

5 Cumulative Impacts

According to the CEQ, cumulative effects are “the effects on the environment that result from the incremental effects of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period time.”⁷⁶

The evaluation of cumulative impacts in this EA considers the past, present, and reasonably foreseeable future projects or actions undertaken by the Port and other parties such as the cities of Burien, Des Moines, Kent, SeaTac, Seattle, and Tukwila, King County, Normandy Park, Federal Way, Washington State, and other public and private entities. Projects were identified through a review of comprehensive plans; agency and city websites; a review of the WSDE’s statewide SEPA register; historic photo review; and field reviews of the GSA.

For this analysis, past projects are defined as those which occurred within the past five years (between 2017 and 2021) (listed in **Table 5-1**). These projects are included in the Existing Conditions. Projects that occurred more than five years ago (e.g., Third Runway) are not separately discussed in this chapter but they are also included in the Existing Conditions which is the baseline for the analysis and captures previously completed projects.

Table 5-2 shows present projects that will be under construction or complete by 2025. **Table 5-3** shows reasonably foreseeable future projects, which are defined as actions within the GSA, 65+ DNL, or STSA that are likely to be completed between 2026 through 2032, and that have been developed with enough specificity to provide meaningful data for analysis. Reasonably foreseeable future projects include projects that have been included in SEA’s Capital Improvement Plan (CIP) or have been approved or are pending approval by the relevant jurisdiction. No projects past 2032 are included because there is a lack of adequate detail about those later projects to enable meaningful review; any analysis of those projects or their impacts would be speculative.

Projects included in the SAMP Long-Term Vision (LTV)⁷⁷ are not included in the reasonably foreseeable future projects analysis because they remain 10-plus years in the future, need additional analysis, and are not yet at the point where they have received funding and / or approval.

⁷⁶ 40 Code of Federal Regulations [CFR] § 1508.1, April 20, 2022.

⁷⁷ SAMP Technical Memorandum No. 7, Facilities Implementation and Financial Feasibility, page 6-1. Available for review at: <https://www.airportprojects.net/sampenvironmentalreview/tm-no-7-facilities-implementation/>.



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TABLE 5-1: PAST ACTIONS (2017 – 2021)

Project	Year of Completion	Description / Known Impacts	Location
South Airport Access	2017	Extension and improvements to connect 24 th Avenue South with 26 th Avenue S. to 28 th Avenue South, including a bridge over the alignment of the new SR 509. This is part of the larger SR 509 Corridor Completion Project and was covered under the SEPA EIS prepared for that project.	SeaTac
D-Concourse Annex	2018	Development of space for six holdroom gates. The 32,400-square foot building allows for hardstand operations where passengers are shuttled to and from an aircraft parked away from the terminal building. The project resulted in minor increases in energy demand, construction emissions, and solid waste. No significant impacts were identified, and a SEPA Determination of Nonsignificance (DNS) was prepared for the project.	SEA
Alternate Utility Facility	2018	Installation of ten 3.0-megawatt diesel generators for the purpose of providing SEA with 100 percent standby power for the Airport’s infrastructure and operations. The project included ten generators, an electrical switch gear building, a control room building, and associated transmission lines connecting to the south substation. A SEPA DNS was issued for this project indicating that the project would not result in significant adverse impacts to the environment.	SEA
Aloft Hotel	2018	Development of a hotel located at approximately S. 190 th Street between 28 th Avenue S. and International Boulevard S. No SEPA evaluation was found for this project.	SeaTac
Residence Inn by Marriott Hotel	2018	Development of a hotel located on International Boulevard S. at S. 196 th Street. No SEPA evaluation was found for this project.	SeaTac
North Satellite, Phase 1	2019	Expansion to the west provided ten new gates, a new upper-level mezzanine, and other improvements. The project resulted in minor increases in energy demand, construction emissions, and solid waste. No significant impacts were identified, and a SEPA DNS was prepared for the project.	SEA
250 Degree Westerly Turn for Southbound Turbo Props when SEA is Operating in North Flow (Burien Turn)	2019	FAA issued a westerly turn departure for approximately 90-percent of southbound turboprops taking off in north flow conditions. No significant impacts were identified, and a CATEX was prepared for the project.	SEA, Burien



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TABLE 5-1: PAST ACTIONS (2017 – 2021) (CONTINUED)

Project	Year of Completion	Description / Known Impacts	Location
SR 509 & SR 518 – S. 192 nd Street to Normandy Park & SR 509 to SR 99 Paving & ADA & Deck & Seismic	2020	Repaving both directions of SR 509 / 1 st Avenue S. in Normandy Park and SR 518 in SeaTac. This project also upgraded sidewalk ramps on SR 509 and seismically retrofitted two bridges on SR 518 and one bridge at the Interstate 405 / Interstate 5 interchange. The project resulted in minor impacts from construction emissions and natural resources (paving materials) consumption. No SEPA evaluation was found.	SeaTac
Alaska Airlines Copper River Building	2020	Construction of the headquarters for Alaska Airlines located at International Boulevard S. and S. 192 nd Street. A mitigated DNS was issued for this project indicating that the project would not result in significant adverse impacts to the environment.	SeaTac
Hilton Garden Inn Hotel	2020	Development of a hotel located on S. 188 th Street one block east of International Boulevard S. No SEPA evaluation was found.	SeaTac
Wingate Hotel	2020	Development of a hotel at S. 192 nd Street between 28 th Avenue S. and International Boulevard S. No SEPA evaluation was found.	SeaTac
Cell Phone Lot Access and Air Cargo Road Safety Improvements	2021	Development of a new entrance route from the NAE to the cell phone lot and implementation of traffic and pedestrian safety improvements along S. 170 th Street and Air Cargo Road. The new access diverts incoming traffic away from the congestion at S. 170 th Street and provides additional capacity improvements for the return to the Main Terminal. A SEPA DNS was issued for this project.	SEA
Interim Fire Station Replacement	2021	Development of a metal framed building to accommodate the living quarters for five firefighters and a steel framed metal covered shelter for the storage of two ARFF trucks. The existing Interim Fire Station was demolished to provide space for the replacement Interim Fire Station. Total square footage for these two elements is around 6,500 square feet. A SEPA DNS was issued for this project.	SEA
Peter Western Bridge Emergency Demolition and Bridge Replacement	2017	Stabilization of steep slopes and a stormwater dissipator box. The SEPA DNS for this project indicated that the project would not result in significant adverse impacts to the environment.	Burien
S. 216 th Street Project	2017	Included 2,950 feet of roadway and streetscape improvements between 11 th Avenue S. and 20 th Avenue S. A SEPA DNS indicated that the project would not result in significant adverse impacts to the environment.	Des Moines



TABLE 5-1: PAST ACTIONS (2017 – 2021) (CONTINUED)

Project	Year of Completion	Description / Known Impacts	Location
S. 216 th Street Project	2017	Included 2,950 feet of roadway and streetscape improvements between 11 th Avenue S. and 20 th Avenue S. A SEPA DNS was issued for this project indicating that the project would not result in significant adverse impacts to the environment.	Des Moines
Des Moines Creek Business Park, Phases I, II, III	2017	Commercial development of 1.6 million square feet of office, industrial, and retail space on the 87-acre site just south of the Airport in Des Moines. A SEPA EIS was prepared for this development and identified construction related emissions, construction noise, clearing and grading, and the filling of isolated wetlands.	Des Moines
Kent Midway Apartments	2017	Construction of a 265-unit multi-family residential development. The project included 12 apartment buildings and one recreation complex building, along with associated parking and landscaping. No significant impacts were identified as part of the SEPA review process.	Kent
The Reserve at SeaTac	2017	Construction of a five-story 289-room senior housing apartment. Additionally, a two-story parking garage, surface parking and garages were constructed on-site. A SEPA DNS was issued for this project indicating that the project would not result in significant adverse impacts to the environment.	SeaTac
New Middle School at Glacier Site, Phase 1	2017	Preparation of an existing developed site for future construction of new middle school by abating and demolishing approximately 86,000 square feet of existing structures and associated architectural features and paved areas in nearly its entirety. A SEPA DNS was issued for this project indicating that the project would not result in significant adverse impacts to the environment.	SeaTac
Des Moines Elementary School	2017	Construction of a new elementary school building of approximately 86,000 square feet. Project impacts are unknown but assumed to be minor given the scale of the proposed project. A MDNS was adopted for this project indicating that the project would not result in significant adverse impacts to the environment.	Des Moines



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Project	Year of Completion	Description / Known Impacts	Location
NERA 3 Redevelopment - Seattle Gateway Center	2018	Development of two logistics buildings of 458,000+ square feet located at S. 142 nd and Des Moines Memorial Way, and at 1039 S. 146 th Street. The SEPA EIS for this development identified temporary impacts to wetlands and buffers, minor increases in traffic (that were mitigated), and additional water / energy demands.	Burien
Waterview Crossing	2018	Development of over 350 apartments, which replaced 117 mobile homes (in three mobile home parks) located between Pacific Highway S. and 28 th or 30 th Avenue South, S. 216 th and 220 th Avenue S. No SEPA record was available.	Des Moines
Puget Sound Regional Fire Authority Station 45	2018	Development of new Fire Station 45 (next to the old one) on S. 200 th Street at 30 th Avenue S. No SEPA evaluation was found.	SeaTac
S. 144 th Way Improvements	2019	Widen and realign S. 144 th Way between S. 146 th Street and Des Moines Memorial Drive to meet current standards for increased truck traffic; improve sight distance particularly at the Miller Creek Trail crossing; and provide bicycle and pedestrian routes through the area. Project impacts were minor and included construction emissions, stormwater treatment, and culvert replacement at Miller Creek.	Burien
TP Homes, LLC	2019	Development of two multi-family buildings with a total of 23 townhome style apartments, landscaping, parking and play area. The SEPA DNS indicated the project would not result in significant adverse impacts to the environment.	Burien
Redpoint Development Group Senior Housing	2019	Development of a 112-unit senior housing / apartment facility with associated parking areas, landscaping, and recreational spaces. The SEPA DNS indicated the project would not result in significant adverse impacts to the environment.	Burien
American Dream Home Group, LLC	2019	Development of four multi-family buildings with a total of 43 townhome style apartments, landscaping, parking and common play area. The SEPA DNS indicated the project would not result in significant adverse impacts to the environment.	Burien
Highline Estates	2019	Development of single-family homes located at S. 240 th and approximately 22 nd Avenue S. SEPA DNS indicated the project would not result in significant adverse impacts.	Des Moines



TABLE 5-1: PAST ACTIONS (2017 – 2021) (CONTINUED)

Project	Year of Completion	Description / Known Impacts	Location
Villa Townhomes	2019	Development of seven townhomes and two single-family residences on two properties combined with shared recreation, drainage, parking facilities, and access from Des Moines Memorial Drive Southwest. A SEPA DNS indicated the project would not result in significant adverse impacts to the environment.	Burien
Wesley Homes	2019	Redevelopment of Wesley Gardens, on the south side of S. 216 th Street consisting of town homes, brownstones, independent living main building, memory care facility, and assisted living facility. A MDNS indicated the project would not result in significant adverse impacts to the environment.	Des Moines
Blueberry Lane	2019	Development of residential planned unit development (PUD) of 60+ single-family homes located at approximately Des Moines Memorial Drive and S. 196 th . A MDNS indicated the project would not result in significant adverse impacts to the environment.	Des Moines
Interstate 5 - SB S. Lucile Street to Spring Street - Pavement Repair	2019	Rehabilitated four miles of southbound Interstate 5 between Spring Street and S. Lucile Street near Boeing Field. Project included minor construction emissions and use of natural resources / materials.	Seattle
Des Moines Gateway Project	2020	Transportation improvements on 24 th Avenue S. between S. 216 th and S. 208 th , and on S. 216 th between 20 th Avenue S. and Pac Highway S. The SEPA Optional DNS indicated that the project would not result in significant adverse impacts to the environment.	Des Moines
Northwest Kidney Centers	2020	Development of a distribution facility and patient treatment facility at S. 128 th Street and approximately 20 th Avenue S. A SEPA DNS indicated the project would not result in significant adverse impacts to the environment.	SeaTac
Pointe by Vintage	2021 / 2022	Development of 161 apartments in five-story building, located at Pac Highway S. at S. 228 th Street. No SEPA or NEPA evaluation was found.	Des Moines

Notes: ATCT = airport traffic control tower; CATEX = categorical exclusion; DNS = determination of nonsignificance; MDNS = mitigated determination of nonsignificance EIS = Environmental Impact Statement; FAA = Federal Aviation Administration; MW = megawatts; PUD = planned urban development; SR = State Route.

Year of completion is an estimate based on available information.



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TABLE 5-2: PRESENT ACTIONS (2022 – 2024)

Project	Year of Completion	Description / Known Impacts	Location
Puget Sound Gateway SR 509 Corridor Completion Project	2023-2028	Various improvements to include new expressway between Interstate 5 and 188 th Street including: a new interchange at 24 th Avenue South, a new wider S. 216 th Street bridge, new ramps along Interstate 5 that connect to SR 509, a new Interstate 5 underpass at Veterans Drive, and a reconfigured Interstate 5 / SR 516 interchange. An EIS was prepared for this project that indicated a range of impacts to all impact categories.	Des Moines, Sea Tac
Snow Storage Expansion Project	2023-2025	The project includes expanding the North (+0.66 acre) and South (+0.30 acre) snow storage areas as well as construction of a new snow storage area northeast of Lagoon 3 (+1.5 acres). The Port published a SEPA MDNS indicated the project would not result in significant adverse impacts to the environment.	SEA
Cedar Hills Regional Landfill Site Development Project	2023-2028	Maximize the capacity and lifespan of the Cedar Hills Regional Landfill in accordance with King County’s 2019 Comprehensive Solid Waste Management Plan. An EIS was prepared for this project that indicated a range of impacts to vegetation, noise, visual and transportation in the immediate vicinity of the landfill alternatives. In addition, GHG emissions are anticipated to increase.	Maple Valley, WA (receives waste from the GSA)
Lake to Sound Trail (Segment C)	2023	Construction of a trail that parallels Des Moines Memorial Drive in Burien for approximately 2,400 linear feet before entering SeaTac at the SR 509 WSDOT right-of-way near Des Moines Memorial Drive and 8 th Avenue S. The Segment C study area is a linear corridor that occurs mostly within the existing road rights-of-way for Des Moines Memorial Drive. The Burien portion of the project starts at the intersection of Des Moines Memorial Drive and S. Normandy Road. This section of the trail was constructed in the road right-of-way over roadside fill, roadway shoulders, and roadside ditches. A SEPA DNS indicated the project would not result in significant adverse impacts to the environment.	Burien, Sea Tac
Bridge Point SeaTac 300 Industrial Property	2024	Redevelopment of 28 parcels totaling approximately 17.38 acres into two building industrial development, to be built out as approximately 310,000 square feet of industrial space, 168 parking stalls, with other associated on-site and offsite improvements. The site is located at Des Moines Memorial Drive S. and S. 200 th Street. A SEPA MDNS was published with mitigated impacts to transportation and aesthetics.	Sea Tac



TABLE 5-2: PRESENT ACTIONS (2022 – 2024) (CONTINUED)

Project	Year of Completion	Description / Known Impacts	Location
S. 154 th Street Station Area Plan	2024	Provide access and circulation improvements for vehicle and pedestrian movements in support of redevelopment near the new transit station. No SEPA evaluation was found.	SeaTac
Amelia at Angle Lake Apartments	2024	New 7-story apartment building with 108 units and 78 below ground parking spaces. A SEPA DNS indicated the project would not result in significant adverse impacts to the environment.	SeaTac
Miller Creek Daylighting Project	2024	Realign Miller Creek to an open channel and box culvert crossing located approximately 400 feet south of the existing crossing under Des Moines Memorial Drive S. The project removes the existing culvert and associated failing utility hole near Des Moines Way Self Storage and diverts stormwater through new infrastructure to the new culvert crossing. Also included is environmental habitat restoration and water quality treatment. A SEPA DNS indicated the project would not result in significant adverse impacts to the environment.	Burien, SeaTac
Concourse A Building Expansion for Lounges	2025	Expansion to relocate and expand a Delta Air Lines passenger lounge and an expanded Port passenger lounge on the southeast end of Concourse A and immediately south of the International Arrivals Facility. The expansion connected to Concourse A resulting in six floors above the ground level (i.e. ramp level) with the project's total gross square footage totaling approximately 57,500 square feet (around 47,000 square feet of expansion and around 10,500 square feet of renovation). The project would result in additional greenhouse gas emissions; however, this increase would not be significant. A SEPA DNS indicated the project would not result in significant adverse impacts to the environment.	SEA
Widen Airport Arrivals Drive	2026	Widen the Airport Arrivals Drive to accommodate existing vehicle demand. A SEPA DNS indicated the project would not result in significant adverse impacts to the environment.	SEA

Notes: ADA = Americans with Disabilities Act; ARFF = aircraft rescue and firefighting facility; CATEX = categorical exclusion; DNS = determination of nonsignificance; MDNS = Mitigated determination of nonsignificance; SR = State Route.

Year of completion is an estimate based on available information.



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TABLE 5-3: FUTURE ACTIONS (2025 – 2032)

Project	Year of Completion	Description / Known Impacts	Location
Puget Sound Gateway SR 509 Corridor Completion Project	2023-2028	Improvements include new expressway between Interstate 5 and 188 th Street, a new interchange at 24 th Avenue South, a new wider S. 216 th Street bridge, new ramps along Interstate 5 that connect to SR 509, a new Interstate 5 underpass at Veterans Drive, and a reconfigured Interstate 5 / SR 516 interchange. EIS indicated impacts to all resource categories.	Des Moines, Kent, SeaTac
Mercy Angle Lake Family Housing	2025	Construction of 130 affordable housing units adjacent to the Angle Lake Light Rail Station to serve households earning between 30 percent and 80 percent of the area median income. A SEPA DNS indicated the project would not result in significant adverse impacts to the environment.	SeaTac
S. 152 nd Street Project	2025-2028	Reconstruct S. 152 nd Street from 30 th Avenue S. to Military Road. Includes sidewalks, street trees, street and pedestrian lighting, storm drainage improvements, and landscaping and would provide access and circulation improvements for vehicle and pedestrian movements in support of redevelopment near the new transit station. Would also construct new separated bikeway and pedestrian facility along S. 152 nd Street. A SEPA DNS indicated the project would not result in significant adverse impacts to the environment.	SeaTac
Sound Transit Federal Way Link Light Rail Extension	2026	Extend light rail from Angle Lake Station to the Federal Way Transit Center. The 7.8-mile extension includes three stations near Highline College, S. 272 nd Street and the Federal Way Transit Center. All three stations add parking for a total of 3,200 spaces along the route. An EIS was prepared for this project that indicated a range of impacts to all impact categories.	SeaTac, Federal Way, Des Moines, Kent
Airport Station Pedestrian Improvements	2026	Reconstruction of 32 nd Avenue S. (from S. 170 th Street to S. 176 th Street) with wider pavement, new curb and gutter, new sidewalk, shared bike lanes, new drainage infrastructure, street/pedestrian lighting, and undergrounding overhead utilities to provide safer access to transit. The remaining segments along 32 nd Avenue South, S. 176 th Street, and S. 180 th Street would retrofit or replace existing pedestrian facilities. No SEPA evaluation was found.	SeaTac



TABLE 5-3: FUTURE ACTIONS (2025 – 2032) (CONTINUED)

Project	Year of Completion	Description / Known Impacts	Location
C Concourse Expansion Project	2026	Addition of four floors, total of 108,000 square feet, for retail and other terminal-support uses; redevelopment of the existing concourse level; new infrastructure, including restrooms, vertical circulation, and seating; and expansion of the existing holdroom at Gate C3. The project would likely result in minor increases in energy demand, construction emissions, and solid waste. A SEPA DNS was issued for this project indicating that the project would not result in significant adverse impacts to the environment.	SEA
Air Cargo Road (ACR) Improvements	2028	ACR's pavement condition was assessed in 2021 as part of the Landside Pavement Management Program (PMP) and the north portion was assigned a Pavement Condition Index (PCI) Category IV of Very Poor. The PMP recommended full pavement reconstruction of ACR from S. 166 th Street to S. 154 th Street. SEPA process is ongoing.	SEA
Runway Number Changes	2029	Update the runway numbers associated with the magnetic variance. No environmental document has been prepared at this time.	FAA
South Concourse Evolution (SCE) Project	2034	Rehabilitation of the South Concourse, originally constructed in the early 1970s. The project includes seismic updates and modernizing building systems. SEPA process is ongoing.	SEA

Notes: EIS = Environmental Impact Statement; DNS = determination of nonsignificance; SR = State Route; TRACON = Terminal Radar Approach Control Facility; TBD = To be determined.

Year of completion is an estimate based on available information.



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5.1 Cumulative Impacts

Cumulative impacts must be evaluated relative to the direct and indirect effects of the Action Alternatives for each environmental category. For a project to have potential cumulative effects with the Proposed Action or the Hybrid Terminal Option, the project must result in impacts to the same resources affected by the Proposed Action. Significant cumulative impacts are determined according to the same thresholds of significance used in the evaluation of the environmental category.

For environmental resources where construction and implementation of the Proposed Action would have no identified environmental impacts, there is no potential for an adverse cumulative environmental impact to occur. These categories include:

- Coastal Resources
- Department of Transportation Section Act, 4(f)
- Historical, Architectural, Archaeological, and Cultural Resources
- Land Use
- Visual Effects

Therefore, the discussion of cumulative impacts discusses only those environmental categories where environmental impacts could result from implementation of the Proposed Action.

5.1.1 Air Quality

The Action Alternatives would result in construction and operation emissions. Construction emission increases would result from construction equipment and fugitive dust generated during demolition and construction of the proposed project elements. Operational emissions would result from the higher level of Airport activity that the Action Alternatives would enable, and motor vehicle emissions from passengers traveling to or from SEA. However, the projected increases in emissions are not expected to create any new violation of the NAAQS. As a result, the Action Alternatives are not expected to produce significant air quality impacts.

Other past Airport, roadway, and development projects have resulted in construction and / or operational related air emissions; however, the combined effect of these actions has not reached a level of significance to prevent attainment of all NAAQS for the Puget Sound Intrastate Air Quality Control Region. The past projects are already considered as part of the current attainment status of the region. None of the present or future projects are expected to generate emissions above the de minimis threshold for individual pollutants, or cause pollution levels for any of the NAAQS to lose attainment status. The Federal Way Link Extension project and the SR 509 Corridor Completion Project would reduce existing criteria pollutant levels below existing levels through a reduction in vehicle miles traveled.

The Action Alternatives, when combined with past, present, and reasonably foreseeable future projects, are not expected to result in significant impacts to air quality.

5.1.2 Biological

The Action Alternatives either have no effect or may affect but are not likely to adversely impact any federally-listed threatened or endangered species or their habitat. Potential impacts to other non-listed species and migratory birds would result from the permanent removal of existing habitat areas such as wetlands, streams, and vegetated areas. These impacts would not be significant in nature, and the Port would utilize BMPs, where applicable, to minimize the extent of impacts and would provide mitigation for impacts to stream or wetland areas in accordance with permit requirements.



Other past, present, and reasonably foreseeable projects will continue to result in cumulative effects to listed species and habitat. Although some of these actions are likely to improve habitat conditions for listed aquatic species, over time, ongoing impacts from stormwater are likely to further degrade water quality in the action area. In addition, other past, present, and reasonably foreseeable future projects are likely to contribute to the overall loss of natural habitat in the area; however, the combined effect of these projects is not anticipated to be significant. Projects that involve federal agencies would be addressed through Section 7 ESA consultations. Pursuant to the State's Growth Management Act, other future projects would comply with regulations to protect environmentally critical areas including wetlands, aquifer recharge areas, and fish and wildlife habitat corridors.

Therefore, the Action Alternatives, when combined with other past, present, or reasonably foreseeable projects would not result in significant adverse impacts to biological resources.

5.1.3 Climate

The Action Alternatives would result in additional construction related and operational GHG emissions. Construction GHG emissions would result from on-road and off-road construction vehicles during construction of the proposed project elements. Operational GHG emissions would result from aircraft operations, GSE, stationary sources, and motor vehicle traffic.

Both the Federal Way Link Extension and SR 509 Corridor Completion projects are expected to result in a decrease of GHG emissions from existing levels by reducing automobile emissions and changes in traffic conditions. Other past, present, and reasonably foreseeable future actions would generate GHG emissions from transportation (burning of fossil fuels), electrical use, and land use changes.

The implementation of GHG-reduction efforts, independent of the Proposed Action, by the Port of Seattle, local and state agencies, and local stakeholders (including airline operators) would help reduce GHG emissions from aircraft sources and aid the Airport and the region to prepare and adapt to climate change risks and impacts. The FAA published the United States Aviation Climate Action Plan in 2021, which describes a whole-of-government approach to achieve new-zero emissions by 2050. The Plan outlines ways to decrease emissions that includes new technology (aircraft and engines), SAF, and improving how aircraft operate throughout the National Airspace System.

Therefore, the Action Alternatives, when combined with other past, present, or reasonably foreseeable projects are not expected to prevent King County or the State of Washington from taking actions to meet their climate goals.

5.1.4 Hazardous Materials, Solid Waste, and Pollution Prevention

5.1.4.1 Hazardous Materials

The Action Alternatives would likely affect known hazardous materials sites and / or areas of contamination. Given the likelihood of hazardous materials within the area of proposed construction, all excavations and demolitions would be monitored by a trained environmental professional for evidence of contaminated soils or materials. All materials excavated from within areas of known or potential contamination would be tested prior to disposal, and any material found to be contaminated would be removed and disposed of in accordance with federal, state, and local requirements, including: Management of Hazardous Waste (49 U.S.C. § 260-280), Transportation of Hazardous Waste (49 U.S.C. § 171-199), the MTCA (Revised Code of Washington [RCW] 70.105D.010), and Dangerous Waste Regulations (Washington Administrative Code [WAC] 173-303). Any previously unknown hazardous materials or areas of contamination that are encountered during construction would be

immediately brought to the attention of the Port's Project Manager for determination of appropriate action. Therefore, the impacts from Action Alternatives would not be significant.

Other past and present projects would have already complied with state and federal regulations governing hazardous materials. Similarly, it was assumed that all future projects would also be required to comply with the relevant regulations. If hazardous materials are encountered during construction of these actions, treatment, disposal, and / or remediation actions would likely be required under the same state and federal laws, meaning that significant impacts from hazardous materials would be unlikely. The largest projects in the future are the Federal Way Link Extension and SR 509 projects. The Federal Way Link Extension project would potentially affect three high-risk sites; however, given regulatory requirements, the likelihood of impacts would be low. The SR 509 project would affect approximately 40 known or suspected contaminated sites; however, general mitigation, removal, and disposal requirements are expected to minimize or prevent potential risks. On-Airport projects such as the C1 Building Expansion Project also could affect known or suspected areas of contamination; however, these risks would be minimized through the same measures identified previously as part of the Action Alternatives.

Therefore, the Action Alternatives, when combined with other past, present, or reasonably foreseeable projects would not result in significant adverse impacts to hazardous materials.

5.1.4.2 Solid Waste

The Action Alternatives would generate additional solid waste during construction related activities and result in increased solid waste generation due to the projected increase in total passengers. There is sufficient capacity to handle the additional waste at the Cedar Hills Regional Landfill. The additional waste would be managed and disposed of by Port selected contractors, in a manner that is consistent with state and local regulations. Therefore, there would not be significant impacts to the solid waste disposal capacity of the region.

Other future actions would have the potential to create solid waste. However, none of the identified future projects are likely to produce solid waste in amounts that would individually or cumulatively exceed solid waste disposal capacity of the region. The largest projects in the future are the Federal Way Link Extension and SR 509 projects. Neither of these projects identified concerns related to solid waste disposal.

Therefore, the Action Alternatives, when combined with other past, present, or reasonably foreseeable projects, would not result in significant adverse impacts to solid waste.

5.1.5 Natural Resources and Energy Supply

5.1.5.1 Energy Supply

The Action Alternatives would increase the demand of energy supply to power new facilities and infrastructure being constructed. However, this increase is not likely to be significant, and would be partially offset with the development and use of more sustainable energy efficient technologies and renewable energy that would likely reduce the burden on energy resources.

The Federal Way Link Extension EIS notes that energy demands would increase through operation of trains and new lighting sources; however, this increase is not expected to adversely affect the power system. The existing and future energy supply in the Seattle-Tacoma area is anticipated to meet the combined demand of the Action Alternatives and all past, present, and future projects.



Therefore, the Action Alternatives, when combined with other past, present, or reasonably foreseeable future projects, would not result in significant adverse impacts to energy supply.

5.1.5.2 Natural Resources

The Action Alternatives would result in temporary increases in demand for construction materials due to the size and scale of the proposed project elements. However, these increases are not likely to be significant.

This demand would likely be compounded by other present and future projects that are anticipated to occur during the same time frame, such as the SCE Project and multiple off-Airport development projects but is not expected to exceed the available resources. While the other identified projects are relatively small, the SR 509 Corridor Completion Project would be a larger project that would consume larger amounts of natural resources. The EIS for the SR 509 project noted that the types and amounts of materials required to complete the project were not in short supply, and their use would not have an adverse effect on the continued availability of these resources. No other large scale regional projects have been identified during the timeframes of construction for the Action Alternatives (anticipated to last from 2025 to 2032) that would likely create shortages of similar materials and resources.

Given the availability of natural resources for construction in the region, the Action Alternatives, when combined with other past, present, or reasonably foreseeable projects, would not result in significant impacts to consumable natural resources.

5.1.6 Noise and Noise-Compatible Land Use

The 2032 Action Alternatives 65+ DNL noise contour would be larger than the 2032 No Action 65+ DNL contour by 0.15 square miles due to the increase in average-annual day operations. Within the area of increased noise exposure there would be 337 additional housing units and 824 additional people within the 65 DNL. No noise sensitive areas within the 65+ DNL would experience a 1.5 dB DNL or higher increase for the 2032 Action Alternatives. Therefore, there would be no significant aircraft noise impacts in 2032.

Past actions affecting the number of aircraft operations or fleet characteristics have been incorporated into the existing and future modeled noise contours. This includes FAA's implementation of a turn for turboprops near Burien that resulted in minor increases in aircraft noise to certain locations, although these increases were well below the FAA's established thresholds for impacts. This action, as well as all other established FAA air traffic arrival and departure procedures were incorporated into the AEDT noise modeling for the Action Alternatives and would not result in additional significant noise impacts. No other past, present, or reasonably foreseeable future actions are expected to result in significant permanent noise impacts. The Federal Way Link Extension project would result in noise impacts to 647 properties; however, all these impacts can be mitigated by sound walls and insulation (where necessary). The 509 Corridor Completion Project would impact 147 noise sensitive properties; however, noise impacts would be reduced by providing noise barriers.

Common mitigation measures related to noise-compatible land use include sound insulation of residences and other noise sensitive structures. Independent of the Action Alternatives, the Port currently implements a Part 150 Noise Remedy Program in which owners of eligible residences may voluntarily enroll to obtain sound insulation for their structures. Since 1985, the Port has sound insulated approximately 9,400 single-family homes, 246 condominiums, 14 college buildings, and eight school buildings within various iterations of the 65 DNL contour and noise remedy boundary. The Port will continue to work on sound insulating the remaining apartments, condominiums, single-family

homes, and houses of worship within the FAA approved noise remedy boundary through the Part 150 program regardless of other actions.

Given the limited extent of noise-related impacts, the Action Alternatives, when combined with other past, present, and reasonably foreseeable future projects (including the Port's ongoing sound insulation work), would not result in significant impacts to noise and noise-compatible land uses.

5.1.7 Socioeconomics, Environmental Justice, and Children's Health and Safety Risks

5.1.7.1 Socioeconomic

The Action Alternatives would not result in significant impacts to community cohesion, would not require any residential relocations, and would likely have a positive overall economic impact to the surrounding community. Two businesses would be closed due to the Proposed Action; however, this would not result in a significant adverse effect to the regional economy.

Other future actions have potential socioeconomic impacts. The Federal Way Link Extension and SR 509 Corridor Completion Project are expected to require multiple business and residential relocations, have impacts to community cohesion, and result in increased pressure for regional growth (although this would be consistent with local community plans). Other than these projects, future development would be smaller in scale and have limited overall impacts.

Given the limited extent of impacts and the potential for economic benefits to the region, the Action Alternatives, when combined with other past, present, and reasonably foreseeable future projects, would not result in significant impacts to socioeconomics.

5.1.7.2 Environmental Justice

Impacts to environmental justice populations from the Action Alternatives were evaluated in the context of relevant resource categories: air quality, biological, climate, noise, socioeconomic, and surface transportation. For socioeconomic and surface transportation, the analyses found no disproportionate and adverse impacts and no significant impacts as a result of the Action Alternatives with mitigation. For all other resource categories evaluated for impacts to environmental justice populations, no disproportionate and adverse impacts or significant impacts were identified. Therefore, the Action Alternatives would not result in disproportionate and adverse impacts to environmental justice populations.

There were no cumulative effects identified in the past, present, and reasonably foreseeable projects in the resource categories evaluated for environmental justice populations. In addition, there would be no anticipated cumulative impacts unique to environmental justice populations. Therefore, the Action Alternative, when combined with other past, present, and reasonably foreseeable future projects, would not result in significant impacts to environmental justice populations.

5.1.8 Surface Transportation

The Action Alternatives would result in 15 roadway intersections not meeting mobility standards in 2032. Mitigation includes installation of traffic signals, intersection modifications, and / or intersection widening required to meet state and local mobility standards. With mitigation, there are no significant impacts.

The modeling of future traffic levels for this EA included the anticipated growth in traffic from the other past, present, and future development projects, as well as increases in population, thus capturing potential cumulative impacts from these projects.



Therefore, the Action Alternatives, when combined with other past, present, or reasonably foreseeable future projects, would not result in significant adverse traffic impacts with the traffic intersection improvements identified.

5.1.9 Water Resources

The Action Alternatives would permanently impact up to 0.79 acres of jurisdictional wetlands, 2.66 acres of wetland buffer, less than 0.02 acres of streams, and 0.12 acres of stream buffer. To offset these impacts, the Port would develop a compensatory mitigation plan during the permitting phase of the project in accordance with all applicable federal and state requirements and guidelines. Given the permitting requirements for impacts to water resources and the mitigation that would be provided to offset any impacts, the Action Alternatives would not result in significant impacts to wetlands or streams.

The Action Alternatives would also expand the impervious areas at the Airport by approximately 75 acres; however, the resulting stormwater runoff would be treated consistent with applicable stormwater management standards and Port protocols. With the planned measures in place, the Action Alternatives would not result in significant impacts to surface waters, nor would they result in an exceedance of water quality standards or contamination of public drinking water supply.

The Action Alternatives would affect land within designated wellhead protection zones. Construction and operation of new facilities within these areas would abide by all applicable regulations related to spill prevention and control regulations to prevent spills from causing significant adverse impacts to groundwater. Therefore, no significant impacts to groundwater are anticipated.

Other past, present, or reasonably foreseeable future projects have, or would be required to comply with applicable federal, state, and local regulatory criteria and permit requirements protecting water resources, and they have, or would also be required to implement BMPs that would protect water resources. The Federal Way Link Extension project would impact 1.3 acres of wetlands, 6.6 acres of wetland buffer, 1,015 linear feet of streams, and 2.5 acres of stream buffer. The SR 509 Corridor Completion Project EIS indicated that approximately 0.3 acres of wetlands, and 7.1 acres of wetland buffer would be affected by the SR 509 preferred alternative, and 113 acres of new impervious surface would be created. Other private development projects have and will continue to result in localized impacts to water resources, however, these impacts would be offset through permitting requirements, compensatory wetland mitigation, and construction of stormwater management / detention facilities to offset the creation of new impervious surfaces. Given the framework of existing regulations and requirements, the combined effect of these projects is not likely to be significant.

Therefore, the Action Alternatives, when combined with other past, present, and reasonably foreseeable future actions, would not result in a significant cumulative impact to water resources.

5.1.10 Cumulative Impact Conclusion

The level of cumulative impacts anticipated to occur within these environmental resource categories is not significant due to the types of past, present, and reasonably foreseeable future projects, the extent of the built environment in which they would occur, the lack of some environmental resources in the area, and regulatory and permitting requirements for the Action Alternatives and other future projects. Therefore, the Action Alternatives together with past, present, and reasonably foreseeable future projects would not result in significant cumulative environmental impacts.