Limited Update to the Burien Categorical Exclusion on Remand From

City of Burien v. Federal Aviation Administration, 9th Circuit, No. 18-71705 (November 27, 2019)

For

Letter of Agreement Update to Automate a 250 Degree Westerly Turn for Southbound Turboprops When Seattle – Tacoma International Airport is Operating in North-Flow

Between the Hours of 6am and 10 pm

January 2020

Prepared by:
United States Department of Transportation
Federal Aviation Administration

Renton, WA

Concurrence by:

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Description of Action:

The Seattle-Tacoma International Airport's (SEA) Air Traffic Control Tower (ATCT) and the Seattle Terminal Radar Approach Control (S46) proposed to update their Letter of Agreement (LOA) to include a paragraph that would allow SEA ATCT to issue a westerly turn departure heading for approximately 90 percent of southbound turboprops taking off in north-flow conditions, in order to enhance safety and efficiency at SEA. Historically, this turn was issued by the departure controller at S46, which caused a slight delay in these aircraft turning west then south to proceed on their filed route. Allowing SEA ATCT to issue the turn is referred to as an "automatic" or "automated" turn because the aircraft is issued the turn prior to or shortly after takeoff by SEA ATCT, therefore leaving the airport environment already in a turn.

After initially instituting the automatic turn in 2016, the FAA voluntarily deleted the single provision from the LOA in March, after the City of Burien filed a petition for review. The FAA then conducted a thorough environmental review, including a comprehensive noise analysis. Although the process would not cause turboprops to fly in entirely new areas, the FAA recognized that the proposed action had some potential to increase noise in particular areas, as it would likely narrow the spread of westerly-turned turboprops flightpaths. The FAA used its established noise measurement methodology and significance thresholds for assessing noise effects of proposed actions. The FAA's noise screening revealed minor expected increases in aircraft noise in certain areas for turboprops only, but well below the FAA's established thresholds for impacts that require any additional environmental review. The noise analysis of all arrivals and departures show no change at all.

In June 2017, the FAA released its draft screening results and its analysis of several other categories of potential environmental impacts available for public comment. After thoroughly reviewing and responding to public comments received, the FAA released its final CATEX documentation to the public on April 16, 2018. The resulting Preferred Alternative modified the existing air traffic procedure noted in the LOA to allow SEA ATCT to automatically turn select

turboprops to a 250 heading within one nautical mile of the runway end, in lieu of S46 issuing the turn on initial contact or shortly thereafter. This automatic westerly turn is suspended between the hours of 10 pm and 6am, when operationally feasible. This change was made in response to comments submitted from the City of Burien and other comments received during the public comment period for the original draft.

After the FAA published its CATEX documentation in April 2018, the City of Burien dismissed its 2017 petition and filed a new petition. The petition was fully briefed by the parties and oral arguments were heard before a panel of the Ninth Circuit on October 23, 2019. On November 27, 2019, the court denied the petition for review in part, granted the petition for review in part and remanded the case to the FAA with instructions.

The remand in this matter is limited to the consideration of the potential cumulative impact of all relevant reasonably foreseeable future actions – including those which may exist in the Sustainable Airport Master Plan (SAMP) documents – as part of the FAA's extraordinary circumstances analysis pursuant to 40 C.F.R 1508.7.

This document, entitled "Limited Update to the Burien Categorical Exclusion on Remand From *City of Burien v. Federal Aviation Administration,* 9th Circuit, No. 18-71705 (November 27, 2019) For Letter of Agreement Update to Automate a 250 Degree Westerly Turn for Southbound Turboprops When Seattle – Tacoma International Airport is Operating in North-Flow" (the "Limited Update") is limited to addressing the court's remand by updating the cumulative impact analysis from the April 2018 CATEX.

SAMP NTP Status at the Time FAA Issued the CATEX in April 2018

At the time the FAA issued the final CATEX in April 2018, the Port of Seattle's SAMP was still within its six-year, planning process. The FAA's involvement and role in the Port's master planning process was consistent with FAA Advisory Circular 150/5070-6 *Airport Master Plans.* Specifically, the FAA had funded a portion of the SAMP using Airport Improvement Program funds and approved the

planning forecast in 2015. By April 2018, the FAA had not yet received a final proposal for the SAMP or an Airport Layout Plan for agency review and approval.

NOTE: add 2 wk. sequence for. Pg 4, 1st ¶

SAMP NTP Development Post-April 2018

In December 2018, eight months after the FAA issued its CATEX, the FAA officially accepted the SAMP. The Port of Seattle ultimately presented to the FAA a number of projects for development, referred to as "Near-Term Projects (NTP)." The FAA and the Port determined these projects were needed to meet forecasted demand, were ripe for environmental review, and could be implemented approximately in the year 2027. Had the FAA had any information regarding the NTP development in April 2018, that timeline would have put these projects outside the timeframe for what is considered to be reasonably foreseeable.

* POS' action to spend $10m- when appd?

* FOIA this timeline

The FAA generally considers a future project reasonably foreseeable if the start date for the future project is within three to five years of the implementation date of the proposed action. In this case, only those future projects that had a start date between April 2021 and April 2023 would have been considered reasonably foreseeable. At the time of the final CATEX, the FAA viewed the SAMP NTPs as too remote and speculative to warrant study. Indeed, the FAA still had not received or approved the final SAMP NTP proposal.

SAMP NTP Status Today

The FAA conditionally approved Sea-Tac's Airport Layout Plan in December 2018, eight months after the CATEX for the air traffic procedure in the LOA was approved. As discussed below, an environmental review of the SAMP NTP is currently underway.

CATEX Analysis

As stated in the CATEX, the Study Area for the Preferred Alternative was used to define the geographic extent of the cumulative impacts analysis. The Study Area for this analysis remains the same as the one used in the CATEX, shown in Figure 18 on page 27 and below of the Environmental Review Document.

The Preferred Alternative is limited to one small air traffic procedure change in assigning a traffic heading and does not involve any ground disturbance or construction. This air traffic change does not add capacity to SeaTac, but instead was instituted to reduce delay for existing and forecasted growth. Capacity is the hourly throughput (arrivals and departures) that an airport is able to sustain during periods of high demand. Capacity is determined from the number and configuration of available runways at an airport, and the related air traffic procedures that are used to operate safely to and from those runways.

Air quality, noise, and noise and compatible land use are the relevant resource categories that may be impacted by the Preferred Alternative. However, the CATEX revealed no significant impacts from those impact categories. The FAA considered these resource categories when it previously analyzed past and present projects in the CATEX. Similarly, the FAA is considering these resource categories for its analysis of the reasonably foreseeable future actions listed below.

kept out 6 gates
diminished GHG emission
SR 509
EJ

Past, Present, and Reasonably Foreseeable Projects - Updated.

The list below includes the original cumulative impacts projects list from the CATEX. It has been supplemented with recently completed projects and new reasonably foreseeable future actions[1] .

	Project Name	Project Description	Location	Status (as of April 2018)	Status (as of January 2020)
1	Resurfacing of 106th, 107th and 108th streets.	Post overlay, new striping will create a bike lane where none exists.	White Center/ Highline	Pending a bike lane analysis and car count and outreach with the community.	Completed 2019 (per 2018 (STIP[2]) funding year– not in 2020 STIP)
2	Mini Roundabout Construction	Design and construction of a mini roundabout in Highline at the intersection of SW 102nd & 8th Ave SW. The mini roundabout may require right of way and will include relocation of a large electric utility pole at the SW corner.	Highline (Burien mailing address)	Started in 2017, intended to be completed in 2018.	Construction started in summer 2019.
3	Construction of a stretch of missing sidewalk, curb and gutter along SW Roxbury Street	Project will replace uneven, cracked asphalt pathway with an 8 foot sidewalk, curb and gutter.	White Center	Intended start date in 2018	Completed 2018 (per 2018 STIP funding year– not in 2020 STIP)

[1] Ordinarily, the FAA would not evaluate in detail some of the projects listed in the chart, as they plainly have no environmental effects that in cumulative with the preferred alternative could be significant. However, FAA has included this discussion out of an abundance of caution with respect to the remand from a petition for review in the Ninth Circuit.

[2] State Transportation Improvement Plan

	Project Name	Project Description	Location	Status (as of April 2018)	Status (as of January 2020)
4	The Sustain the Hyde Shuttles Project	Continues a coordinated, community-based paratransit operation in King County. The project provides affordable, accessible and appropriate transportation for seniors 55 years of age and older and people with disabilities of all ages.	Multiple locations, including Normandy Park, Burien, and all of Seattle except the downtown core.	There are two phases of the project, one to be completed in 2017 and the other to be started in 2017 and completed by 2019.	There are no new entries for the Hyde Shuttle Project in the 2020 STIP, so federal funding may have been discontinued. Shuttles still available per their website[3].
5	SR 518/Des Moines Memorial Drive Interchange Improvements[4]	Project will add a two-lane off-ramp from eastbound SR 518 to Des Moines Memorial Drive to support the planned redevelopment of the 135 acre Northeast Redevelopment Area that is being undertaken through incremental redevelopment of the area to land uses that are compatible with airport operations.	Burien	Project construction started in the summer of 2017, and is scheduled to be complete in the fall of 2018.	Completed January 2019.
6	Northeast Redevelopment Area (NERA)[5]	This redevelopment plan was developed because many of the existing land uses in the NERA became	Burien	Ongoing	Development has started. -NERA 3/Seattle

[3] https://soundgenerations.org/get-help/transportation/hyde-shuttle/
[4] http://www.wsdot.wa.gov/Projects/SR518/desmoinesmemorialdrimprove/
[5] http://www.burienwa.gov/index.aspx?NID=320

	Project Name	Project Description	Location	Status (as of April 2018)	Status (as of January 2020)
		incompatible with airport operations, and a new plan was needed for the area. The redevelopment area is bordered by South 138th Street to the north, 8th Avenue South to the west, and Des Moines Memorial Drive South to the east and south. The plan will aide NERA property owners in transitioning from the current mixture of vacant, residential, institutional, and small-scale commercial uses to land uses that are compatible with airport operations.			Gateway Center No. 1, warehouse – construction complete. -NERA 3/Seattle Gateway Center No. 2, office/warehouse building at 1021 S 146th St is under construction
7	SR 509: Southbound S. 160th St. Vicinity to S. 112th St. Vicinity – Paving and ADA Compliance[6]	In the spring of 2015, contractor crews working for WSDOT repaved southbound SR 509 from South 112th Street to Southwest 160th Street in Burien. This four-mile stretch of highway, popularly known as the "Burien Freeway," was failing.	Burien	Completed May 2015	Completed

[6] http://www.wsdot.wa.gov/Projects/SR509/160thTo112thPaving/

	Project Name	Project Description	Location	Status (as of April 2018)	Status (as of January 2020)
		Large cracks formed in the pavement and many areas were uneven as the result of potholes and previous maintenance repairs. Contractors also upgraded two pedestrian ramps at Southwest 128th Street to provide a safer transition for users.			
8	SR 509: S. Normandy Road Vicinity to 174th Intersection – Paving and ADA Compliance[7]	In summer 2015, contractor crews working for WSDOT repaved SR 509, also known as 1st Avenue South. The old pavement had deep cracks, chips, wheel ruts, and potholes. Once the new pavement was in place, crews replaced traffic detection equipment and placed new high visibility striping. In addition to new pavement, contractor crews upgraded 13 pedestrian ramps to meet current ADA standards.	Burien	Completed October 2015	Completed

[7] http://www.wsdot.wa.gov/Projects/SR509/NormandyRd174thPaving/

	Project Name	Project Description	Location	Status (as of April 2018)	Status (as of January 2020)
9	1st Ave S Overlay/ Rehabilitation	Construct a full width grind and overlay of the street from S 14th St to S 128th St, including 6 foot shoulders. Full depth pavement repair as necessary. ADA ramp and pedestrian push button upgrades at S 136th St and 128th St intersections. Channelization and traffic signal detection loops will be replaced in kind.	Burien	NA	Reasonably Foreseeable New Highway Project. Construction scheduled for 2020
10	2020 Airfield Pavement Replacement Project	This project is part of Sea-Tac's ongoing Pavement Management and Maintenance Program required by the FAA. This will replace distressed and aging pavements. This group of projects include six work areas on the airport CATEX completed	SeaTac	NA	Completion December 2020
11	International Arrival Facility	To be connected to Concourse A and would house multiple Department of Homeland Security facilities and facilitate movement of international passengers.	SeaTac	NA	Intended Completion Feb 2021

	Project Name	Project Description	Location	Status (as of April 2018)	Status (as of January 2020)
		Not intended to expand airport capacity, create new gates, change existing aircraft fleet mix or provide new roadway access to airport. CATEX completed			
12	Taxiway Reconfiguration	Reconfigured Taxiway A and Taxiway B Centerlines. Relocated Taxiway L. Reconfigure Taxiway Q. CATEX completed	SeaTac	NA	Completed
13	North Satellite Expansion	Renovate and expand existing North Satellite Terminal to include 8 new gates. CATEX completed	SeaTac	NA	Intended Completion Fall 2021
14	Sustainable Airport Master Plan (SAMP) Near-Term Projects (SAMP NTP)	Near-term project improvements for Sea-Tac resulting from the SAMP process and the connected scoping period under the National Environmental Policy Act. These projects are facilities and roadway improvements that are needed to serve expected growth in passengers, aircraft	SeaTac	NA	Undergoing environmental review – expected construction date 2027

	Project Name	Project Description	Location	Status (as of April 2018)	Status (as of January 2020)
		operations, and cargo activity through 2027.			

NA = Not Applicable

Reasonably Foreseeable Cumulative Effects of Highway Projects

Actions 2 and 9 address highway maintenance and/or safety deficiencies. Actions 1, 3, 7, and 8 are completed projects that addressed highway maintenance and deficiencies in compliance with the Americans with Disabilities Act. Action 4 provides ongoing compliance with the Americans with Disabilities Act. None of the projects did or will increase highway capacity, so any environmental impacts resulting from these projects will only be temporary during the construction period.

Action 5 is a completed highway project that increased access to NERA, which is Action 6. The resources that may be impacted by the Preferred Alternative in conjunction with Actions 5 and 6 are air quality, and noise and noise compatible land use. The analysis of cumulative impacts regarding these projects is below.

Reasonably Foreseeable Cumulative Effects of Airport Projects

In reviewing all reasonably foreseeable future actions[8] now, the FAA has determined projects 10-12 are not capacity enhancing. The projects do not increase the operational capacity of the airport. Project 13 includes the addition of eight new gates in the North Satellite Terminal. While these gates could allow airlines to schedule more flights at SEA-TAC, the operational capacity of the airport will not increase. The airport's capacity is dictated by the sustainable hourly throughput of the runways.

[8] Ordinarily, the FAA would not evaluate in detail some of the projects listed in the chart, as they plainly have no environmental effects that in cumulative with the preferred alternative could be significant. However, FAA has included this discussion out of an abundance of caution with respect to the remand from a petition for review in the Ninth Circuit.

Project 14, SAMP NTP

The SAMP NTP EA includes approximately thirty projects at SeaTac that are needed to enhance efficiency, accommodate existing and forecasted growth in activity, and alleviate congestion on the airfield, in the terminal, and on the roadway system. Key components of the SAMP NTP EA Proposed Action include construction of a second terminal, a centralized maintenance campus, off-airport cargo handling facilities, realignment of airport roadways, and expansion of the fueling facilities. The purpose of these projects is not to enhance the number of arrivals and departures at SEA-TAC. Like Project 13, the additional gates could allow airlines to schedule more flights but the operational capacity of the airport will not increase. The airport's capacity continues to be dictated by the sustainable hourly throughput of the runways. Airport capacity remains higher than the forecasted airline schedules to the existing gates. Currently, aircraft must wait on the ground until gates are open for passengers to load or unload. This adds to congestion at the airport. The SAMP NTP projects will reduce delays that occur because of gate constraints. The SAMP projects are also not anticipated to have a growth-inducing effect, as they are simply designed to accommodate the growth in operations that is forecast in the unconstrained scenario of the Forecast Update

The SAMP NTP is undergoing an environmental process pursuant to the National Environmental Policy Act (NEPA). This analysis is in a relatively early stage. A draft environmental assessment (EA) is expected to be released in late 2020. That EA will fully analyze the impacts of the SAMP NTP projects. Some of those potential impacts will include construction impacts and ground-disturbing impacts; none of which are relevant to the Preferred Alternative analyzed in the CATEX.

The FAA will review the SAMP NTP Environmental Assessment and determine whether a Finding of No Significant Impact (FONSI) can be issued or if it is necessary to prepare an Environmental Impact Statement (EIS). The City of Burien cannot be impacted by the SAMP NTP projects unless the FAA approves the SAMP NTP Environmental Assessment. Any environmental approval, whether an EA FONSI or an EIS Record of Decision, will also be subject to judicial review.

In terms of noise and noise compatible land use and air quality impacts, the CATEX showed that there would be no significant impact from the implementation of the Preferred Alternative. Based on the FAA's understanding at this point, the SAMP NTP projects will serve to accommodate the current and forecasted growth that would occur at SeaTac with or without SAMP NTP. Turboprop operations are forecast to gradually decline at SEA-TAC as airlines use more jet aircraft. The new gates that are being considered in SAMP NTP are expected to be used by jet aircraft, which would not make use of the turboprop air traffic procedure. The Preferred Alternative, when combined with the projects of the SAMP NTP, would not trigger a significant increase in noise and noise compatible land use or air impacts.

Anticipated Growth in Operations

Even though the SAMP NTP projects are not expected to induce growth in the number of operations at SEA-TAC, growth is anticipated up to gate availability constraints, regardless of whether the SAMP NTP projects are ever actually undertaken.

The SAMP NTP projects are relying upon the Seattle-Tacoma International Airport's Aviation Activity Forecast Update, August 2019 (Forecast Update). The FAA recently approved the Forecast Update in January 2020. The Forecast Update shows that there were 433,778 "Historical 2018" total operations at SeaTac as compared to 412,170 total operations in 2016, as reported in the CATEX. This is a growth in total operations of 4.6% over two years.

Based on the data compiled during the development of the CATEX, 3,540 turboprops headed southbound during north flow. This represented approximately two percent of all departures in 2016.[9] The FAA gathered new Performance Data Analysis and Reporting System (PDARS) data as part of this Limited Update. The data gathered specifically counted all the turboprops that flew the 250-degree heading for all of 2018. This new data shows a total of 1,860 turboprops departed southbound in north flow in 2018. This decline in

[9] See the 2018 CATEX, page 8

southbound turboprop departures from 2016 to 2018 is a 47.5% decrease. Accordingly, there is a trend suggesting a reduced number of turboprops in the future.

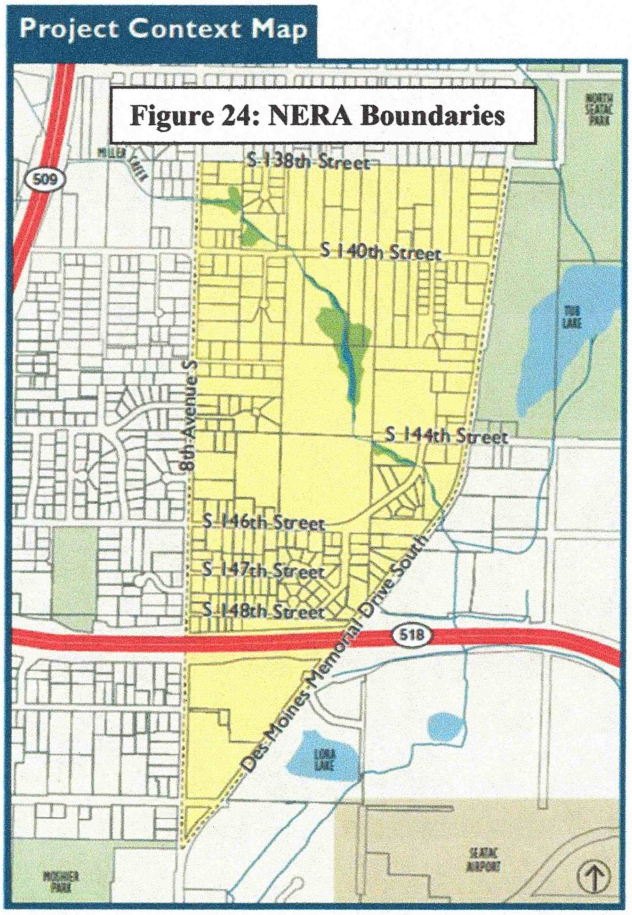
Regarding the projection of future foreseeable conditions, the Forecast Update shows 433,778 total operations for 2018 Historical Operations and 518,360 total operations for 2027 Unconstrained Operations[10]. This is a 19.5% increase in forecasted growth for total operations at Sea-Tac. The Forecast Update provided a Constrained Operations estimate of 508,000. This would equate to a 17.11% increase in total operations. The Forecast Update also provided numbers for turboprop operations. It shows 63,854 turboprop operations for 2018 Historical operations, and 51,870 turboprop operations for 2027 Unconstrained Operations. This is an 18.77% decrease in turboprop operations. While this is a smaller decrease in turboprop operations than the PDARS comparison above, both depict a continued ongoing trend of reduced number of turboprops.

Finally, the Forecast Update also shows that Alaska Airlines will remove Q400 aircraft, their only turboprop aircraft, from their fleet. The phase-out schedule in the Forecast Update is shown in the table below:

Year	Number of Turboprops in Fleet
2018	39
2020	23
2035	0

[10] Unconstrained forecasts do not include specific assumptions about physical, regulatory, environmental, or other impediments to aviation activity growth. (page 11 of SAMP_NTP_EnvReview_2018_FORECAST_UPDATE_FINAL_20190830). An unconstrained forecast reflects the expected passenger and operations demand at an airport due to economic growth and travel patterns, but with no assumed constraints on an airport's ability to support the operations. This is useful to understand infrastructure needs at an airport. However, airports with significant congestion and constraints can have firm constraints that preclude further operations growth. Firm constraints can include lack of gate availability to schedule new flights or demand that systemically exceeds runway capacity.

The FAA thus expects that environmental impacts from southbound turboprops during north flow on the automatic 250-degree heading will decline over time as the number of turboprop operations decline.



Cumulative Impact Analysis

Air Quality

No projects or proposals have been identified that, when combined with the Preferred Alternative, would violate any aspect of the current State Implementation Plan or threaten the attainment status of the region. In addition, no projects or proposals have been identified that, when combined with the Preferred Alternative, would have substantial GHG emissions, or would lead to a violation of any Federal, state, or local air regulation.

Alaska Airline's plan to replace Q400 turboprops with regional jets could lead to a slight increase in emissions. For example, a post on Aviation.com compared air emissions of a Q400 to an Embraer E-Jet E2-175. They used 82 to 86 passengers on a 1,100 km (600 NM) trip. The results showed the Q400 emissions at 2.79 L/100 km/seat versus the E2-175 with emissions at 3.44 L/100 km/seat.

While Alaska Airline's proposed fleet change could potentially increase emissions, the modification of the existing air traffic procedure would not contribute to this emissions increase.

Noise and Noise-Compatible Land Use

Ground transportation changes in the NERA area might have resulted in minor localized noise exposure changes in the immediate NERA area as a result of the SR

518/Des Moines Memorial Drive Interchange Improvements due to changes in traffic circulation patterns and improved access to the area. Land use changes in the area resulting from the NERA Plan are designed to make land use consistent with airport operations, which reduces sensitive noise areas that may be exposed to noise from airport operations.

Per the All Arrivals and Departures Noise exposure levels, the DNL in the NERA area range from the 60 – 65 dBA to over 70dBA. However, the noise results from the All Arrivals and Departures model show that there are no changes to the noise exposure level. Since the NERA area has been designed to be compatible with airport noise, and because there is no change in noise levels in the vicinity of NERA, this project in combination with the NERA development will not lead to a cumulative noise impact.

There are no projects identified above, that when combined with the Preferred Alternative, would have significant adverse noise impacts. In addition, with the ongoing trend of reduced number of turboprops, the area where there was a concentration of turboprops should have a noise reduction since jets cannot use the 250 heading.