult.

A 2020 BloombergNEF study finds that, as a byproduct of the pandemic, *“greenhouse gases generated as a result of the U.S. economy will drop 9.2 percent this year, the lowest level in 3 decades. The biggest drop in emissions came from transportation where emissions fell 14 percent stemming from significant reductions in air travel and automobile trips.”* Looking long term, emerging aircraft technology suggests promising opportunities for more environmentally friendly air travel. Still nascent hybrid-electric, all-electric or even hydrogen-based propulsion systems may have profound impacts on the environmental footprint of air transportation.

In the interim, the production and use of sustainable aviation fuels in Washington State can reduce harmful emissions for commercial aircraft in production today and be part of the overall effort to reduce greenhouse gas emissions.

III. Commission Findings and Conclusions

General Considerations

Given the extensive work required to site a new airport, the Commission has concluded that the most resilient strategy for addressing Washington’s projected demand for air transportation is to pursue both a large new airport while also expanding or improving existing airports. In this way, some of the projected near-term demand for air passenger

service, air cargo operations and general aviation can be accommodated among existing airports. A large airport with Sea-Tac like capacity located within western Washington (given population growth modeling) will still be required if the state is to meet projected air service and air cargo demand. Locating a single large airport, however, requires addressing challenges such as public sentiment, size, location, multimodal transportation accessibility, sponsor interest and more.

Interest and commitment from an airport sponsor (public agency operator or owner) are key requirements for both siting a new airport and expanding existing facilities. To date, Lewis County, and Ports of Shelton, and Bremerton have expressed interest in discussing potential capacity improvements while Pierce and Thurston Counties and the Port of Olympia have indicated they are not interested in adding air service and air cargo capacity within their areas. In addition to the existing sponsors previously mentioned, other potential sponsors and various stakeholder groups received informational briefings on the work of the CACC.

Industry support is another important requirement in identifying areas with potential for capacity improvements. Proximity to the major population centers and demand for services are key factors influencing airline investments. The further an airport location is from population centers, the less desirable it is to the passenger and freight airline industries, and therefore the less likely it will be as a viable commercial airport.

The Commission must consider future general aviation needs as well as air passenger service and air cargo operations. Even though the general aviation sector is forecast to experience slower growth than other sectors, a recent survey of 37 airports shows that 850 pilots were on waiting lists with planned future hangar capacity sufficient only for 326 aircraft. There is a growing need for hangar capacity in the general aviation sector.

Site Selection Factors

Available Land: A supplemental airport would require 1,000-2,000 acres, and a replacement, or more likely a Sea-Tac equivalent sized airport could require as much as 4,600 acres.

Existing Facilities: Runway length, available land on one or both ends of the runway, adequate space to add a runway.

Environmental Constraints: Known concerns or protections for habitat and species, wetlands, weather patterns and similar topics.

Proximity to Population

Centers: Travel time calculations that demonstrate good access for citizens.

Airport Sponsor: Governance; local government commitment for both development and operation, and liaison with the public, local governments, industry, and others.

Multimodal Transportation: Access to roadways, and public transportation.

Public involvement is also critical to future siting decisions. The pandemic has made it very difficult to obtain broad public input using traditional tools. Public comments are now received through the CACC website and conveyed to Commission members. But there has not been much opportunity for thoughtful community engagement, due to social distancing requirements. In early November, approval was granted to hire a communications consultant group to assist in obtaining more robust public feedback as the Commission's work progresses.

Site Selection Factors

The Commission adopted six key site selection factors they considered to be basic minimum requirements for any site that could offer additional aviation capacity. Drawing from WSDOT and PSRC data, the Commission developed a preliminary list of six existing airports with the potential to meet some of the projected demand for air passenger service, air cargo, or general aviation. The six airports are Arlington Municipal Airport, Bremerton National Airport, Snohomish County Airport/Paine Field, Sanderson Field (Shelton), Tacoma Narrows Airport (Gig Harbor), and Ed Carlson Memorial Field-South Lewis County Airport. Olympia Regional Airport and McChord Field also possess potential for additional capacity, but both lack sponsor support.

The pandemic has pushed the aviation capacity predicament into the future. It provides a bigger window of opportunity to take on the complex undertaking of creating capacity for a multi-faceted aviation system. But the window will only be open for so long. Currently, 2019 domestic air travel levels of demand are not expected to return until 2024 or 2025. Prior to the pandemic, the trend toward higher demand for air transportation was clear. Even with the 2027 implementation of near-term projects at Sea-Tac, service will degrade once enplanements reach 59 million annual passengers.

Projections for future business travel demand are perhaps the greatest unknown. Business travel reportedly makes up 29 percent of the total airline travel and is a large expense to businesses.

IV. Near and Long-Term Commission Recommendations

The Commission recommends four (4) near-term and two (2) long-term recommendations as part of the overall strategy to address air transportation demand.

The four near-term recommendations are:

1. **Provide the Legislature with a preliminary list of six (6) potential sites to consider. This list may be subject to change as further**

information is gathered. The list should be considered preliminary for two reasons. First, the pandemic slowed the work of the Commission and limited opportunities for public input. Second, the list only includes existing airports. To meet all of the projected demand, it may be necessary to develop a new airport. It is highly likely that the preliminary list will change as more information is received and the potential for a new airport site is fully vetted. Finally, should a potential or existing airport sponsor change their position of support, the Commission will remain flexible in considering adding or removing airport options.

2. **Propose a phased implementation to meet near-term demand at two to three existing airports.** As expressed earlier, the Commission believes that near-term demand could be met by expanding capacity at two or more airports while the work to locate a new airport continues. This is viewed as the most flexible and prudent path toward meeting future aviation needs in light of the uncertainties associated with post-pandemic air transportation demand and the potential for advanced aviation technology in the years ahead.
3. **Adopt legislation to adjust the timeline of the CACC from 2022 to 2024.** This recommendation lengthens the Commission's timeline. It also makes allowances for the chair of the CACC to recess the Commission while leveraging the Aviation System Plan Update to gather additional information and conduct technical analysis for locating a new airport that will support the Commission's decision making. It would also allow the CACC to explore adding air cargo capacity at Boeing Field (currently, King County is excluded from any CACC recommendations).
4. **Authorize the continuation of the revolving airport loan program and the Community Aviation Revitalization Board (CARB).** This existing, well-received program, a means for airports to be more self-sufficient through revenue generating projects

and adding general aviation capacity, requires legislative authorization to continue its purpose beyond the current biennium. Additional funding should also be considered given the high demand for additional loans. Funding from the CARB program will help airports address general aviation demand.

The two long-term recommendations are:

5. **Advance the development and use of Sustainable Aviation Fuels (SAF) as a bridging strategy while more advanced aircraft capable of significant emissions and noise reduction are developed.** Commercial aircraft in production today are likely to be in use for the next 20-30 years. In concert with the discussion to develop a Clean Fuel Standard, the state should consider ways to increase the production or use of SAF through a Washington State supplier. This action would help mitigate air transportation impacts on society and the environment and is consistent with the Port of Seattle goal to power each flight fueled at Seattle Tacoma International Airport (Sea-Tac) with at least a 10 percent blend of sustainable aviation fuel by 2028.
6. **Support WSDOT's role in advancing aviation technology, including continuing the work of the Electric Aircraft Working Group (EAWG).** The Electric Aircraft Feasibility Study recently completed by WSDOT concludes that electric aircraft have the potential to play a significant, affordable and environmentally friendly role in Washington's future aviation system. Current battery technology is a limiting factor for all-electric aircraft, and hybrid-electric or hydrogen fuel systems are likely required for large commercial use. Continuing the work to support the adoption of practical aerospace technology will help Washington address environmental impacts while remaining economically competitive.

Airport Master Plan Elements*

- Airfield Inventory
- Forecast of Aviation Activity
- Facility Requirements
- Alternatives Analysis
- Airport Layout Plan
- Airport Capital Improvement Plan

* Includes environmental considerations for noise impacts to communities, rare/endangered species, wildlife hazards, historic resources, natural resources, greenhouse gases, clean air quality, recycling, and sustainability.

V. The Way Ahead

The Commission intends to narrow the field of options to meet forecasted demand through a multi-pronged and resilient strategy. The Commission will apply weighted evaluation criteria to the current list of six (6) potential airports to identify existing airports that could be expanded to meet near-term demand. If the recommendations that come out of the screening are acceptable to the Commission members and legislators, WSDOT will work with the airport sponsor and the FAA to initiate an update to the airport's master plan.

The Commission also intends to utilize the upcoming Aviation System Plan update (scheduled to begin in 2022) to provide the hard data necessary to develop options for a new airport. This data will enable the Commission to make informed recommendations based on solid technical analysis. Demographic shifts will also be studied and updated in the system plan to help solidify the Commission's recommendations.

A critical component next step is to engage the larger public to gain their input as to how the state should address Washington's future air transportation demand. The Commission has heard many concerns about noise and the impacts on the environment and society. Future work will provide an opportunity for the state to call for and consider measures to reduce both noise and harmful emissions from aircraft. Some of those measures may include the potential use of Community Benefits Agreements at select airports. However, it will require an informed public and robust dialogue to develop solutions that can meet the best interests of our community over the short and long term.

A communications consultant selected in December 2020 will help to greatly expand community outreach with informational materials on the Commission's work, surveys, open houses, and more.

The adoption of near-term and long-term recommendations will enable the Commission to conduct a more informed analysis of the options before them. The Commission is likely to meet again in late winter or early spring while staff work continues. Periodic webinars are planned in the interim to address information requests from Commission members. In addition, the Commission will encourage members of the public to discuss and offer their input into how Washington should meet its future aviation needs.

APPENDIX A

CACC Members and Positions

Voting

David Fleckenstein, Chair	Representative from the Division of Aeronautics (Aviation), Dept. of Transportation
Jeffrey Brown.....	Representative of commercial service airports and ports – County with a population of two million or more
Stroud Kunkle.....	Representative of commercial service airports and ports – Port in eastern WA with a runway of at least 13,500’ in length
Larry Krauter	Representative of commercial service airports and ports – Commercial service airport in eastern WA located in a county with a population of 400,000 or more
Jim Kuntz	Representative of commercial service airports and ports – Association of ports
Shane Jones	Representative from the airline industry and private sector
(No appointee).....	Representative from the airline industry and private sector
Andrea Goodpasture	Representative from the airline industry and private sector
Mark Englizian	Citizen representative from eastern Washington
Steve Edmiston.....	Citizen representative from western Washington
Spencer Hansen.....	Representative from the freight forwarding industry
Joseph Braham.....	Representative from the trucking industry
Arif Ghouse	Representative from a community organization which understands the impacts of a large commercial aviation facility on a community
Bryce Yadon.....	Representative from a statewide environmental organization
Robin Toth	Representative from the Department of Commerce

Non-Voting

Warren Hendrickson, Vice-Chair	Representative from the WA state Aviation Alliance (WSAA)
Robert Rodriguez.....	Representative from the Department of Defense
Senator Jim Honeyford	Senate member from the two largest caucuses in the Senate, appointed by the President of the Senate
Senator Karen Keiser.....	Senate member from the two largest caucuses in the Senate, appointed by the President of the Senate
Representative Tom Dent.....	House of Representatives member from the two largest caucuses, appointed by the Speaker of the House
Representative Tina Orwall	House of Representatives member from the two largest caucuses, appointed by the Speaker of the House
Robert Hodgman	Representative from the Division of Aeronautics of the Dept. of Transportation
Sabrina Minshall.....	Representative from an eastern WA metropolitan planning organization
Josh Brown.....	Representative from a western WA metropolitan planning organization
Tony Bean.....	Representative from an eastern WA regional airport
Rudy Rudolph	Representative from a western WA regional airport
Kerri Woehler	WSDOT Multi-Modal Planning



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