SAMP important dates

Draft EIS release: 5/22/2026 (60 day comment period)

6.9.2026 Port Commission Meeting - StART's activities in 2025/26 update. Port's headquarters – Pier 69 – 2711 Alaskan Way, Seattle, WA 98121. The meeting is scheduled to start at noon; the StART item is the second briefing on the agenda and should start in the 1:30/2:00 PM timeframe.

6.11.2026 – Port of Seattle presenting at Des Moines City Council

6.15.2026 – Port of Seattle presenting at Burien City Council

Port Public Meetings:

6.22.2026 (6-8pm) - Glacier Middle School Entrance lobby/commons 2450 S 142nd St SeaTac, WA 98168

6.23.26 (6-8pm) - Mount Rainier High School Cafeteria space 22450 19th Ave S. Des Moines, WA 98198

6.25.26 (6-8pm) – Wildwood Elementary School Multipurpose room 2405 S 300th St Federal Way, WA 98003

6.27.26 (10am-12pm) - Gregory Heights Elementary School Cafeteria and gym 16201 16th Ave SW Burien, WA 98166

City of Des Moines/City Burien Public Meeting: 7.14.2026 (6pm)

Comment period ends: 7.21.2026

weighted hub. This is ambitious but not implausible if Alaska fully executes its 12-route international strategy and Delta continues its Pacific expansion with additional A350 and 787 widebody deployments.

One important distinction: average seats per departure can increase through two independent mechanisms — more widebody aircraft on international routes (high seat count, lower frequency) or larger narrowbodies on domestic routes (moderate seat count gain, high frequency). The 737-10 replacement cycle addresses the second mechanism and could contribute a meaningful seat-per-departure increase without any additional widebody operations. This makes even the moderate scenario potentially conservative.

4. The Operations Arithmetic — Where the SAMP Assumptions Break Down

SEA recorded 435,896 total operations in 2025 and accommodated approximately 52.72 million enplanements — placing the airport at roughly 97 percent of the current updated operations ceiling (approximately 449,000 operations, or the constrained peak achievable at current infrastructure levels when measured against the 2019 practical maximum of 450,487 operations).

Technical Note — Operations Ceiling Distinction

The 2019 actual peak of 450,487 operations represents the highest observed throughput at SEA under the pre-TBFM, pre-Reduced Diagonal Spacing operational environment. The Technical Appendix to the SEA Airport Capacity Analysis (Bogen, 2026) documents that TBFM deployment and Reduced Diagonal Spacing have increased the constrained infrastructure ceiling to approximately 517,000 annual operations under current operational procedures. References in this document to the "practical ceiling" reflect the 2019 historical peak as a conservative bound; the updated ceiling of ~517,000 is the more appropriate planning reference for forward-looking scenarios. Both figures materially exceed the ~880,000 operations the

SAMP's baseline assumption would require, reinforcing rather than mitigating the fundamental inconsistency.

The critical arithmetic is as follows. If SEA accommodates 56 million enplanements by 2032, at an industry-standard load factor of 86 percent and the SAMP's assumed 148 seats per departure, the required number of departures is approximately 440,000 — yielding approximately 880,000 total operations (arrivals plus departures). That figure is approximately 1.7 times the updated infrastructure ceiling of 517,000 annual operations. Even incorporating connecting passengers — who reduce the effective enplanements-per-departure ratio — the numbers remain irreconcilable at any load factor above approximately 47 percent, far below any realistic operational standard.

The SAMP cannot simultaneously maintain a conservative seat growth assumption of 0.5 percent per year and a 56 million enplanement target. These two parameters are arithmetically incompatible under the physical throughput constraints of the existing airfield. The only internally consistent resolution is faster upgauging — which means the moderate or high scenario is not a planning stress case but an operational prerequisite for the SAMP's own goals to be achievable.

Looking further ahead, how Seattle-Tacoma International Airport would accommodate 70 million or more enplanements in the years beyond 2032 — without infrastructure improvements that substantially expand runway throughput — remains an unresolved planning question that warrants direct treatment in the SAMP.

5. What Makes the 56 Million Enplanement Target Achievable

The SAMP near-term projects are specifically designed to accommodate 56 million enplanements and meet forecasted demand to 2032. The principal infrastructure investment — a second terminal with 19 new gates in approximately 575,000 square feet — addresses terminal throughput and gate capacity, not runway operations. More gates enable larger aircraft to be handled more efficiently and flexibly, which is an implicit operational endorsement of upgauging — but it is not a validation of the 0.5 percent seat growth assumption. Terminal expansion and fleet upgauging are complementary and mutually reinforcing; the SAMP's infrastructure investment implicitly assumes the latter while its modeling conservatively understates it.

The conclusion is that the SAMP's passenger target and its seat growth assumption are in tension. The only operationally viable path to 56 million enplanements within the airport's constrained operations ceiling is materially faster upgauging — which confirms that the moderate or high seat growth scenario is a planning prerequisite, not a sensitivity case.

6. Implications for Community Noise

For aviation noise-affected communities surrounding Seattle-Tacoma International Airport, the fleet upgauging trajectory documented in this comment has significant practical implications that are not adequately addressed in the SAMP.

Larger aircraft — including the Boeing 737-10, Boeing 787, and Airbus A330-900 — produce greater absolute acoustic energy per operation than the smaller narrowbody and regional jet aircraft they replace. While the FAA's Day-Night Average Sound Level (DNL) metric averages noise exposure over a 24-hour period and applies a 10-decibel nighttime penalty, this metric does not fully capture the low-frequency noise components that are characteristic of larger turbofan engines and that have been associated with community annoyance and health effects at exposure levels below the 65 DNL threshold. Because DNL calculations weight and roll off low-frequency energy, an increase in widebody and high-capacity narrowbody operations may not produce a measurable change in the official 65 DNL contour — even as the actual low-frequency acoustic environment experienced by nearby residents deteriorates year over year.

This dynamic is well recognized by aviation noise researchers and public health organizations internationally, even if it is not yet reflected in U.S. regulatory standards. The absence of a regulatory threshold does not mean the absence of an impact.

This analysis should be explicitly acknowledged and transparently communicated in the SAMP, regardless of current regulatory requirements. The Port of Seattle has an opportunity to lead on this issue — to proactively advocate for the health and well-being of aircraft noise-affected surrounding communities rather than waiting for national noise and health regulations to address what is already a recognized and growing concern. The appropriate time for additional noise mitigation advocacy is now, not upon some future regulatory trigger.

7. Conclusions and Recommended SAMP Revisions

Based on the analysis above, the following revisions to the SAMP are recommended:

1. **Fleet Mix Assumption:** The SAMP should update its seat growth assumption from 0.5 percent per year to a range reflecting the moderate scenario (2.0 percent) as the central estimate, with the high scenario (3.5 percent) as an upper bound. This adjustment should be applied consistently across all passenger-to-operations translations in the SAMP and EIS.
2. **Internal Consistency Check:** The SAMP should demonstrate arithmetic consistency between its enplanement forecast, seat growth assumption, load factor assumption, and operations count in a single integrated table. The current baseline assumptions are not mutually consistent at the stated passenger target.
3. **Operations Ceiling Reference:** The SAMP should reference the updated infrastructure-constrained operations ceiling of approximately 517,000 annual operations (reflecting TBFM deployment and Reduced Diagonal Spacing improvements) rather than the 2019 historical peak of 450,487 operations as the relevant planning bound.
4. **Noise Disclosure:** The SAMP and EIS should include a dedicated discussion of low-frequency noise impacts associated with fleet upgauging, acknowledging the limitations of the DNL 65 metric in capturing this dimension of community impact and identifying opportunities for the Port of Seattle to pursue proactive noise mitigation measures.

References and Data Sources

- Bogen, J. (2026). *Technical Appendix: SEA Airport Capacity Analysis.* Port of Seattle / Aviation Planning Division. May 28, 2026.
- FAA Airport Capacity Benchmark Report (2016). Federal Aviation Administration.
- FAA Terminal Area Forecast (TAF), 2024 Edition. Federal Aviation Administration.

- FAA Aviation System Performance Metrics (ASPM) Database, 2020–2026. Federal Aviation Administration.
- Bureau of Transportation Statistics, Form 41 T-100 Segment Data, 2020–2025.
- FAA Order 5090.3C: *Field Formulation of the NPIAS.* Federal Aviation Administration.
- Alaska Airlines. (2026, January). Fleet order announcement — 105 Boeing 737-10 and 787 widebody aircraft. Alaska Airlines Newsroom.
- Delta Air Lines. (2026). Long-term gate lease agreement, Delta One Lounge, and SEA route expansions. Delta Air Lines Corporate Communications.