



U.S. General Services Administration

Environmental Impact Statement for the Kenneth G. Ward (Lynden) and Sumas Land Ports of Entry Modernization and Expansion Projects Lynden and Sumas, Washington

Volume I

Draft



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COVER SHEET

Responsible Agency: United States (U.S.) General Services Administration (GSA)

Title: Draft Environmental Impact Statement (EIS) for the Kenneth G. Ward (Lynden) and Sumas Land Ports of Entry (LPOEs) Modernization and Expansion Projects in Lynden and Sumas, Washington

GSA proposes to modernize and expand the existing Lynden and Sumas LPOEs in Lynden and Sumas, Whatcom County, Washington. The existing Lynden and Sumas LPOEs are owned and managed by GSA and are operated by the U.S. Department of Homeland Security's Customs and Border Protection.

GSA has prepared this EIS, which examines the purpose of and need for these projects; alternatives considered; the existing environment that could be affected; the potential impacts resulting from each of the alternatives; and proposed best management practices and/or mitigation measures. The EIS addresses the potential environmental impacts of the Proposed Action alternatives on environmental resources including land use; water resources; biological resources; geology, topography, and soils; air quality, climate change, and greenhouse gases; human health and safety; infrastructure and utilities; traffic and transportation; noise and vibration; socioeconomics; and environmental justice and protection of children's health and safety.

GSA is soliciting comments from interested persons and stakeholders on the Draft EIS during a 45-day comment period. The public was notified of the Draft EIS public hearing through publication of a Notice of Availability in the *Federal Register* and as a display advertisement in the *Cascadia Daily News* and *Lynden Tribune*, as well as letters mailed to interested parties. Comments received during the 45-day comment period will be considered in preparation of the Final EIS and will be made part of the Administrative Record. All public comments must be received by September 22, 2024 in order to be considered in the Final EIS.

Electronic comments should be sent to the Lynden and Sumas LPOE email addresses:

- lyndenlpoe@gsa.gov
- sumaslpoe@gsa.gov

Written comments on this EIS should be mailed to:

ATTN: Patrick Manning, Capital Project Manager
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SUMMARY

The United States (U.S.) General Services Administration (GSA) proposes to modernize and expand the Kenneth G. Ward (hereafter Lynden) and Sumas Land Ports of Entry (LPOEs). The Lynden LPOE is located at the end of Washington State Route (SR) 539 at the U.S. – Canada border. The Sumas LPOE is located on SR 9 in the city of Sumas, Washington which is approximately 10 miles east of the Lynden LPOE. The ports are operated by the U.S. Department of Homeland Security’s Customs and Border Protection (CBP) and are multi-modal facilities where CBP officers inspect commercially owned vehicles (COVs), privately owned vehicles (POVs), and pedestrians.

As part of a nationwide effort, GSA, in support of CBP, conducted programmatic feasibility studies for LPOEs and identified their operational deficiencies based on applicable LPOE and GSA facility design standards. These programmatic feasibility studies provide viable alternatives to modernize and expand each port, correct deficiencies, and bring the facilities up to current standards. The feasibility study for the Lynden LPOE was completed in 2019, and the feasibility study for the Sumas LPOE was completed in 2018 (GSA 2019a; 2018). The feasibility studies determined that the existing structures do not contain the necessary square footage to meet the specified space and facility requirements of CBP (also referred to as Program of Requirements). In addition, the facilities both lack dedicated outbound inspection infrastructure.

The feasibility studies identified several alternative layouts for modernizing and expanding the ports. Following preparation of the feasibility studies, GSA initiated a Program Development Study (PDS) for each LPOE as the next step in the design process to further refine potential alternatives under consideration. The PDS process is an iterative process that builds on prior phases, and documents are issued based on a percent completion of project design. The PDS process for these LPOE projects is occurring concurrently with development of this EIS and would comply with applicable LPOE and GSA facility design standards. Alternatives analyzed in this EIS are consistent with the current draft of the PDS at the time of publication of this EIS.

ENVIRONMENTAL REVIEW PROCESS

GSA has prepared this EIS for the purpose of analyzing the potential environmental impacts resulting from the Proposed Action to modernize and expand the existing Lynden and Sumas LPOEs. The EIS has been prepared in accordance with NEPA (42 United States Code [U.S.C.] 4321 *et seq.*), the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 *Code of Federal Regulations* [CFR] 1500-1508), GSA Order ADM 1095.1F (*Environmental Consideration in Decision Making*), GSA Public Buildings Service (PBS) *NEPA Desk Guide*, and other relevant laws, regulations, and Executive Orders (EOs), including the National Historic Preservation Act (NHPA).

The projects at the Lynden and Sumas LPOEs are analyzed jointly in this EIS due to their proximity (approximately 10 miles) to one another. Operational changes at one of the two LPOEs could have impacts on the other LPOE, especially during construction. For this reason, GSA decided it was important to analyze the two LPOEs together to ensure that impacts are fully considered.

INTRODUCTION

The Lynden and Sumas LPOEs are located in Whatcom County, Washington on the U.S. – Canada border, both approximately 100 miles north of Seattle, Washington and 45 miles southeast of Vancouver, British Columbia (BC). The existing Lynden LPOE site is located at the end of SR 539, approximately 6 miles north of the city of Lynden, Washington, and occupies approximately 4.7 acres. The site is surrounded by the U.S. – Canada border to the north; structures for dairy and corn production and privately owned residences to the south; a commercial business and a small, forested area to the east; and agricultural land to the west. The Main Building was constructed in 1988. Existing facilities have received only minor additions and improvements since their original construction.

The existing Sumas LPOE site is located on SR 9 within the city of Sumas, Washington, and occupies approximately 4.0 acres. The site is surrounded by the U.S. – Canada border to the north; mixed-use commercial buildings and residential properties to the south; mixed-use commercial buildings and residential properties to the east; and Burlington Northern Santa Fe Railroad (BNSF) tracks and residential area to the west. Existing facilities have received only minor additions and improvements since their original construction in 1988.

PURPOSE AND NEED

Congress enacted the Infrastructure Investment and Jobs Act, also known as the Bipartisan Infrastructure Law, on November 15, 2021, and included \$3.4 billion for GSA to undertake 26 construction and modernization projects at LPOEs nationwide (GSA 2023a). Many of the country's LPOEs, including the Lynden and Sumas LPOEs, are outdated, long overdue for modernization, operate at full capacity, and have surpassed the needs for which they were originally designed.

The purpose of these projects is for GSA to support the CBP mission through modernizing and expanding the Lynden and Sumas LPOEs. Accomplishing this purpose would increase the functionality, capacity, operational efficiency, effectiveness, security, sustainability, and safety of the Lynden and Sumas LPOEs.

The projects are generally needed to update the current facilities at the Lynden and Sumas LPOEs, which no longer function adequately and cannot meet CBP current operational needs or Program of Requirements. The existing Lynden and Sumas LPOEs have not undergone major improvements since their construction in the late 1980s and do not have sufficient space for modernization and expansion within their current layout. Additionally, the constrained layout limits CBP's ability to incorporate new technologies as they become available. More information on the specific need for each project is included below.

Lynden LPOE Need

The Lynden LPOE processes a limited amount of commercial truck traffic; however, the existing facilities are inadequate and have space limitations that can cause delays in processing times and congestion in the commercial lane. The port's limited capacity can cause commercial vehicles to reroute and pass through other LPOEs in the region, which results in escalating wait times at other LPOEs throughout western Washington. Therefore, the modernized and expanded Lynden LPOE is needed to:

- meet CBP operational needs;
- optimize operational and traffic flows;
- address facility deficiencies;
- improve customer service;
- provide a comfortable and safe working environment for port personnel; and
- permit CBP flexibility to install new technology as it becomes available.

Sumas LPOE Need

The existing Sumas LPOE does not have enough space for efficient traffic flows, which leads to congestion and delays. Commercial vehicles do not have sufficient room to maneuver in the port, particularly when undergoing secondary inspection or moving to the NII building. These inefficiencies can cause increased processing time, impede incoming vehicles, and result in increased congestion. This congestion can lead to traffic that accumulates beyond the secure inspection areas at the LPOE, which impedes the port's operations and causes traffic and safety concerns in the surrounding urban area. This is both a concern for southbound traffic into the U.S. and northbound traffic to Canada. Currently southbound COVs queue on Railroad Avenue after they have passed primary inspection but have not yet been cleared to enter the U.S. The location where COVs queue on Railroad Avenue awaiting clearance is located outside of the LPOE

property, which, therefore, creates security issues. Northbound traffic to Canada does not currently have a location within the Sumas LPOE in which to queue; therefore, during peak periods traffic does queue on Cherry Street in the Sumas downtown. The queued traffic on Cherry Street can gridlock the downtown area of Sumas, especially during heavy traffic periods, causing difficulties for the local population attempting to access nearby businesses. There are some limited, scheduled northbound inspections of commercial and POV traffic that occur (see Section 1.2.1.2). The existing Sumas LPOE does not contain northbound inspection infrastructure; therefore, the inspections are conducted in a parking area along Sumas Avenue. This parking area is not visible from the main port area due to existing buildings, such as the American Legion building, creating a safety and security issue for inspection personnel. In addition, this area along Sumas Avenue east of the port is technically outside of the port property creating a security issue. Additionally, the Main Building at the Sumas LPOE does not have adequate space to house the required POV, pedestrian, and commercial inspection and processing operations; and there are potential security vulnerabilities due to the current layout. Therefore, the need for the modernized and expanded Sumas LPOE would be the same as the Lynden LPOE, which is documented in Section 1.3.1. An additional need for the Sumas LPOE expansion is to provide adequate space for both northbound and southbound vehicle queuing within the port property.

SUMMARY OF THE PROPOSED ACTION AND ALTERNATIVES

Proposed Action

The Proposed Action is defined as the modernization and expansion of both the Lynden and Sumas LPOEs. All action alternatives would include:

- potential land acquisition adjacent to the LPOEs;
- site preparation, including demolition and disposal of existing LPOE structures, grading, and filling;
- construction and operation of a new Main Building and other support facilities;
- addition of enclosed inspection spaces for COVs and POVs;
- enhanced accessibility; and
- improved lighting, which would be designed to minimize light pollution.

The Lynden and Sumas LPOE's proposed configurations have not been established and design considerations are ongoing. All facility and infrastructure improvements proposed under the action alternatives would be designed in accordance with applicable LPOE design standards and would incorporate a sustainable, climate-resilient, cyber-secure, and operationally efficient design. GSA would seek to meet or exceed energy and sustainability goals established by federal guidelines and policies, along with industry standard building codes and best practices. Project elements may include, but are not limited to:

- implementation of GSA's *Facilities Standards for the Public Buildings Service* (P100 Standards) and associated 2022 Addendum in facilities design (GSA 2022a), which establishes GSA's mandatory standards and criteria for GSA-owned facilities;
- mandatory standards for energy and sustainable design, historic preservation, accessibility, and other codes and standards;
- Diversion of at least 50 percent of nonhazardous construction and demolition waste from a landfill per Section 207 of EO 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*; and
- Consideration of renewable energy sources. GSA is evaluating the use of renewable energy technologies, which would be determined during design.

The PDS documents the design standards and guidance that would be incorporated into the design and construction of the modernized and expanded LPOEs (GSA 2024).

As part of the modernization and expansion of the Lynden and Sumas LPOEs, GSA intends to achieve Gold-level certification under the Leadership in Energy and Environmental Design (LEED®) green building rating system, which aligns with the CEQ *Guiding Principles of Sustainable Federal Buildings* at the highest feasible level within reasonable cost. New construction is intended to meet LEED® and Sustainable Sites Initiative (SITES) silver certification standards per P100 requirements to be determined as part of the PDS. The new facilities would comply with the Energy Independence and Security Act (EISA) of 2007. Between EISA 2007 and LEED®, each project would adhere to whichever requirements are higher. Furthermore, the projects would also adhere to the CEQ's *Guiding Principles for Sustainable Federal Buildings*. The design team would utilize GSA's *Guiding Principles Checklist* to track and report compliance.

Section 438 of the EISA 2007 specifies stormwater management requirements that would be incorporated into the final design of the Proposed Action. Relevant guidance includes:

- U.S. Environmental Protection Agency (USEPA) *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects Under Section 438 of the Energy Independence and Security Act* (USEPA 2009); and
- GSA PBS Chief Architect *Memorandum on Compliance with Section 438 (Stormwater) Requirements of the Energy Independence and Security Act of 2007* (GSA 2019b).

GSA is evaluating the use of renewable energy technologies. Renewable technologies that may be incorporated into the facility design include, but are not limited to, solar (photovoltaic [PV] or solar collectors) and certain types of geothermal heat pumps. Selection of each technology, to include final sizing, is dependent on final design. It is possible a combination of these technologies could be selected during final design.

Lynden LPOE Alternatives

GSA is considering two action alternatives for the Lynden LPOE and the No Action Alternative for comparison purposes and as required under NEPA.

Lynden LPOE Alternative 1 – No Action Alternative

The No Action Alternative for the Lynden LPOE assumes that there would be no demolition of existing facilities, no construction of newer and larger facilities, and no expansion of LPOE operations. This alternative would not meet the purpose of and need for the project because the existing facilities do not have the space or functionality to meet the current operational demands. The Lynden LPOE would continue to operate as described in Chapter 1 with limited and inadequate commercial and agricultural inspection areas, inefficient vehicle processing infrastructure, and with undersized and outdated workspace for staff and other personnel with no room for expansion. Minor repairs would occur as needed; however, this alternative would not enable the facilities to meet the current operational needs, which require upgraded and expanded inspection areas and LPOE infrastructure, revised lane formation for more efficient traffic flow, and modernized and expanded building space for LPOE staff and other personnel.

Although the No Action Alternative does not meet the purpose of and need for the Lynden LPOE modernization and expansion project, this alternative is carried forward to provide a baseline for comparison of effects to the Proposed Action alternatives.

Lynden LPOE Alternative 2 – East-West Oriented LPOE Expansion

Lynden LPOE Alternative 2 would modernize and expand the LPOE to a capacity that would allow the port to meet its current and planned future operational needs. LPOE modernization and expansion would include

potential land acquisition, site preparation (full or partial demolition, grading and filling, rock excavation), and construction. GSA may fully demolish all structures, foundations, and utilities in the project area, or they may reuse existing foundations and utilities. The extent of demolition activities would be determined during design. The maximum proposed limits of disturbance for Lynden LPOE Alternative 2 would be approximately 14.5 acres.

A majority of the modernization and expansion construction activities, including staging activities, would take place within the maximum proposed limits of disturbance. The expansion to the west would primarily support new commercial operations, while the parcel to the east of Guide Meridian Road would support reconfigured northbound traffic and outbound inspection requirements.

The proposed facilities to be constructed under Lynden LPOE Alternative 2 include:

- Main Building and Head House
- NII Building
- Commercial Inspection Yard
- Inspection Booths and Canopies
- Parking
- Outbound Inspections Area
- Inbound Inspections Area (Non-Commercial)
- Utilities

Facility functions may be consolidated or expanded pending final design. Construction activities such as connecting to existing utilities and repairing roadway and shoulder pavement may occur outside the maximum proposed limits of disturbance. The extent of this construction activity would be determined during design. The roadway pavements and shoulders within these utility connection areas would not be subject to the project's potential land acquisition. GSA would coordinate with various stakeholders, including the Washington State Department of Transportation (WSDOT), local municipalities, and associated utility providers regarding these connections and any service outages prior to commencing construction activities.

Under Lynden LPOE Alternative 2, the new Main Building would provide an established clear line-of-sight in both the north and south directions. The new Main Building would support port operations. The larger Main Building would also provide additional interior building space to better support port operational requirements and employees. A smaller building to be constructed on the east side of Guide Meridian Road would support the port's outbound commercial inspection requirements. In addition, parking and other paved surfaces would support expanded visitor (POV, bus, and pedestrian travelers), employee, and commercial vehicle parking requirements. Inspection lanes and facilities would be modernized and expanded, to include new fully operational commercial capabilities, and upgraded to handle traffic flows and improve operational efficiency.

Operations at the Lynden LPOE would be comparable to existing conditions but would be more efficient. Ongoing maintenance would be required for newly constructed facilities. The number of employees present onsite varies during peak and off-peak hours. Based on funding and resource availability, CBP may increase the current staff at the Lynden LPOE by approximately 20 personnel after the modernization and expansion project is completed.

Lynden LPOE Alternative 3 – North-South Oriented LPOE Expansion

Lynden LPOE Alternative 3 would include the same action as Lynden LPOE Alternative 2, with the one noted difference being the orientation of the LPOE alignment. The maximum proposed limits of disturbance for Lynden LPOE Alternative 3 would be approximately 10.3 acres. Under Lynden LPOE Alternative 3,

the new layout would be oriented north-south and located to the west and south of the existing port. This orientation option would facilitate more efficient commercial traffic flow (being in line or parallel to the proposed north-south oriented non-commercial flow) and would also generally mimic the port's existing north-south traffic flow. All other proposed work under Lynden LPOE Alternative 3, including potential development of the parcel on the east side of Guide Meridian Road, along with the other site preparation and construction, proposed number of buildings, inspection lanes, and phasing, would be the same as Lynden LPOE Alternative 2.

Sumas LPOE Alternatives

GSA is considering three action alternatives for the Sumas LPOE and the No Action Alternative for comparison purposes and as required by NEPA.

Sumas LPOE Alternative 1 – No Action Alternative

Sumas LPOE Alternative 1, No Action Alternative, assumes that there would be no demolition of existing facilities, no construction of newer and larger facilities, and no expansion of LPOE operations. This alternative would not meet the purpose and need of the project because the existing LPOE does not have the space or functionality to meet the current operational demands. The Sumas LPOE would continue to operate as under current conditions, with limited inspection areas, inefficient vehicle processing infrastructure, and with undersized and outdated workspace for staff and other personnel (including staff needing to drive against non-commercial vehicles on a one-way route to access the staff parking area). Minor repairs would occur as needed; however, this alternative would not enable the LPOE to meet its current operational needs, which require modernized and expanded inspection areas and LPOE infrastructure, revised lane formation for more efficient traffic flow and maneuverability and modernized and expanded building space for LPOE staff and other personnel.

Although the No Action Alternative does not meet the purpose of and need for the project, this alternative is carried forward to provide a baseline for comparison of effects from the Proposed Action alternatives.

Sumas LPOE Alternative 2 – Feasibility Study Preferred Alternative

Sumas LPOE Alternative 2 would modernize and expand the LPOE to a capacity that would allow the port to meet its current and future operational needs. LPOE modernization and expansion would include potential land acquisition, site preparation (full or partial demolition, grading and filling, rock excavation, and paving), and construction. GSA may fully demolish all structures, foundations, and utilities in the project area, or they may reuse existing foundations and utilities. The extent of demolition activities would be determined during design. The maximum proposed limits of disturbance for Sumas LPOE Alternative 2 would be approximately 12.6 acres. Sumas LPOE Alternative 2 would have an orientation or layout of the commercial inspection facility, including loading docks, adjoining the Main Building toward the eastern side of the LPOE. All construction activities, including staging activities, would take place within the maximum proposed limits of disturbance. Expansion to the west is not possible due to the existing BNSF railway located immediately west of the existing port. The expansion would support expanded inbound (southbound) and outbound (northbound) commercial and non-commercial operations, and significantly improve pedestrian traffic safety while traversing the port to and from the U.S.

The proposed facilities to be constructed under Sumas LPOE Alternative 2 include:

- Main Building
- Inbound Commercial Inspection Area
- Outbound Inspection Area
- NII Building
- Inspection Booths and Canopies

- Hazardous Materials and Agriculture Inspection Platforms
- Stormwater Detention Area
- Outdoor Parking and Staging Areas
- Utilities.

The LPOE would include a dedicated lane for the CBP NEXUS program. The NEXUS program allows pre-screened travelers expedited processing when entering the U.S. and Canada. With the exception of the NEXUS lane, all inbound POV and outbound POV lanes would be reversible as needed for seasonal traffic patterns.

Facility functions may be consolidated or expanded pending final design. Construction activities such as connecting to existing utilities and repairing roadway and shoulder pavement may occur outside the maximum proposed limits of disturbance (see Figure 2.3-3). The extent of this construction activity would be determined during design. The roadway pavements and shoulders within these utility connection areas would not be subject to the project's potential land acquisition. GSA would coordinate with various stakeholders, including the WSDOT, local municipalities, and associated utility providers regarding these connections and any service outages prior to commencing construction activities.

Under Sumas LPOE Alternative 2, a new Main Building, complete with an adjoining commercial inspection facility, would provide an established clear line-of-sight in both the north and south directions. The new Main Building would support port operations. The larger Main Building would also provide additional interior building space to better support port operational requirements and employees. A separate smaller building would support the port's outbound commercial inspection requirements. In addition, parking and other paved surfaces would support expanded employee, visitor (POV, bus, and pedestrian travelers), and commercial vehicle parking requirements, and would provide enhanced safety for pedestrian visitors. Inspection lanes and facilities would be expanded and upgraded to handle traffic flows and improve operational efficiency.

Operations at the Sumas LPOE would be comparable to existing conditions but would be more efficient. Ongoing maintenance would be required for newly constructed facilities. The number of employees present onsite varies during peak and off-peak hours. Based on funding and resource availability, CBP may increase the current staff at the Sumas LPOE by approximately 26 personnel after the modernization and expansion project is completed.

Sumas LPOE Alternative 3 – Commercial Inspection West

Sumas LPOE Alternative 3 would include the same action as Sumas LPOE Alternative 2, with the one noted difference being the orientation of the commercial inspection facility adjoining the proposed Main Building. Under Sumas LPOE Alternative 3, the maximum proposed limits of disturbance would be approximately 12.6 acres; however, the orientation or layout of the commercial inspection facility, including loading docks, adjoining the Main Building, would be "flipped" to the western side of the LPOE compared to Sumas LPOE Alternative 2. The Sumas LPOE Alternative 3 layout proposes to have the commercial hard secondary loading dock/garage area located on the building's west side, compared to Sumas LPOE Alternative 2 where this area would be located on the east side. This alternative configuration would facilitate a slight adjustment of commercial and non-commercial support facilities, resulting in a potentially smaller overall building footprint. This orientation option, compared to Sumas LPOE Alternative 2, would also potentially facilitate more efficient commercial traffic flow, particularly for any agricultural/livestock vehicles requiring U.S. Department of Agriculture (USDA) inspection at the port. All other proposed work under Sumas LPOE Alternative 3, including potential land acquisition and development of the port's east side area in support of outbound commercial inspections, along with the other site preparation and construction, proposed number of buildings, inspection lanes, and phasing, would be the same as Sumas LPOE Alternative 2.

Sumas LPOE Alternative 4 – Multi-Story Construction LPOE Expansion

Sumas LPOE Alternative 4 would include the same action as Sumas LPOE Alternatives 2 or 3; however, GSA would construct a multi-story Main Building. Operational space within the Main Building would be consolidated on multiple levels, minimizing the overall building footprint. Sumas LPOE Alternative 4 would also potentially include an employee pedestrian bridge to be constructed across Cherry Street, linking the east side parking and commercial outbound inspection facility with the west side's Main Building and adjoining commercial inspection facility, further increasing employee safety as they traverse the port. Under Sumas LPOE Alternative 4, the maximum proposed limits of disturbance would be approximately 12.6 acres. All other proposed work under Sumas LPOE Alternative 4, including development of the port's east side area in support of outbound commercial inspections, along with the other site preparation and construction, proposed number of buildings, inspection lanes, and phasing, would be similar to Sumas LPOE Alternatives 2 and 3.

Construction Sequencing Options

GSA and CBP considered two construction sequencing options for detailed analysis in this EIS: Concurrent Construction Option and Sequential Construction Option. The construction sequencing options are independent of the action alternatives that are under consideration and could be implemented under any combination of selected Action Alternatives at the two ports. Both options would require coordination of construction activities within the ports as they are constructed.

Concurrent Construction Option

Under the Concurrent Construction option, both ports would remain open during construction. As under existing conditions, it is envisioned that the Lynden LPOE would be accessible for 16 hours per day and the Sumas LPOE for 24 hours per day, 7 days per week. Pedestrian access would be maintained through the ports by utilizing and resetting, as necessary, various access and safety controls. POV access would also be maintained through both ports using various controls, which may require limits on the number of open processing lanes and shifting of POVs to COV lanes for limited times. COVs may need to be detoured at times to other ports to permit adequate space for continued POV processing.

It would be anticipated that under this option construction would require approximately 24 months to complete and fully open both modernized and expanded LPOEs.

Sequential Construction Option

Under the Sequential Construction Option, GSA and CBP are considering the potential for temporary closure of the Lynden LPOE during construction. This would facilitate faster construction of the Lynden LPOE and would permit any required or impacted COV traffic to be diverted or re-routed from the Sumas LPOE (once it is under construction) to the Lynden LPOE once the newly constructed commercial inspection facilities are operational. The Lynden LPOE is located approximately 6 miles north of the city of Lynden, whereas the Sumas LPOE is located directly in the city of Sumas. Pedestrian, POV and COV crossings are also fewer at the Lynden LPOE than at the Sumas LPOE (see Section 3.9, Traffic and Transportation, for more information). Under this option, the Sumas LPOE would remain open in essentially the current condition while the Lynden LPOE is substantially closed and under construction. Keeping the Sumas LPOE open during construction of the Lynden LPOE would provide required access under a relatively short detour, if Lynden LPOE users decide to use the Sumas LPOE.

All traffic, pedestrians, POVs, and COVs that normally use the Lynden LPOE would be detoured to other LPOEs during the majority of the construction of the Lynden LPOE. It would be anticipated that most traffic would utilize either the Sumas, Pacific Highway, or Peace Arch LPOEs. Some increase in processing delay times at these LPOEs would be expected while Lynden LPOE is constructed. With this option it is possible that some construction at Lynden LPOE could occur while the facility is open to traffic (e.g., completing building finishes, installing final lighting fixtures, etc.) and some construction at

Sumas LPOE that does not substantially impact traffic could occur while Lynden LPOE is under construction (e.g., vegetation clearing, full or partial demolition of structures outside of the general flow of traffic that are not necessarily essential to operations, etc.). GSA is considering this option with the intent of identifying the construction option that would best reduce impacts on the communities surrounding the LPOEs, with particular emphasis on the city of Sumas due commercial business and community reliance on the LPOE. It is likely that sequential construction could best limit the time required to complete construction of both projects.

Once the modernized and expanded Lynden LPOE is reopened, construction that impacts traffic (vehicular and pedestrian) would begin on the Sumas LPOE. The Sumas LPOE would remain open to pedestrians and POVs during construction to the greatest extent possible. COVs would be detoured from the Sumas LPOE to other LPOEs during portions of the construction period. It would be anticipated that most COVs would use the newly modernized and expanded Lynden LPOE. Detouring COVs from the Sumas LPOE during construction would provide more space within the port for construction activities and for setting and resetting of access controls. It would also reduce potential processing delays through the Sumas LPOE as only pedestrian and POV traffic would be allowed. The modernized and expanded Lynden LPOE would remain a 16 hour per day, 7 day per week operation as under current conditions. Therefore, COVs traveling during the nighttime hours would likely use Pacific Highway or Peace Arch LPOEs during construction of the Sumas LPOE.

It would be anticipated that under this option construction would require approximately 18 months to complete and fully open both modernized and expanded LPOEs.

IMPACT COMPARISON MATRIX

This EIS evaluates the potential impact on the environmental conditions from implementing the Proposed Action and alternatives including the No Action Alternative. For each resource area analyzed in this EIS, the expected consequences of the alternatives are summarized in Table S-1 and S-2. Impact reduction measures are summarized in Table S-3.

Table S-1. Summary Comparison of Alternatives – Lynden LPOE

Lynden LPOE Alternative 1 No Action Alternative	Lynden LPOE Alternative 2 East-West Orientation LPOE Expansion	Lynden LPOE Alternative 3 North-South Orientation LPOE Expansion
<i>Land Use</i>		
<p>No changes in land use would occur. Current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance or demolition and construction activities would occur, and land acquisition would not be needed.</p>	<p>Construction: Direct, long-term, minor, local, adverse impacts on land use, due to demolition and replacement of existing facilities. Additionally, GSA would need to acquire approximately 9.8 acres of land that currently includes farmland and a commercial business (with associated parking lot) that would be converted into buildings, paved surfaces, and landscaped areas.</p> <p>Operation: Direct, long-term, minor, regional, beneficial impacts on land use due to increased efficiency and improved traffic flow and safety to and from the LPOE.</p>	<p>Construction: Direct, long-term, moderate, local, adverse impacts on land use, due to demolition and replacement of existing facilities. Additionally, GSA would need to acquire approximately 5.6 acres of land that currently includes farmland commercial facilities, a commercial business (with associated parking lot), and a residence, that would be converted into buildings, paved surfaces, and landscaped areas.</p> <p>Operation: Direct, long-term, minor, regional, beneficial impacts on land use due to increased efficiency and improved traffic flow and safety to and from the LPOE.</p>
<i>Water Resources</i>		
<p>No ground or subsurface disturbance from new facility or infrastructure construction would occur; therefore, there would be no adverse impact to water resources.</p>	<p>Construction: Indirect, short-term, negligible, local and regional, adverse impacts to adjacent surface waters due to the potential for increased erosion, sedimentation, and pollutants to receiving waters associated with up to approximately 14.5 acres of ground disturbance. Indirect, short-term, minor, site-specific and local, adverse impacts to groundwater depending on groundwater depth-to-water due to the potential for ground-disturbing activities (including installation of a geothermal energy system) to affect groundwater flow or further degrade existing groundwater quality. No surface waters, wetlands, or floodplains occur within the project area.</p> <p>Operation: Indirect, long-term, negligible, local and regional, adverse impacts to adjacent surface waters due to an increase in impervious surfaces resulting in increased stormwater runoff volumes. This alternative could add up to 9.5 acres of new impervious area within the project area. Adverse impacts to groundwater would not be expected during operations.</p>	<p>Construction: Indirect, short-term, negligible, local and regional, adverse impacts to adjacent surface waters due to the potential for increased erosion, sedimentation, and pollutants to receiving waters associated with up to approximately 10.3 acres of ground disturbance. Indirect, short-term, minor, site-specific and local, adverse impacts to groundwater depending on groundwater depth-to-water due to the potential for ground-disturbing activities (including installation of a geothermal energy system) to affect groundwater flow or further degrade existing groundwater quality. No surface waters, wetlands, or floodplains occur within the project area.</p> <p>Operation: Indirect, long-term, negligible, local and regional, adverse impacts to adjacent surface waters due to an increase in impervious surfaces resulting in increased stormwater runoff volumes. This alternative could add up to 3.5 acres of new impervious area within the project area. Adverse impacts to groundwater would not be expected during operations.</p>

Table S-1. Summary Comparison of Alternatives – Lynden LPOE

Lynden LPOE Alternative 1 No Action Alternative	Lynden LPOE Alternative 2 East-West Orientation LPOE Expansion	Lynden LPOE Alternative 3 North-South Orientation LPOE Expansion
<i>Biological Resources</i>		
<p>No ground disturbance from new facility or infrastructure construction would occur; therefore, there would be no adverse impacts on existing biological resources.</p>	<p>Construction: Direct, short-term, minor, site-specific, adverse impacts associated with removal of vegetation during demolition and construction activities. Direct and indirect, short-term, minor, local, adverse impacts on wildlife due to temporary habitat disruption and increases in noise and human activity. With implementation of impact avoidance measures, this alternative may affect but would not likely adversely affect federally and state-protected species.</p> <p>Operation: No additional adverse impacts to vegetation or wildlife would be expected.</p>	<p>Impacts under Lynden LPOE Alternative 3 would be the same as those for Alternative 2.</p>
<i>Geology, Topography, and Soils</i>		
<p>No ground or subsurface disturbance from new facility or infrastructure construction would occur; therefore, there would be no adverse impacts on existing geology, topography, and soils.</p>	<p>Construction: Direct, short- and long-term, minor, site-specific, adverse impacts on geology and soils during demolition, clearing, and excavation for construction of new buildings and infrastructure, including a geothermal energy system, if implemented. Total maximum disturbance of approximately 14.5 acres. Direct, long-term, minor, site-specific, adverse impacts on topography due to vegetation removal and site grading, as required. Under this alternative, the western portion of the project area would need to be raised using large amounts of fill.</p> <p>Operation: Direct, long-term, minor, site-specific, adverse impacts on soils due to an increase in impervious surfaces (up to 9.5 acres of new impervious area within the project area). No additional adverse impacts to geology or topography would be expected.</p>	<p>Construction: Direct, short- and long-term, minor, site-specific, adverse impacts on geology and soils during demolition, clearing, and excavation for construction of new buildings and infrastructure, if implemented. Total maximum disturbance of approximately 10.3 acres. Direct, long-term, minor, site-specific, adverse impacts on topography due to vegetation removal and site grading, as required. This alternative would require substantially less fill material than required under Lynden LPOE Alternative 2.</p> <p>Operation: Direct, long-term, minor, site-specific, adverse impacts on soils due to an increase in impervious surfaces (up to 3.5 acres of new impervious area within the project area). No additional adverse impacts to geology or topography would be expected.</p>

Table S-1. Summary Comparison of Alternatives – Lynden LPOE

Lynden LPOE Alternative 1 No Action Alternative	Lynden LPOE Alternative 2 East-West Orientation LPOE Expansion	Lynden LPOE Alternative 3 North-South Orientation LPOE Expansion
<i>Air Quality, Climate Change, and Greenhouse Gases</i>		
<p>No construction or changes to onsite operations would occur; therefore, there would be no changes to air quality and GHG emissions.</p>	<p>Construction: Direct, short-term, minor, regional, adverse impacts on air quality from construction emissions. Construction activities would comply with all applicable federal, state, and local regulations relating to air quality, including any permitting and registration requirements. Direct, short-term, negligible, regional, adverse impact to GHG emissions and global climate change primarily from use of fuel in construction equipment, worker vehicles, and delivery and refuse trucks.</p> <p>Operation: Direct and indirect, long-term, negligible to minor, regional, adverse impacts on air quality due to a likely increase in energy demand at the modernized and expanded LPOE. Reductions in wait times for POVs could lower vehicle idling emissions, partially offsetting anticipated increases. Direct, long-term, negligible, regional, adverse impact to GHG emissions and climate change due to a likely increase in energy demand and number of employees commuting to the LPOE. Reductions in wait times for POVs could lower vehicle idling emissions, partially offsetting this increase.</p>	<p>Impacts under Lynden LPOE Alternative 3 would be the same as those for Alternative 2.</p>
<i>Human Health and Safety</i>		
<p>Current facilities and infrastructure at the existing LPOE would remain unchanged; therefore, negligible adverse impacts would continue, associated with ongoing maintenance, which would require negligible amounts of hazardous materials usage and generate negligible amounts of hazardous waste, in addition to potential risks to human health and safety associated with existing conditions and current operations.</p>	<p>Construction: Direct, short-term, minor, site-specific, adverse impacts to the health and safety of construction workers, due to the risks inherent in construction activities. Direct and indirect, short-term, negligible to minor, local, adverse impacts from hazardous materials use and waste handling due to the potential increase in such materials/wastes during demolition and construction activities, and the potential to encounter contaminated soil during excavation activities (removal of contaminated soil would represent a direct, long-term, moderate, local, beneficial impact to human health and safety). Construction would not cause demand or create hazardous conditions that would exceed the capacities of existing fire protection and emergency services.</p>	<p>Construction: Direct and indirect, short-term, negligible to minor, site-specific and local, adverse impacts to health and safety would be the same as under Lynden LPOE Alternative 2. Likewise, removal of contaminated soil would represent a direct, long-term, moderate, local, beneficial impact to human health and safety.</p> <p>Operation: Direct and indirect, long-term, minor to moderate, local, beneficial impacts on human health and safety would be the same as under Lynden LPOE Alternative 2. Direct and indirect, long-term, negligible to minor, local, adverse impacts could occur, as described under Lynden LPOE Alternative 2.</p>

Table S-1. Summary Comparison of Alternatives – Lynden LPOE

Lynden LPOE Alternative 1 No Action Alternative	Lynden LPOE Alternative 2 East-West Orientation LPOE Expansion	Lynden LPOE Alternative 3 North-South Orientation LPOE Expansion
	<p>Operation: Direct and indirect, long-term, minor to moderate, local, beneficial impacts on human health and safety, as the expanded and modernized LPOE would be compliant with applicable building and safety codes, and updated configurations would improve traffic patterns and minimize the risk of accidents. Direct, long-term, negligible to minor, adverse impacts could occur, as new facilities would be located above a site of known groundwater contamination. Risk to facility occupants would be mitigated through the installation of vapor barriers beneath the building foundation, and continued groundwater monitoring and remediation with Department of Ecology oversight. Negligible to minor adverse impacts could also result from radiation emissions from inspection equipment, although operations would be conducted in accordance with all applicable standards and codes. Direct and indirect, long-term, negligible to minor, local, adverse impacts associated with hazardous materials and waste handling, due to the potential storage of petroleum and use of paints and cleaners in facility maintenance activities. All hazardous materials would be managed in accordance with applicable federal, state, and local regulations. If implemented, closed loop geothermal systems would use antifreeze, propylene glycol, or ethanol solution as a heat exchange fluid; however, regular maintenance would minimize any potential for leaks.</p>	
Infrastructure and Utilities		
<p>Current facilities and infrastructure at the existing LPOE would remain. The LPOE would not benefit from updated facilities and infrastructure with LEED® certification that would be designed to accommodate renewable energy sources and achieve sustainable standards.</p>	<p>Construction: Direct, short-term, minor, site-specific, adverse impacts while existing infrastructure is demolished, and new facilities are constructed. Direct, short-term, local, negligible, adverse impacts locally due to increased demand on public utilities. Direct, short-term, minor, site-specific, adverse impacts on utility services as utility relocation and reconnection is required, due to the potential for temporary, intermittent shut offs. Construction of new utilizes would be conducted in accordance with applicable local and state regulations.</p>	<p>Construction: Direct, short-term, minor, site-specific, adverse impacts while existing infrastructure is demolished, and new facilities are constructed. Impacts under this alternative would be higher than under Lynden LPOE Alternative 2 due to the presence of additional infrastructure in the proposed expansion area that would be demolished. Direct, short-term, negligible, adverse impacts locally due to increased demand on public utilities. Direct, short-term, minor, site-specific, adverse impacts on utility services as utility relocation and reconnection is required, due to the potential for temporary, intermittent shut offs. Construction of new</p>

Table S-1. Summary Comparison of Alternatives – Lynden LPOE

Lynden LPOE Alternative 1 No Action Alternative	Lynden LPOE Alternative 2 East-West Orientation LPOE Expansion	Lynden LPOE Alternative 3 North-South Orientation LPOE Expansion
	<p>Operation: Direct, long-term, major, site-specific, beneficial impacts on infrastructure, as newly constructed facilities would comply with applicable GSA standards, building codes, and P100 standards, new construction is intended to meet LEED® Gold and SITES silver certification, and would support updated operational needs for CBP. New facilities, updated layout, improved inspection lanes, and updated parking lot design would improve the efficiency of processing pedestrians, COVs, and POVs, and would relieve traffic congestion. Direct, long-term, major, site-specific, beneficial impacts on utilities, due to proposed upgrades and/or replacement with more modernized systems. Direct, long-term, negligible, local, adverse impacts to public electricity and telecommunication utilities would result due to increased demand; however, much of this demand would be offset by a more efficient, sustainable facility design.</p>	<p>utilizes would be conducted in accordance with applicable local and state regulations.</p> <p>Operation: Direct, long-term, major, site-specific, beneficial impacts on infrastructure, as newly constructed facilities would comply with applicable GSA standards, building codes, and P100 standards, new construction is intended to meet LEED® Gold and SITES silver certification, and would support updated operational needs for CBP. New facilities, updated layout, improved inspection lanes, and updated parking lot design would improve the efficiency of processing pedestrians, COVs, and POVs, and would relieve traffic congestion. Direct, long-term, major, site-specific, beneficial impacts on utilities, due to proposed upgrades and/or replacement with more modernized systems. Direct, long-term, negligible, local, adverse impacts to public electricity and telecommunication utilities would result due to increased demand; however, much of this demand would be offset by a more efficient, sustainable facility design.</p>
Traffic and Transportation		
<p>Under this alternative, existing issues related to traffic congestion (and related safety and security issues) would remain unchanged.</p>	<p>Construction: Short-term, negligible to minor, adverse traffic impacts due to an increase in workers commuting to the site (approximately 10 to 15 workers per day for much of construction, with a peak of 50 to 70 workers). Under the Concurrent Construction Option, it is likely that some traffic would divert temporarily to other nearby ports. Under the Sequential Option, the Lynden LPOE would be closed during construction, requiring all traffic from the port to use an alternative location.</p> <p>Operation: Direct, long-term, local, beneficial impacts on safety, security, and congestion at the LPOE due to improved traffic configurations. No long-term impact on traffic volumes would occur.</p>	<p>Impacts under Lynden LPOE Alternative 3 would be the same as those for Alternative 2.</p>

Table S-1. Summary Comparison of Alternatives – Lynden LPOE

Lynden LPOE Alternative 1 No Action Alternative	Lynden LPOE Alternative 2 East-West Orientation LPOE Expansion	Lynden LPOE Alternative 3 North-South Orientation LPOE Expansion
<i>Noise and Vibration</i>		
<p>No construction or changes to onsite operations would occur; therefore, there would be no new increases in noise levels or adverse impacts to the noise environment and associated vibration.</p>	<p>Construction: Direct, short-term, minor, local, adverse noise impacts associated with construction activities. A conservative estimate assumes that noise levels would be approximately 90 dBA at 50 feet away. The closest residence likely to be present during construction is approximately 440 feet from areas where construction activities would occur. At this distance, outdoor noise levels would be approximately 73 dBA if all equipment were operating simultaneously; indoor noise levels would be approximately 54 dBA (with windows shut). These levels are below thresholds considered harmful by the USEPA and WHO. Increased traffic could also contribute to temporary, intermittent increases in noise, resulting in direct, short-term, minor, adverse noise impacts along primary transportation corridors. Regarding vibration, PPV levels do not reach the level at which structural damage could occur to non-historic structures (0.3 inches per second) or the threshold that could result in human annoyance (0.2 inches per second). Therefore, no adverse vibration impacts would occur.</p> <p>Operation: No additional adverse impacts on noise levels or vibration would be expected.</p>	<p>Impacts under Lynden LPOE Alternative 3 would be the same as those for Alternative 2.</p>
<i>Socioeconomics</i>		
<p>No new facility or infrastructure construction would occur; therefore, there would be no impacts on existing population and housing, labor and income, the local economy, and public services within the Lynden CCD.</p>	<p>Construction: Direct, short- to long-term, minor to moderate, local and regional, adverse impacts due to proposed land acquisition, which would impact a private farm and displace the duty-free store. GSA would provide relocation assistance for applicable stakeholders in accordance with the Uniform Act. Direct, short-term, minor, local and regional, adverse impacts to housing could result due to an influx of construction workers placing temporary, increased demand on local housing. Lodging opportunities are somewhat limited in the project area; however, 78 hotels are located within 25 miles of the Lynden LPOE.</p> <p>Under the Concurrent Construction Option, direct and indirect, short-term, minor to moderate, adverse local</p>	<p>Construction: Direct, short- to long-term, minor to moderate, local and regional, adverse impacts similar to those discussed under Lynden LPOE Alternative 2. Land acquisition under this alternative would impact a private farm, including a residence. GSA would provide relocation assistance for applicable stakeholders in accordance with the Uniform Act. Direct, short-term, minor, local and regional, adverse impacts to housing could result, as described under Lynden LPOE Alternative 2.</p> <p>Under the Concurrent Construction Option, direct and indirect, short-term, minor to moderate, adverse local socioeconomics impacts may result as commercial traffic is redirected to other ports in the region. If travelers</p>

Table S-1. Summary Comparison of Alternatives – Lynden LPOE

Lynden LPOE Alternative 1 No Action Alternative	Lynden LPOE Alternative 2 East-West Orientation LPOE Expansion	Lynden LPOE Alternative 3 North-South Orientation LPOE Expansion
	<p>socioeconomics impacts may result as commercial traffic is redirected to other ports in the region. If travelers choose to reroute to other LPOEs, there could be indirect, short-term, negligible to minor, local, adverse impact on the Lynden economy. Under the Sequential Construction Option, the Lynden LPOE would be completely closed until construction is complete, which may result in direct and indirect, short-term, negligible to minor, local, adverse impacts as travelers utilize other LPOEs.</p> <p>Operation: Direct, long-term, negligible to minor, local, beneficial impacts on population, labor, and earnings would result from increased staffing at the expanded and modernized LPOE (anticipated increase of 20 full-time employees to the current staff of 36). Any employee increase would result in a direct, long-term, minor, local, adverse impact on available housing. Additional personnel with school-age children could result in a direct, long-term, negligible, adverse impact on the local school system. Reduced traffic times at the expanded and modernized LPOE would have direct, long-term, minor to moderate, local, beneficial impacts on personal travel expenditures, resulting in indirect, long-term, minor to moderate, beneficial economic impacts to the Lynden CCD. Shorter wait times for tourists could result in direct and indirect, long-term, minor to moderate, local, beneficial impacts on earnings and employment within the Lynden CCD if tourists increase spending in the area. Direct and indirect, long-term, minor, local, beneficial impacts to community services due to improved roadway safety.</p>	<p>choose to reroute to other LPOEs, there could be indirect, short-term, negligible to minor, local, adverse impact on the Lynden economy. Under the Sequential Construction Option, the Lynden LPOE would be completely closed until construction is complete, which may result in direct and indirect, short-term, negligible to minor, local, adverse impacts as travelers utilize other LPOEs.</p> <p>Operation: Impacts would be the same as under Lynden LPOE Alternative 2.</p>

Table S-1. Summary Comparison of Alternatives – Lynden LPOE

Lynden LPOE Alternative 1 No Action Alternative	Lynden LPOE Alternative 2 East-West Orientation LPOE Expansion	Lynden LPOE Alternative 3 North-South Orientation LPOE Expansion
<i>Environmental Justice and Protection of Children’s Health and Safety</i>		
Current facilities and infrastructure at the existing LPOE would remain; therefore, there would be no change in conditions related to minority and low-income populations or children’s health and safety.	No environmental justice communities are located within a 1-mile radius of the Lynden LPOE project area; therefore, no adverse impacts to these communities would occur during construction or operation. Additionally, there are no areas within 1 mile of the maximum proposed limits of disturbance that children may regularly visit; therefore, no adverse impacts on children’s health and safety would occur.	Impacts under Lynden LPOE Alternative 3 would be the same as those for Alternative 2.

CBP = Customs and Border Protection
 CCD = census county division
 COV = commercially owned vehicle
 dBA = decibels on an A-weighted scale

GHG = greenhouse gas
 GSA = General Services Administration
 LEED® = Leadership in Energy and Environmental Design
 LPOE = Land Port of Entry

POV = privately owned vehicle
 PPV = peak particle velocity
 USEPA = United States Environmental Protection Agency
 WHO = World Health Organization

Table S-2. Summary Comparison of Alternatives – Sumas LPOE

Sumas LPOE Alternative 1 No Action Alternative	Sumas LPOE Alternative 2 Feasibility Study Preferred Alternative	Sumas LPOE Alternative 3 Commercial Inspection West	Sumas LPOE Alternative 4 Multi-Story Construction LPOE Expansion
Land Use			
<p>No changes in land use would occur. Current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance or demolition and construction activities would occur, and land acquisition would not be needed.</p>	<p>Construction: Direct, long-term, moderate, local, adverse impacts due to demolition and replacement of existing facilities. Additionally, GSA would need to acquire approximately 8.6 acres of land that currently includes commercial businesses used for shipping and receiving parcels, a closed grocery store that is currently used for small-scale book printing, a hotel/motel, a mixed-use facility, a Duty-free shop, an American Legion building, a gasoline station and mini mart, and their associated parking lots. As the project area is currently developed, land acquisition and subsequent construction would not result in land use conflicts or eliminate large portions of open space. Modification of portions of SR 9 would also occur.</p> <p>Operation: Direct, long-term, minor, regional, beneficial impacts</p>	<p>Impacts under Sumas LPOE Alternative 3 would be the same as those for Alternative 2.</p>	<p>Impacts under Sumas LPOE Alternative 4 would be the same as those for Alternative 2.</p>
Water Resources			
<p>No ground or subsurface disturbance from new facility or infrastructure construction would occur; therefore, there would be no adverse impact to water resources.</p>	<p>Construction: Indirect, short-term, negligible, local and regional, adverse impacts to adjacent surface waters due to the potential for increased erosion, sedimentation, and pollutants to receiving waters associated with up to approximately 12.6 acres of ground disturbance. Indirect, short-term, minor, site-specific and local, adverse impacts to groundwater depending on groundwater depth-to-water due to the potential for ground-disturbing activities (including installation of a geothermal energy system) to affect groundwater flow or further degrade existing groundwater quality. Direct and indirect, long-term, negligible to minor, site-specific, adverse impacts to floodplains that would be minimized through adherence to design standards and requirements related to development within floodplains. It would not be anticipated that construction would result in elevation changes within the 1-percent annual chance or 0.2-percent annual chance floodplains that would increase the chance of flooding. No surface waters or wetlands occur within the project area.</p>	<p>Impacts under Sumas LPOE Alternative 3 would be the same as those for Alternative 2.</p>	<p>Impacts under Sumas LPOE Alternative 4 would be the same as those for Alternative 2.</p>

Table S-2. Summary Comparison of Alternatives – Sumas LPOE

Sumas LPOE Alternative 1 No Action Alternative	Sumas LPOE Alternative 2 Feasibility Study Preferred Alternative	Sumas LPOE Alternative 3 Commercial Inspection West	Sumas LPOE Alternative 4 Multi-Story Construction LPOE Expansion
	<p>Operation: Indirect, long-term, negligible, local and regional, adverse impacts on adjacent surface waters due to an increase in impervious surfaces resulting in increased stormwater runoff volumes. This alternative could add up to 1.8 acres of new impervious area within the project area. Adverse impacts to groundwater or floodplains would not be expected during operations. Due to a history of major flood events in this area, it is possible that operations of the modernized and expanded LPOE could be impacted by future flood events. Flooding impacts would be minimized by adherence to design standards and requirements related to development within floodplains.</p>		
<i>Biological Resources</i>			
<p>No ground disturbance from new facility or infrastructure construction would occur; therefore, there would be no adverse impacts on existing biological resources.</p>	<p>Construction: Direct, short-term, minor, site-specific, adverse impacts associated with removal of vegetation during demolition and construction activities. Limited existing vegetation occurs within the project area. Direct and indirect, short-term, minor, local, adverse impacts on wildlife due to temporary habitat disruption and increases in noise and human activity. Existing vegetation onsite does not represent high-quality habitat for wildlife. With implementation of impact avoidance measures, this alternative may affect but would not likely adversely affect federally and state-protected species.</p> <p>Operation: No additional adverse impacts to vegetation or wildlife would be expected.</p>	<p>Impacts under Sumas LPOE Alternative 3 would be the same as those for Alternative 2.</p>	<p>Impacts under Sumas LPOE Alternative 4 would be the same as those for Alternative 2.</p>
<i>Geology, Topography, and Soils</i>			
<p>No ground or subsurface disturbance from new facility or infrastructure construction would occur; therefore, there would be no adverse impacts on existing geology, topography, and soils.</p>	<p>Construction: Direct, short- and long-term, minor, site-specific, adverse impacts on geology and soils during demolition, clearing, and excavation for construction of new buildings and infrastructure, if implemented. Total maximum disturbance of approximately 12.6 acres. Direct, long-term, negligible, site-specific, adverse impacts on topography due to vegetation removal and site grading as required; however, as the majority of the project area is</p>	<p>Impacts under Sumas LPOE Alternative 3 would be the same as those for Alternative 2.</p>	<p>Impacts under Sumas LPOE Alternative 4 would be the same as those for Alternative 2.</p>

Table S-2. Summary Comparison of Alternatives – Sumas LPOE

Sumas LPOE Alternative 1 No Action Alternative	Sumas LPOE Alternative 2 Feasibility Study Preferred Alternative	Sumas LPOE Alternative 3 Commercial Inspection West	Sumas LPOE Alternative 4 Multi-Story Construction LPOE Expansion
	<p>relatively flat and previously disturbed, topography would not change substantially.</p> <p>Operation: Direct, long-term, negligible, site-specific, adverse impacts on soils due to an increase in impervious surfaces (up to 1.8 acres of new impervious area within the project area). No additional adverse impacts to geology or topography would be expected.</p>		
<i>Air Quality, Climate Change, and Greenhouse Gases</i>			
<p>No construction or changes to onsite operations would occur; therefore, there would be no changes to air quality and GHG emissions.</p>	<p>Construction: Direct, short-term, minor, regional, adverse impacts on air quality from construction emissions. Construction activities would comply with all applicable federal, state, and local regulations relating to air quality, including any permitting and registration requirements. Direct, short-term, negligible, regional, adverse impact to GHG emissions and global climate change primarily from use of fuel in construction equipment, worker vehicles, and delivery and refuse trucks.</p> <p>Operation: Direct and indirect, long-term, negligible to minor, regional, adverse impacts on air quality due to a likely increase in energy demand at the modernized and expanded LPOE. Reductions in wait times for POVs could lower vehicle idling emissions, partially offsetting anticipated increases. Direct, long-term, negligible, regional, adverse impact to GHG emissions and climate change due to a likely increase in energy demand and number of employees commuting to the LPOE. Reductions in wait times for POVs could lower vehicle idling emissions, partially offsetting this increase.</p>	<p>Impacts under Sumas LPOE Alternative 3 would be the same as those for Alternative 2.</p>	<p>Impacts under Sumas LPOE Alternative 4 would be the same as those for Alternative 2.</p>
<i>Human Health and Safety</i>			
<p>Current facilities and infrastructure at the existing LPOE would remain unchanged; therefore, negligible adverse impacts would continue, associated with</p>	<p>Construction: Direct, short-term, minor, site-specific, adverse impacts to the health and safety of construction workers, due to the risks inherent in construction activities. Direct and indirect, short-term, negligible to minor, local, adverse impacts from hazardous materials use and waste handling due to the potential increase in such</p>	<p>Impacts under Sumas LPOE Alternative 3 would be the same as those for Alternative 2.</p>	<p>Impacts under Sumas LPOE Alternative 4 would be the same as those for Alternative 2.</p>

Table S-2. Summary Comparison of Alternatives – Sumas LPOE

Sumas LPOE Alternative 1 No Action Alternative	Sumas LPOE Alternative 2 Feasibility Study Preferred Alternative	Sumas LPOE Alternative 3 Commercial Inspection West	Sumas LPOE Alternative 4 Multi-Story Construction LPOE Expansion
<p>ongoing maintenance, which would require negligible amounts of hazardous materials usage and generate negligible amounts of hazardous waste, in addition to potential risks to human health and safety associated with existing conditions and current operations.</p>	<p>materials/wastes during demolition and construction activities, and the potential to encounter contaminated soil during excavation activities (removal of contaminated soil would represent a direct, long-term, moderate, beneficial impact to human health and safety). Construction would not cause demand or create hazardous conditions that would exceed the capacities of existing fire protection and emergency services.</p> <p>Operation: Direct and indirect, long-term, moderate, local, beneficial impacts on human health and safety, as the expanded and modernized LPOE would be compliant with applicable building and safety codes, and updated configurations would improve traffic patterns and minimize the risk of accidents. Direct, long-term, negligible to minor, local, adverse impacts could also result from radiation emissions from inspection equipment, although operations would be conducted in accordance with all applicable standards and codes. Direct and indirect, long-term, negligible to minor, local, adverse impacts associated with hazardous materials and waste handling, due to the potential storage of petroleum and use of paints and cleaners in facility maintenance activities. All hazardous materials would be managed in accordance with applicable federal, state, and local regulations. If implemented, closed loop geothermal systems would use antifreeze, propylene glycol, or ethanol solution as a heat exchange fluid; however, regular maintenance would minimize any potential for leaks.</p>		
Infrastructure and Utilities			
<p>Current facilities and infrastructure at the existing LPOE would remain. The LPOE would not benefit from updated facilities and infrastructure with LEED® certification that would be designed to accommodate</p>	<p>Construction: Direct, short-term, minor, site-specific, adverse impacts while existing infrastructure is demolished, and new facilities are constructed. Direct, short-term, negligible, adverse impacts locally due to increased demand on public utilities. Direct, short-term, minor, site-specific, adverse impacts on utility services as utility relocation and reconnection is required, due to the potential for temporary, intermittent shut offs. Construction of new</p>	<p>Impacts under Sumas LPOE Alternative 3 would be the same as those for Alternative 2.</p>	<p>Impacts under Sumas LPOE Alternative 4 would be the same as those for Alternative 2.</p>

Table S-2. Summary Comparison of Alternatives – Sumas LPOE

Sumas LPOE Alternative 1 No Action Alternative	Sumas LPOE Alternative 2 Feasibility Study Preferred Alternative	Sumas LPOE Alternative 3 Commercial Inspection West	Sumas LPOE Alternative 4 Multi-Story Construction LPOE Expansion
<p>renewable energy sources and achieve sustainable standards.</p>	<p>utilizes would be conducted in accordance with applicable local and state regulations.</p> <p>Operation: Direct, long-term, major, site-specific, beneficial impacts on infrastructure, as newly constructed facilities would comply with current GSA standards, building codes, and P100 standards, would have LEED® Gold Certification at minimum, and would support updated operational needs for CBP. New facilities, updated layout, improved inspection lanes, and updated parking lot design would improve the efficiency of processing pedestrians, COVs, and POVs, and would relieve traffic congestion. Direct, long-term, major, site-specific, beneficial impacts on utilities, due to proposed upgrades and/or replacement with more modernized systems. Direct, long-term, negligible, local, adverse impacts to public electricity and telecommunication utilities would result due to increased demand; however, much of this demand would be offset by a more efficient, sustainable facility design.</p>		
Traffic and Transportation			
<p>Under this alternative, existing issues related to traffic congestion (and related safety and security issues) would remain unchanged.</p>	<p>Construction: Short-term, negligible to minor, adverse traffic impacts due to an increase in workers commuting to the site (approximately 10 to 15 workers per day for much of construction, with a peak of 50 to 70 workers). Under the Concurrent Construction Option, it is likely that some traffic would divert temporarily to other nearby ports. Under the Sequential Option, the Lynden LPOE would be closed during construction, requiring all traffic from the port to use an alternative location. Even if all Lynden LPOE traffic diverted to the Sumas LPOE, SR 9 would continue to meet WSDOT level of service standard.</p> <p>Operation: Long-term, beneficial impacts on safety, security, and congestion at the LPOE due to improved traffic configurations. No long-term impact on traffic volumes would occur.</p>	<p>Impacts under Sumas LPOE Alternative 3 would be the same as those for Alternative 2.</p>	<p>Impacts under Sumas LPOE Alternative 4 would be the same as those for Alternative 2.</p>

Table S-2. Summary Comparison of Alternatives – Sumas LPOE

Sumas LPOE Alternative 1 No Action Alternative	Sumas LPOE Alternative 2 Feasibility Study Preferred Alternative	Sumas LPOE Alternative 3 Commercial Inspection West	Sumas LPOE Alternative 4 Multi-Story Construction LPOE Expansion
Noise and Vibration			
<p>No construction or changes to onsite operations would occur; therefore, there would be no new increases in noise levels or adverse impacts to the noise environment and associated vibration.</p>	<p>Construction: Direct, short-term, minor to moderate, adverse noise impacts associated with construction activities. The closest residences to the area where construction activities would occur are approximately 80 feet away. If all equipment were operating simultaneously, it is estimated that noise levels would be approximately 89 dBA outdoors and 69 dBA indoors (with windows shut) at that distance. Occupants of the Valley Community Church and Sumas City Hall may also be impacted by increased noise levels; noise levels at these locations during construction would not be expected to exceed 90 dBA outdoors and 70 dBA indoors (with windows shut) for temporary periods. These levels are below thresholds considered harmful by the USEPA and WHO. Increased traffic could also contribute to temporary, intermittent increases in noise, resulting in direct, short-term, minor, adverse noise impacts along primary transportation corridors. Regarding vibration, anticipated PPV levels do not reach the level at which structural damage to historic or non-historic structures could occur (0.1 and 0.3 inches per second, respectively) or the threshold that could result in human annoyance (0.2 inches per second). Therefore, no adverse vibration impacts would occur.</p> <p>Operation: No additional adverse impacts on noise levels or vibration would be expected.</p>	<p>Impacts under Sumas LPOE Alternative 3 would be the same as those for Alternative 2.</p>	<p>Impacts under Sumas LPOE Alternative 4 would be the same as those for Alternative 2.</p>
Socioeconomics			
<p>No new facility or infrastructure construction would occur; therefore, there would be no impacts on existing population and housing, labor and income, the local economy, and public services within the Sumas CCD.</p>	<p>Construction: Direct, short- to long-term, minor to moderate, local and regional, adverse impacts due to proposed land acquisition, which would displace at least four active businesses as well as the American Legion Post 212. GSA would provide relocation assistance for applicable stakeholders in accordance with the Uniform Act. Direct, short-term, minor, local and regional, adverse impacts to housing could result due to an influx of construction workers placing temporary, increased demand</p>	<p>Impacts under Sumas LPOE Alternative 3 would be the same as those for Alternative 2.</p>	<p>Impacts under Sumas LPOE Alternative 4 would be the same as those for Alternative 2.</p>

Table S-2. Summary Comparison of Alternatives – Sumas LPOE

Sumas LPOE Alternative 1 No Action Alternative	Sumas LPOE Alternative 2 Feasibility Study Preferred Alternative	Sumas LPOE Alternative 3 Commercial Inspection West	Sumas LPOE Alternative 4 Multi-Story Construction LPOE Expansion
	<p>on local housing. Lodging opportunities are somewhat limited in the project area; however, 50 hotels are located within 25 miles of the Sumas LPOE.</p> <p>Under the Concurrent Construction Option, direct and indirect, short-term, minor to moderate, adverse local socioeconomic impacts may result as commercial traffic is redirected to other ports in the region. If travelers choose to reroute to other LPOEs, there could be indirect, short-term, minor to moderate, local, adverse impact on the Sumas economy, which relies directly on the Sumas LPOE for economic support. Direct, short-term, negligible to minor, local, beneficial impacts could result as construction workers utilizing temporary lodging spend wages locally. Under the Sequential Construction Option, indirect, short-term, minor to moderate, local, adverse impacts could occur if travelers choose to utilize other LPOEs while the Sumas LPOE is undergoing construction.</p> <p>Operation: Direct, long-term, negligible to minor, local, beneficial impacts on population, labor, and earnings would result from increased staffing at the expanded and modernized LPOE (anticipated increase of 26 full-time employees to the current staff of 73). Direct, long-term, minor, local, adverse impacts on available housing. Additional personnel with school-age children could result in a direct, long-term, negligible, adverse impact on the school system. Reduced traffic times would have direct, long-term, minor to moderate, beneficial economic impacts to the Sumas CCD. Shorter wait times for tourists could result in direct and indirect, long-term, minor to moderate, local, beneficial impacts on earnings and employment within the Sumas CCD if tourists increase spending in the area. Direct and indirect, long-term, minor, local, beneficial impacts to community services due to improved roadway safety.</p>		

Table S-2. Summary Comparison of Alternatives – Sumas LPOE

Sumas LPOE Alternative 1 No Action Alternative	Sumas LPOE Alternative 2 Feasibility Study Preferred Alternative	Sumas LPOE Alternative 3 Commercial Inspection West	Sumas LPOE Alternative 4 Multi-Story Construction LPOE Expansion
<i>Environmental Justice and Protection of Children's Health and Safety</i>			
<p>Current facilities and infrastructure at the existing LPOE would remain; therefore, there would be no change in conditions related to minority and low-income populations or children's health and safety.</p>	<p>Construction: Direct, short-term, minor to moderate, local, adverse impacts on children's health and safety, as children may be present in residences or at the Sumas Elementary School located within 1 mile of the project area. Children are especially vulnerable to air pollution and increased noise levels may affect learning.</p> <p>Operation: Direct, long-term, negligible, local, beneficial impact on children's health and safety, as operations would remain comparable to current conditions, but more efficient.</p> <p>No environmental justice communities are located within a 1-mile radius of the Sumas LPOE project area; therefore, no adverse impacts to these communities would occur during construction or operation.</p>	<p>Impacts under Sumas LPOE Alternative 3 would be the same as those for Alternative 2.</p>	<p>Impacts under Sumas LPOE Alternative 4 would be the same as those for Alternative 2.</p>

CBP = Customs and Border Protection
 CCD = census county division
 COV = commercially owned vehicle
 dBA = decibels on an A-weighted scale

GHG = greenhouse gas
 GSA = General Services Administration
 LEED® = Leadership in Energy and Environmental Design
 LPOE = Land Port of Entry

POV = privately owned vehicle
 PPV = peak particle velocity;
 USEPA = United States Environmental Protection Agency
 WHO = World Health Organization

Table S-3. Impact Reduction Measures

Resource Area	Impact Reduction Measures
Land Use	<p>Although local governments cannot regulate or permit activities of the federal government on federally owned land, GSA would consider local zoning laws for construction and operation of the proposed LPOE and all design requirements of state and local governments to the extent practicable. This could include both the incorporation of exterior design elements to reflect the unique character of the area and the emphasis on pedestrian circulation and amenities, such as landscaped plazas and walkways, to the extent practicable and consistent with GSA design standards. To ensure minimal conflicts with land use, GSA would continue coordination efforts during the design process with city and county governments, WSDOT, utility providers, and other stakeholders.</p>
Water Resources	<p>LEED® Gold certification for the project would include objectives for reducing adverse impacts to water quality and minimizing risks from flooding hazards. In addition, GSA requires a minimum SITES Silver rating.</p> <p>GSA would follow the impact reduction measures and BMPs outlined in the NPDES permit. GSA would also take into account BMPs listed in the Stormwater Manual for Western Washington.</p> <p>GSA would seek to adhere to development standards provided in the city of Sumas' critical area ordinance to address current and future flood risks.</p> <p>GSA additionally commits to:</p> <ul style="list-style-type: none"> • Developing in compliance with Section 438 of the 2007 EISA with the objective of restoring the hydrology to predevelopment conditions; • Considering green infrastructure and low impact development practices, such as reducing impervious surfaces, using vegetated swales and revegetation, and using porous pavements; and • Developing an SPCC plan, as applicable.
Biological Resources	<p>General measures to reduce or avoid construction impacts on biological resources would include:</p> <ul style="list-style-type: none"> • Only approved, native species would be used for revegetation. When possible, pollinator-friendly plant species would be used. These plant species would not be invasive or noxious species, and disturbed areas would be promptly restored or revegetated to the extent practicable following construction. • Construction equipment would be washed before and after coming to the site to the extent practicable to limit the transport of invasive species. If non-native invasive species are present in the project area, these plants would be eradicated and removed from the site before earthmoving activities begin. • All buildings scheduled for demolition would be inspected for nests prior to any demolition activities. Any further requirements would be determined in coordination with applicable state and federal resource agencies pending survey results. • If construction activities occur within the nesting periods of migratory birds that may be found within the ROI (see Section 3.4 of the EIS) or the yellow-billed cuckoo (June to early August), surveys would be conducted for nests prior to initiating demolition or construction activities. Any further requirements would be determined in coordination with applicable federal resource agencies pending survey results. • If milkweed plants are observed within the proposed expansion areas, they would be avoided to the extent practicable in order to reduce potential impacts to the federal candidate monarch butterfly. If avoidance is not practicable, milkweed plants would be transplanted outside of the project area. When transplanting milkweed plants, care would be taken to retain as much of the tap root as possible. Digging 4 inches away from each side of the plant would help avoid cutting the tap root. Transplanting in early spring or in late summer/late fall may also increase success. • If the project is determined to have potential to disturb or kill eagles, a permit under the BGEPA would be obtained.

Table S-3. Impact Reduction Measures

Resource Area	Impact Reduction Measures
Geology, Topography, and Soils	Measures to reduce construction impacts on geology and soil-related concerns, such as soil erosion, loss, and stability, would be addressed in the project design plans, as well as through erosion and sediment controls and site stabilization measures as specified through applicable NPDES permit requirements. Such measures would include setting up barriers and utilizing standard BMPs (e.g., earth walls, soil nails, riprap, turbidity barriers, etc.) to reduce impacts to soils or from soil erosion. Refer to Section 3.3, Water Resources, for a discussion of additional measures that would limit impacts from soil loss as a result of erosion during construction and operations.
Air Quality, Climate Change, and Greenhouse Gases	<p>Construction activities within the project area would generate fugitive dust (non-toxic PM) emissions. Precautions to prevent PM from becoming airborne could include:</p> <ul style="list-style-type: none"> • Using water for dust control when grading roads or clearing land. • Stabilizing open storage piles and disturbed areas by covering and/or applying water or organic dust palliative where appropriate. This is applicable to both active and inactive sites during workdays, weekends, holidays, and windy conditions. • Paving roadways and maintaining them in a clean condition. • Covering open equipment when conveying or transporting material likely to create objectionable air pollution when airborne. • Promptly removing spilled or tracked dirt or other materials from other streets. • Installing wind fencing and phasing grading operations where appropriate and operating water trucks for stabilization of surfaces under windy conditions. • When hauling material and operating non-earthmoving equipment, preventing spillage, limiting speeds to 15 mph and limiting speeds of earth-moving equipment of 10 mph. <p>The following source-specific controls could be considered to minimize emissions during construction activities:</p> <ul style="list-style-type: none"> • Reduce unnecessary idling from heavy equipment. • Prohibit engine tampering to increase horsepower, except when meeting manufacturer's recommendations. • Lease or buy newer, cleaner equipment using the best available emissions control technologies. • Use lower-emitting engines and fuels, including electric, liquified gas, hydrogen fuel cells, and/or alternative diesel formulations, if feasible. • Have on-highway vehicles meet, or exceed, the USEPA exhaust emissions standards for model year 2010 and newer heavy-duty nonroad compression-ignition engines (e.g., nonroad trucks, construction equipment, cargo handlers, etc.). • Have nonroad vehicles and equipment meet, or exceed, the USEPA Tier 4 exhaust emissions standards for heavy-duty nonroad compression-ignition engines (e.g., nonroad trucks, construction equipment, cargo handlers, etc.). <p>The following administrative controls could be considered during construction:</p> <ul style="list-style-type: none"> • Locate diesel engines, motors, and equipment staging areas as far as possible from residential areas and other sensitive receptors (e.g., schools, daycare centers, hospitals, senior centers, etc.). • Avoid routing truck traffic near sensitive land uses to the fullest extent feasible. • Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emissions controls for each piece of equipment before groundbreaking. • Reduce construction-related trips of workers and equipment, including trucks.

Table S-3. Impact Reduction Measures

Resource Area	Impact Reduction Measures
	<ul style="list-style-type: none"> • Develop a construction traffic and parking management plan, if required, that minimizes traffic interference and maintains traffic flow and safety. • Implement measures to minimize idling emissions from cars waiting to cross the border, such as anti-idling policies <p>Many of the mitigation measures for air quality identified above would also serve to reduce GHG emissions. GSA would take the following additional steps to minimize GHGs:</p> <ul style="list-style-type: none"> • Use low embodied carbon concrete and environmentally preferable asphalt cement that reduce GHG missions. • Recycle construction debris to the maximum extent feasible.
Human Health and Safety	<p>Measures that would limit impacts related to human health and safety during construction and operation include:</p> <ul style="list-style-type: none"> • Prior to demolition, an inspection of the buildings to be demolished would be performed by a licensed asbestos inspector and a demolition application would need to be completed and filed with the NWCAA. • Water would be applied to the ground surface during construction and other soil disturbing activities as a means of dust suppression. • GSA would require diversion of at least 50 percent of nonhazardous construction and demolition waste from landfills per Section 207 of EO 14057, Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability. • All spills or releases of petroleum, oils, lubricants, hazardous materials, pollutants, or contaminants would be handled in accordance with measures outlined in a Spill Prevention and Response Plan prepared for construction. • GSA would develop a SPCC plan during final design for operations of each facility, assuming the facility meets the requirements to prepare a plan per 40 CFR 112. • As a BMP, a Soil Management Plan may be prepared to address the potential for encountering areas of environmental concern (e.g., contaminated soil) during grading, excavation, or other subsurface disturbance. The Soil Management Plan would identify specific measures to address hazardous waste and materials cleanup efforts, including monitoring, handling, stockpiling, characterization, onsite reuse, export, and disposal protocols for excavated soil. • All personnel would follow federal regulations and standard handling procedures as specified in product Safety Data Sheets for hazardous materials. • All potentially hazardous wastes generated would be properly characterized, segregated, and managed onsite prior to offsite disposal. • If PCB-containing materials are identified onsite, appropriate abatement actions for their disposal would be implemented in accordance with regulatory requirements, and soils beneath transformers would be evaluated for evidence of releases. If present in underlying soils, appropriate actions for removal and disposal would be implemented in accordance with applicable regulatory requirements. • Any existing municipal (household) trash, construction debris, and other waste materials would be removed from all project areas and disposed of in accordance with applicable regulations. • Potentially hazardous wastes generated during project-related construction activities would be disposed of or recycled at appropriate facilities in accordance with applicable regulatory requirements.

Table S-3. Impact Reduction Measures

Resource Area	Impact Reduction Measures
	<ul style="list-style-type: none"> • Construction workers would adhere to safety standards promulgated in 29 CFR 17 to protect against workplace hazards. To minimize potential exposure or safety concerns to workers, appropriate personal protection equipment would be worn. • Signs, barriers, and traffic cones would be installed to direct vehicles and non-construction personnel away from the construction area
Infrastructure and Utilities	GSA would coordinate with utility providers in advance of demolition and construction activities to determine the best course of action to avoid or minimize impacts, either by implementing measures to protect utility lines or by arranging for their temporary or permanent relocation.
Traffic and Transportation	<p>Measures that would mitigate the impacts associated with traffic during construction include:</p> <ul style="list-style-type: none"> • Minimize construction truck movement during peak traffic hours; • Place construction staging areas where they would least interfere with local traffic and parking; • Minimize impacts to pedestrians during construction activities by providing appropriate information and signage to pedestrians and motorists who are traveling through the area; and • Develop a construction traffic and parking management plan, if required, that minimizes traffic interference and maintains traffic flow and safety.
Noise and Vibration	<p>Potential construction noise impacts would be minimized to the extent practicable utilizing standard noise control measures, such as equipment noise controls (e.g., mufflers), limitations or prohibition of equipment idling, minimizing equipment usage to short periods of time to the extent possible, and limitations or prohibitions on running equipment for extended periods when not necessary. OSHA regulations (i.e., wearing hearing protection and limiting exposure) would be followed to reduce the impact of high noise levels on construction workers that could occur during construction.</p> <p>Nighttime (10 PM to 7 AM) construction activities at either LPOE would require a variance from Washington State. Nighttime construction activities at the Sumas LPOE would require a variance from the city of Sumas.</p> <p>No impact reduction measures are required for vibration as no impacts would occur.</p>
Socioeconomics	Measures to reduce construction impacts described for other resource topics (particularly air quality, noise, and traffic) would also reduce adverse impacts on quality of life.
Environmental Justice and Protection of Children	Disproportionate impacts to communities with environmental justice concern would not occur under any of the alternatives. Therefore, no impact reduction measures are required. Measures to reduce construction impacts described for other resource topics (particularly air quality, noise, and traffic) would also reduce adverse impacts on children's health and safety.

BGEPA = Bald and Golden Eagle Protection Act
 BMP = best management practices
 CFR = Code of Federal Regulations
 EIS = Environmental Impact Statement
 EISA = Energy Independence and Security Act
 EO = Executive Order
 GHG = greenhouse gas

GSA = General Services Administration
 LEED® = Leadership in Energy and Environmental Design
 LPOE = Land Port of Entry
 mph = miles per hour
 NPDES = National Pollutant Discharge Elimination System
 NWCAA = Northwest Clean Air Agency
 PCB = non-polychlorinated biphenyl

PM = particulate matter
 ROI = region of interest
 SITES = Sustainable Sites Initiative
 SPCC = spill prevention, control, and countermeasures
 USEPA = United States Environmental Protection Agency
 WSDOT = Washington State Department of Transportation

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ACRONYMS

Acronym	Definition
AADT	Annual Average Daily Traffic
ACM	asbestos-containing material
ADA	Americans with Disabilities Act
AG	Agriculture
APE	area of potential effect
AST	aboveground storage tank
ASTM	American Society for Testing and Materials
BC	British Columbia
BCC	birds of conservation concern
BGEPA	Bald and Golden Eagle Protection Act
BMP	best management practices
BNSF	Burlington Northern Santa Fe Railroad
BTS	Bureau of Transportation Statistics
CAA	Clean Air Act
CBP	Customs and Border Protection
CBSA	Canada Border Services Agency
CCD	census county division
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH ₄	methane
CO ₂	carbon dioxide
COG	Council of Government
COV	commercially owned vehicle
CWA	Clean Water Act
dB	decibels
DFA	Duty Free Americas
dBA	decibels on an A-weighted scale
DOSH	Division of Occupational Safety and Health
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EO	Executive Order
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
GHG	greenhouse gas
GMA	Growth Management Act
GSA	U.S. General Services Administration
GWP	global warming potential
HAP	hazardous air pollutant
HSS	highways of statewide significance
HUC	Hydrologic Unit Code
IDP	Inadvertent Discovery Plan
IECC	International Energy Conservation Code
IPaC	Information for Planning and Consultation

Acronym	Definition
LBP	lead-based paint
LEED®	Leadership in Energy and Environmental Design
LPOE	Land Port of Entry
LRR	Land Resource Region
LUST	leaking underground storage tank
MBTA	Migratory Bird Treaty Act
MLRA	Major Land Resource Area
mph	miles per hour
MPO	Metropolitan Planning Organization
msl	mean sea level
MTCA	Model Toxics Control Act
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAICS	North American Industry Classification System
NEPA	National Environmental Policy Act
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NII	non-intrusive inspection
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NSPS	New Source Performance Standard
NSR	New Source Review
NWCAA	Northwest Clean Air Agency
O ₃	ozone
OSHA	Occupational Health and Safety Administration
PBS	Public Buildings Service
PCB	non-polychlorinated biphenyl
PDS	Program Development Study
PM _{2.5}	very fine particulate matter 2.5 micrometers or smaller
PM ₁₀	fine particulate matter 10 micrometers or smaller
POV	privately owned vehicle
ppm	parts per million
PPV	peak particle velocity
PSD	Prevention of Significant Deterioration
PSE	Puget Sound Energy
RCRA	Resources Conservation and Recovery Act of 1976
RCW	Revised Code of Washington
ROD	Record of Decision
ROI	region of influence
SC-GHG	social cost of greenhouse gases
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SITES	Sustainable Sites Initiative
SO ₂	sulfur dioxide
SPCC	spill prevention, control, and countermeasures
SR	State Route
STIP	State Transportation Improvement Program
SWPPP	stormwater pollution prevention plan

Acronym	Definition
TC	Tourist Commercial
THPO	Tribal Historic Preservation Officer
TMDL	Total Maximum Daily Load
U.S.C	U.S. Code
USDA	U.S. Department of Agriculture
U.S. DOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
VOC	volatile organic compound
vpd	vehicles per day
vph	vehicles per hour
WAC	Washington Administrative Code
WDFW	Washington Department of Fish and Wildlife
WHO	World Health Organization
WNHP	Washington Natural Heritage Program
WOTUS	Waters of the U.S.
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation
WSS	Web Soil Survey

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CHAPTER 1 PURPOSE AND NEED

This chapter introduces the United States (U.S.) General Services Administration's (GSA) proposed Kenneth G. Ward (hereafter Lynden) and the Sumas Land Ports of Entry (LPOEs) Modernization and Expansion project and describes the purpose of and need for agency action and the scope of this Draft Environmental Impact Statement (EIS). This chapter also summarizes the National Environmental Policy Act (NEPA) of 1969 process and relevant regulations, and both project's backgrounds and objectives.

1.1 INTRODUCTION

The mission of GSA is to deliver the best customer experience in real estate, acquisition, and technology services to the government and the American people. The mission of GSA includes the design, construction, management, maintenance, custody, and control of federal buildings, including 122 of the 167 U.S. LPOEs. The Public Buildings Service (PBS) of GSA assists federal agency customers housed in GSA facilities with their current and future workplace needs based on their specific mission requirements. The Lynden LPOE is located at the end of Washington State Route (SR) 539 at the U.S. – Canada border. The Sumas LPOE is located on SR 9 in the city of Sumas, which is approximately 10 miles east of the Lynden LPOE. The ports are operated by the U.S. Department of Homeland Security's Customs and Border Protection (CBP) and are multi-modal facilities where CBP officers inspect commercially owned vehicles (COVs), privately owned vehicles (POVs), and pedestrians. The mission of the CBP is to safeguard America's borders thereby protecting the public from dangerous people and materials while enhancing the Nation's global economic competitiveness by enabling legitimate trade and travel.

As part of a nationwide effort, GSA, in support of CBP, conducted programmatic feasibility studies for LPOEs and identified their operational deficiencies based on applicable LPOE and GSA facility design standards. These programmatic feasibility studies provide viable alternatives to modernize and expand each port, correct deficiencies, and bring the facilities up to current standards. The feasibility study for the Lynden LPOE was completed in 2019, and the feasibility study for the Sumas LPOE was completed in 2018 (GSA 2019a; 2018). The feasibility studies determined that the existing structures do not contain the necessary square footage to meet the specified space and facility requirements of CBP (also referred to as Program of Requirements). In addition, the facilities both lack dedicated outbound inspection infrastructure.

The feasibility studies identified several alternative layouts for modernizing and expanding the ports. Following preparation of the feasibility studies, GSA initiated a Program Development Study (PDS) for the Lynden and Sumas LPOEs as the next step in the design process to further refine potential alternatives under consideration. The PDS process is an iterative process that builds on prior phases, and documents are issued based on a percent completion of project design. The PDS process for these LPOE projects is occurring concurrently with development of this EIS and would comply with applicable LPOE and GSA facility design standards. Alternatives analyzed herein are consistent with the PDS at the time of publication of this EIS.

GSA has prepared this EIS for the purpose of analyzing the potential environmental impacts resulting from the Proposed Action to modernize and expand the existing Lynden and Sumas LPOEs. The EIS has been prepared in accordance with NEPA (42 United States Code [U.S.C.] 4321 *et seq.*), the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 *Code of Federal Regulations* [CFR] 1500-1508), GSA Order ADM 1095.1F (*Environmental Consideration in Decision Making*), GSA PBS *NEPA Desk Guide*, and other relevant laws, regulations, and Executive Orders (EOs), including the National Historic Preservation Act (NHPA).

The projects at the Lynden and Sumas LPOEs are analyzed jointly in this EIS due to their proximity (approximately 10 miles) to one another. Operational changes at one of the two LPOEs could have impacts on the other LPOE, especially during construction. For this reason, GSA decided it was important to analyze the two LPOEs together to ensure that impacts are fully considered.

Throughout this EIS, the Lynden LPOE will be discussed first followed by the Sumas LPOE. Document headings will clearly identify the appropriate LPOE.

1.2 PROJECT AREA AND BACKGROUND

The Lynden and Sumas LPOEs are located in Whatcom County, Washington on the U.S. – Canada border. The LPOEs are both approximately 100 miles north of Seattle, Washington and 45 miles southeast of Vancouver, British Columbia (BC). Figure 1.2-1 displays the regional location of the Lynden and Sumas LPOEs and their proximity to the Pacific Highway and Peace Arch LPOEs located in Blaine, Washington. The Pacific Highway and Peace Arch LPOEs are located approximately 12 miles west of the Lynden LPOE and 22 miles west of the Sumas LPOE.

The Lynden LPOE is at the end of SR 539 and is approximately 6 miles north of the city of Lynden, Washington. The LPOE is adjacent to the U.S. – Canada border and Canada Border Services Agency (CBSA) Aldergrove LPOE to the north; structures for dairy and corn production and privately owned residences to the south; a commercial business and a small, forested area to the east; and agricultural land to the west.

The Sumas LPOE is located on SR 9, directly south of the U.S. – Canada border in the city of Sumas, Washington. The LPOE is located adjacent to the Canadian international border and CBSA Abbotsford LPOE to the north; mixed-use commercial buildings and residential properties to the south; mixed-use commercial buildings and residential properties to the east; and Burlington Northern Santa Fe Railroad (BNSF) tracks and residential area to the west.

1.2.1 Existing Facilities

1.2.1.1 Lynden LPOE Existing Facilities

The Lynden LPOE operates 16 hours per day, 7 days per week, and services traffic between Lynden, Washington and Aldergrove, BC. The facilities are situated on a 4.73-acre site and include the Main Building, three primary inspection lanes, one commercial inspection lane, two enclosed inspection garages, and a loading dock. Photo 1.2-1 shows the existing Lynden LPOE campus. Figure 1.2-2 shows the Lynden LPOE existing facilities.



Source: Solv LLC 2023a

PHOTO 1.2-1. LYNDEN LPOE

The Lynden LPOE Main Building is sited on SR 539, which is also known as Guide Meridian Road. Incoming traffic passes on the west side of the building, and outbound traffic passes to the east beyond the adjacent commercial business. The LPOE is open from 8:00 AM to 12:00 AM and processes POVs, buses, pedestrians, and a limited amount of permitted commercial traffic. During the hours when the Lynden LPOE is not operational, traffic reroutes to other nearby LPOEs, including Sumas, Pacific Highway, and Peace Arch LPOEs.



Source: Esri 2023

Figure 1.2-1. Lynden and Sumas LPOEs Regional Location



Source: Google Earth 2023a

Figure 1.2-2. Lynden LPOE Existing Facilities

The Main Building was constructed in 1988 and is a one-story building with approximately 16,425 gross square feet. The main level of the building includes a primary inspection booth, an open officer work area, a public waiting area with a service counter, three holding cells, the port director's office, staff lockers, and a storage room. The loading dock is situated off the west side of the building. All interior spaces are fully utilized with no room for expansion (GSA 2019a). The existing facilities of the Lynden LPOE have only received minor additions and improvements since their original construction in 1988.

CBP is the only tenant of the Lynden LPOE. While personnel from the Animal and Plant Health Inspection Service (APHIS), U.S. Fish and Wildlife Service (USFWS), and the U.S. Food and Drug Administration come onsite periodically (as needed), these agencies are not tenants of the LPOE and do not perform routine vehicle inspections. GSA PBS also has a presence at the LPOE as they are responsible for facilities management, such as maintenance and repair.

The LPOE contains four total inspection lanes, three of which are primary non-commercial lanes, and one which can also process limited commercial traffic. All four lanes are covered by the primary inspection canopy, which spans the highway off the Main Building. CBP personnel perform primary inspections of POV traffic from one primary inspection booth attached to the interior of the Main Building, two detached inspection booths, and one high-low inspection booth (i.e., booths with high and low windows for processing both POVs and commercial traffic). Commercial vehicles (i.e., trucks and buses) and large POVs such as recreational vehicles or pickup trucks with attached camping trailers undergo primary inspection in the far western lane, which contains the high-low inspection booth.

Secondary inspection occurs on an as-needed basis in the inspection lanes or at the non-commercial secondary inspection area. The non-commercial secondary inspection area consists of two covered inspection bays, which are located south of the Main Building (GSA 2019a).

1.2.1.2 Sumas LPOE Existing Facilities

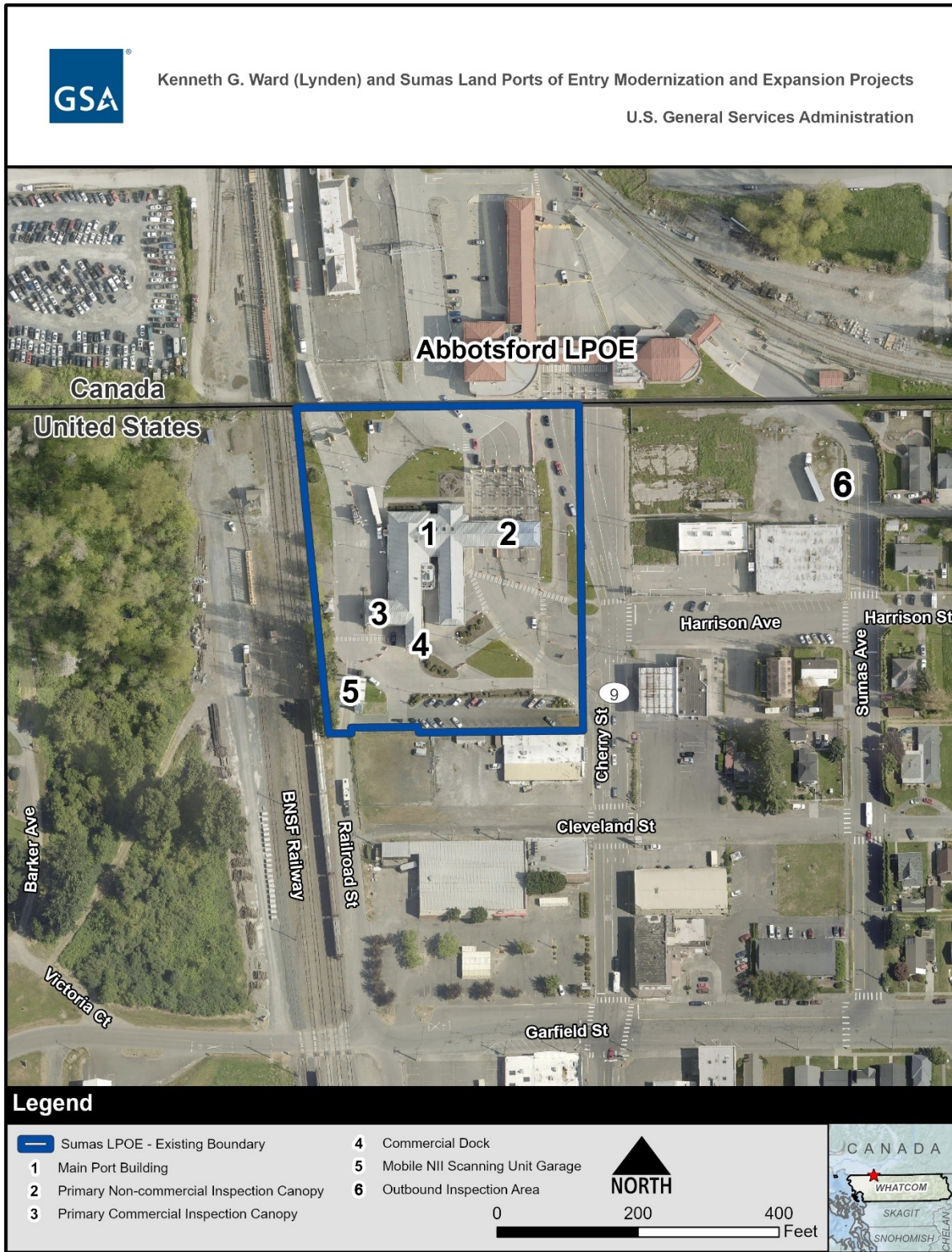


Source: Solv LLC 2023b

PHOTO 1.2-2. SUMAS LPOE

The Sumas LPOE operates 24 hours per day, 7 days per week, and services traffic between Sumas, Washington, and Abbotsford, BC. The facilities are situated on a 4.02-acre site and include the Main Building, primary non-commercial inspection canopy, non-commercial secondary inspection canopy, primary commercial inspection canopy, a commercial dock, and a garage housing a mobile non-intrusive inspection (NII) scanning unit. Photo 1.2-2 shows the existing Sumas LPOE campus. Figure 1.2-3 shows the Sumas LPOE existing facilities. The existing facilities of the Sumas LPOE have only received minor additions and improvements since their original construction in 1988 (GSA 2018). The Sumas LPOE Main Building processes POVs, buses, pedestrians, and commercial traffic.

Incoming traffic passes on the east side of the building and outbound traffic passes to the east of the incoming traffic lanes on Cherry Street (SR 9). Outbound inspections for traffic to Canada are not routinely conducted at the Sumas LPOE; some scheduled outbound inspections of commercial traffic do occasionally occur along Sumas Avenue near the American Legion building. As the existing Sumas LPOE does not have any dedicated outbound inspection facilities, scheduled outbound inspections are conducted in a parking lot along Sumas Avenue. This area is blocked from view from the main port area by buildings, such as the American Legion building.



Source: Google Earth 2023b

Figure 1.2-3. Sumas LPOE Existing Facilities

The Main Building of the Sumas LPOE is a single-story, 12,339-square-foot structure. The facility offers sight lines to incoming traffic and provides CBP with spaces for administrative functions, pedestrian and non-commercial passenger processing, commercial processing, storage, and support facilities. Other spaces in the building include holding cells, a violator processing area, employee locker and restrooms, enclosed offices, a break room, mechanical and electrical spaces, a non-commercial secondary inspection garage, an agriculture specialist's lab, and an office. The building is fully occupied and has no space for expansion (GSA 2018).

The LPOE currently contains four primary non-commercial lanes. Pedestrian traffic transits through indoor processing queues and spaces. All four non-commercial lanes and the pedestrian entrance are covered by the non-commercial inspection canopy, which extends to the east from the Main Building. One of the four primary non-commercial lanes can accommodate buses and other oversized vehicles.

The non-commercial secondary inspection canopy extends to the south of the Main Building's roof and covers three secondary lanes and a separate passenger entrance to the public lobby. The two non-commercial canopies are perpendicular to each other forming an "L" at the southeast corner of the building. A hard secondary inspection garage is located between the secondary canopy and the Main Building.

The commercial inspection facilities are located on the west side of the Main Building and include two primary lanes and booths without a canopy, a secondary inspection canopy, a two-bay loading dock, and warehouse space in the Main Building. The warehouse, used primarily for CBP storage, is near the south end of the building. This area of the Main Building also includes spaces for an emergency generator, conference room, exercise room, and office space. Inspections using mobile NII equipment are conducted in a freestanding metal building at the southwest corner of the site.

1.3 PURPOSE AND NEED

Congress enacted the Infrastructure Investment and Jobs Act, also known as the Bipartisan Infrastructure Law, on November 15, 2021 and included \$3.4 billion for GSA to undertake 26 construction and modernization projects at LPOEs nationwide (GSA 2023a). Many of the country's LPOEs, including the Lynden and Sumas LPOEs, are outdated, long overdue for modernization, operate at full capacity, and have surpassed the needs for which they were originally designed.

The purpose of these projects is for GSA to support the CBP mission through modernizing and expanding the Lynden and Sumas LPOEs. Accomplishing this purpose would increase the functionality, capacity, operational efficiency, effectiveness, security, sustainability, and safety of the Lynden and Sumas LPOEs.

The projects are generally needed to update the current facilities at the Lynden and Sumas LPOEs, which no longer function adequately and cannot meet CBP current operational needs or Program of Requirements. The existing Lynden and Sumas LPOEs have not undergone major improvements since their construction in the late 1980s and do not have sufficient space for modernization and expansion within their current layout. Additionally, the constrained layout limits CBP's ability to incorporate new technologies as they become available.

More information on the specific need for each project is included in Sections 1.3.1 and 1.3.2 for the Lynden and Sumas LPOE projects, respectively.

1.3.1 Lynden LPOE Need

The Lynden LPOE processes a limited amount of commercial truck traffic; however, the existing facilities are inadequate and have space limitations that can cause delays in processing times and congestion in the commercial lane. The port's limited capacity can cause commercial vehicles to reroute and pass through other LPOEs in the region, which results in escalating wait times at other LPOEs throughout western Washington. Therefore, the modernized and expanded Lynden LPOE is needed to:

- meet CBP operational needs;
- optimize operational and traffic flows;
- address facility deficiencies;
- improve customer service;
- provide a comfortable and safe working environment for port personnel; and
- permit CBP flexibility to install new technology as it becomes available.

1.3.2 Sumas LPOE Need

The existing Sumas LPOE does not have enough space for efficient traffic flows, which leads to congestion and delays. Commercial vehicles do not have sufficient room to maneuver in the port, particularly when undergoing secondary inspection or moving to the NII building. These inefficiencies can cause increased processing time, impede incoming vehicles, and result in increased congestion. This congestion can lead to traffic that accumulates beyond the secure inspection areas at the LPOE, which impedes the port's operations and causes traffic and safety concerns in the surrounding urban area. This is both a concern for southbound traffic into the U.S. and northbound traffic to Canada. Currently southbound COVs queue on Railroad Avenue after they have passed primary inspection but have not yet been cleared to enter the U.S. The location where COVs queue on Railroad Avenue awaiting clearance is located outside of the LPOE property, which, therefore, creates security issues. Northbound traffic to Canada does not currently have a location within the Sumas LPOE in which to queue; therefore, during peak periods traffic does queue on Cherry Street in the Sumas downtown. The queued traffic on Cherry Street can gridlock the downtown area of Sumas, especially during heavy traffic periods, causing difficulties for the local population attempting to access nearby businesses. There are some limited, scheduled northbound inspections of commercial and POV traffic that occur (see Section 1.2.1.2). The existing Sumas LPOE does not contain northbound inspection infrastructure; therefore, the inspections are conducted in a parking area along Sumas Avenue. This parking area is not visible from the main port area due to existing buildings, such as the American Legion building, creating a safety and security issue for inspection personnel. In addition, this area along Sumas Avenue east of the port is technically outside of the port property creating a security issue. Additionally, the Main Building at the Sumas LPOE does not have adequate space to house the required POV, pedestrian, and commercial inspection and processing operations; and there are potential security vulnerabilities due to the current layout. Therefore, the need for the modernized and expanded Sumas LPOE would be the same as the Lynden LPOE, which is documented in Section 1.3.1. An additional need for the Sumas LPOE expansion is to provide adequate space for both northbound and southbound vehicle queuing within the port property.

1.4 RELEVANT ENVIRONMENTAL LAWS AND REGULATIONS

1.4.1 National Environmental Policy Act and NEPA Process

NEPA was signed into law on January 1, 1970, requiring federal agencies to consider the potential impacts to the natural and human environment from their proposed actions and disclose the potential impacts in a document that is circulated for public review. The NEPA process is intended to help public officials make decisions based on an understanding of the environmental consequences and to take actions that protect, restore, and enhance the environment (40 CFR 1500.1). Therefore, in accordance with NEPA, GSA will take this EIS and related input from the public and other federal agencies into consideration as part of its decision-making process.

Federal agencies are required to provide meaningful opportunities for public participation in a proposed action. Opportunities for the public to become involved in the NEPA process occur when an agency begins scoping and when a NEPA document is published for public review and comment.

1.4.2 Section 106 of the National Historic Preservation Act

The NHPA of 1966 (16 U.S.C. 470), as amended, is the most comprehensive federal law pertaining to the preservation and protection of the Nation's historic properties (i.e., districts, sites, buildings, structures, and objects). Section 106 of the NHPA requires federal agencies to consider the effects of their activities on such properties.

Implementing regulations for Section 106 are in 36 CFR 800 (*Protection of Historic Properties*), which requires the responsible federal agency, in consultation with the State Historic Preservation Officer (SHPO)/Tribal Historic Preservation Officer (THPO), and federally recognized tribes, to determine the level of effort to identify historically significant cultural resources in the area of potential effects (APE) of the undertaking.

Obligations under NEPA and Section 106 are distinct and independent of each other and would be conducted concurrently and separately. In accordance with 36 CFR 800, federal agencies are encouraged to coordinate studies and documents prepared under Section 106 with those done under NEPA. Section 800.8(a) of the regulations provides guidance on how NEPA and Section 106 processes can be coordinated. GSA will conform to the consultation, identification, and documentation standards set forth in 36 CFR 800.8(c) and will notify in advance the Advisory Council on Historic Preservation, SHPO, and THPO where it intends to use the NEPA process to comply with Section 106.

Further details on the Section 106 process that was conducted for this EIS are discussed in Section 3.1.3.4, Cultural Resources and Chapter 6, Consultation and Coordination.

1.4.3 Section 7 of the Endangered Species Act

The Endangered Species Act provides a means for conserving the ecosystems upon which threatened and endangered species depend and a program for the conservation of such species. The Endangered Species Act directs all federal agencies to participate in conserving these species and to use their authorities to further the purposes of the Act.

Section 7 of the Endangered Species Act outlines the procedures for federal interagency cooperation to conserve federally listed species and designated critical habitats. Specifically, Section 7(a)(1) charges federal agencies to aid in the conservation of threatened and endangered species, and Section 7(a)(2) requires the agencies to ensure that their activities are not likely to jeopardize the continued existence of listed species or adversely modify designated critical habitats.

GSA Section 7 consultation activities for this EIS are described in more detail in Section 3.4, Biological Resources, and Chapter 6, Consultation and Coordination.

1.4.4 Other Relevant Laws, Regulations and Requirements

CEQ regulations for NEPA found in 40 CFR 1502.24 state that, to the fullest extent possible, agencies shall prepare draft EISs concurrently and integrated with environmental impact analyses and related surveys and studies required by environmental review laws and EOs. It also requires a draft EIS to list all federal permits, licenses, and other entitlements that must be obtained in implementing the Proposed Action. Table 1-1 provides a list of potentially relevant laws and regulations with which GSA must comply as part of the project planning and NEPA processes.

In addition to the relevant laws and regulations listed in Table 1-1 that apply to the projects under NEPA, there are a number of design standards and guidance documents that will influence the design of the LPOEs. The standards and guidance documents are not specific to NEPA and therefore are not listed here; however, they are incorporated by reference to the PDS (GSA 2024). The most pertinent of these standards are listed briefly in Section 2.2 of this EIS.

Table 1-1. Relevant Laws and Regulations

Statutes
Archaeological Resources Protection Act of 1979 (16 U.S.C. § 470aa-mm)
Bald and Golden Eagle Protection Act (16 U.S.C. § 668-668d)
Clean Air Act of 1970 as amended (42 U.S.C. § 7401, et seq.)
Clean Water Act of 1977 as amended (33 U.S.C. § 1251, et seq.)
Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. § 9601, et seq.)
Endangered Species Act of 1973 (16 U.S.C. § 1531-1544)
Energy Independence and Security Act (42 U.S.C. § 17001, et seq.)
Migratory Bird Treaty Act (16 U.S.C. § 703, et seq.)
National Energy Conservation Policy Act (42 U.S.C. § 8231, et seq.)
National Historic Preservation Act of 1966 (54 U.S.C. § 300101 et seq.) (89 Public Law 665 (1966))
Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. § 3001 et seq.)
Resource Conservation and Recovery Act of 1976 (42 U.S.C. § 6901, et seq.)
Safe Drinking Water Act (42 U.S.C. § 300, et seq.)
Inflation Reduction Act of 2022 (Public Law 117-369, 136 Statute 1818)
Regulations
29 CFR 1910.95 – <i>Occupational Noise Exposure</i>
32 CFR 229 – <i>Protection of Archaeological Resources: Uniform Regulations</i>
32 CFR 259 – <i>Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally-Assisted Programs</i>
40 CFR 280 Subpart F – <i>Release Response and Corrective Action for UST Systems Containing Petroleum of Hazardous Substances</i>
33 CFR 320-330 – <i>U.S. Army Corps of Engineers Regulations</i>
36 CFR 800 – <i>Protection of Historic Properties</i>
40 CFR 300-399 – <i>Hazardous Substance Regulations</i>
40 CFR 6, 51, and 93 – <i>Conformity of General Federal Actions to State or Federal Implementation Plans</i>
40 CFR 1500-1508 – <i>CEQ Regulations</i>
<i>Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation</i> (48 FR 44716)

Table 1-1. Relevant Laws and Regulations

Executive Orders
EO 11593 – <i>Protection and Enhancement of the Cultural Environment</i>
EO 11988 – <i>Floodplain Management</i>
EO 12088 – <i>Federal Compliance and Pollution Control</i>
EO 12898 – <i>Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations</i>
EO 13007 – <i>Indian Sacred Sites</i>
EO 13045 – <i>Protection of Children from Environmental Health Risks and Safety Risks</i>
EO 13112 – <i>Invasive Species</i>
EO 13175 – <i>Consultation and Coordination with Indian Tribal Governments</i>
EO 13287 – <i>Preserve America</i>
EO 13327 – <i>Federal Real Property Asset Management</i>
EO 13589 – <i>Promoting Efficient Spending</i>
EO 13690 – <i>Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input</i>
EO 13990 – <i>Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis</i>
EO 14008 – <i>Tackling the Climate Crisis at Home and Abroad</i>
EO 14030 – <i>Climate-Related Financial Risk</i>
EO 14057 – <i>Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability</i>
EO 14096 – <i>Revitalizing Our Nation’s Commitment to Environmental Justice for All</i>
Revised Code of Washington State
Title 70: <i>Public Health and Safety</i>
Title 70A: <i>Environmental Health and Safety</i>
Title 79: <i>Chapter 79.36: Easements Over Public Lands</i>
Title 80: <i>Public Utilities</i>
Title 81: <i>Transportation</i>
Title 86: <i>Flood Control</i>
Title 90: <i>Water Rights—Environment</i>
Title 91: <i>Waterways</i>

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CHAPTER 2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

Chapter 2 describes the alternatives development process and the alternatives that are analyzed in this EIS. This chapter also discusses the alternatives that were considered and dismissed by GSA.

2.1 ALTERNATIVES DEVELOPMENT PROCESS

As described in Chapter 1, GSA completed feasibility studies for the Lynden LPOE in 2018 (GSA 2018) and the Sumas LPOE in 2019 (GSA 2019a). The feasibility studies identified several alternatives to be studied further for each LPOE. Subsequent to the feasibility studies, coordination between GSA and CBP resulted in identification of two action alternatives for the Lynden LPOE and three action alternatives for the Sumas LPOE. This EIS will assess each of these alternatives, along with a No Action Alternative for each LPOE. The alternatives will be further refined as part of the PDS that is occurring concurrently with this EIS. The alternatives analyzed herein are consistent with the current draft of the PDS at the time of publication of this Draft EIS. The Final EIS will be updated, as applicable to incorporate refinements to the proposed alternatives throughout the PDS process.

2.2 PROPOSED ACTION

The Proposed Action is defined as the modernization and expansion of both the Lynden and Sumas LPOEs. All action alternatives would include:

- potential land acquisition adjacent to the LPOEs;
- site preparation, including full or partial demolition and disposal of existing LPOE structures, grading, and filling;
- construction and operation of a new Main Building and other support facilities;
- addition of enclosed inspection spaces for COVs and POVs;
- enhanced accessibility; and
- improved lighting, which would be designed to minimize light pollution.

The Lynden and Sumas LPOE's proposed configurations have not been established and design considerations are ongoing. All facility and infrastructure improvements proposed under the action alternatives would be designed in accordance with applicable LPOE design standards and would incorporate a sustainable, climate-resilient, cyber-secure, and operationally efficient design. GSA would seek to meet or exceed energy and sustainability goals established by federal guidelines and policies, along with industry standard building codes and best practices. Sustainability elements may include, but are not limited to:

- implementation of GSA's *Facilities Standards for the Public Buildings Service* (P100 Standards) and associated 2022 Addendum in facilities design (GSA 2022a), which establishes GSA's mandatory standards and criteria for GSA-owned facilities;
- mandatory standards for energy and sustainable design, historic preservation, accessibility, and other codes and standards;
- Diversion of at least 50 percent of nonhazardous construction and demolition waste from a landfill per Section 207 of EO 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*; and
- Consideration of renewable energy sources. GSA is evaluating the use of renewable energy technologies, which would be determined during design.

The PDS documents the design standards and guidance that would be incorporated into the design and construction of the modernized and expanded LPOEs (GSA 2024).

As part of the modernization and expansion of the Lynden and Sumas LPOEs, GSA intends to achieve Gold-level certification under the Leadership in Energy and Environmental Design (LEED®) green building rating system, which aligns with the CEQ *Guiding Principles of Sustainable Federal Buildings* at the highest feasible level within reasonable cost. New construction is intended to meet LEED® and achieve Sustainable Sites Initiative (SITES) Silver certification standards per P100 requirements to be determined as part of the PDS. The new facilities would comply with the Energy Independence and Security Act (EISA) of 2007. Between EISA 2007 and LEED®, each project would adhere to whichever requirements are higher. Furthermore, the projects would also adhere to the CEQ's *Guiding Principles for Sustainable Federal Buildings*. The design team would utilize GSA's *Guiding Principles Checklist* to track and report compliance.

Section 438 of the EISA 2007 specifies stormwater management requirements that would be incorporated into the final design of the Proposed Action. Relevant guidance includes:

- U.S. Environmental Protection Agency (USEPA) *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects Under Section 438 of the Energy Independence and Security Act* (USEPA 2009); and
- GSA PBS Chief Architect *Memorandum on Compliance with Section 438 (Stormwater) Requirements of the Energy Independence and Security Act of 2007* (GSA 2019b).

2.3 PROPOSED ALTERNATIVES

As part of the decision-making process, GSA intends on selecting an alternative for the Lynden LPOE and the Sumas LPOE (i.e., two alternatives would be selected). Alternatives are presented individually throughout this EIS, although implementation of both alternatives is also considered in Chapter 3.

2.3.1 Lynden LPOE Alternatives

GSA is considering two action alternatives for the Lynden LPOE and the No Action Alternative for comparison purposes and as required under NEPA.

2.3.1.1 Lynden LPOE Alternative 1 - No Action Alternative

The No Action Alternative for the Lynden LPOE assumes that there would be no demolition of existing facilities, no construction of newer and larger facilities, and no expansion of LPOE operations. This alternative would not meet the purpose of and need for the project because the existing facilities do not have the space or functionality to meet the current operational demands. The Lynden LPOE would continue to operate as described in Chapter 1 with limited and inadequate commercial and agricultural inspection areas, inefficient vehicle processing infrastructure, and with undersized and outdated workspace for staff and other personnel with no room for expansion. Minor repairs would occur as needed; however, this alternative would not enable the facilities to meet the current operational needs, which require upgraded and expanded inspection areas and LPOE infrastructure, revised lane formation for more efficient traffic flow, and modernized and expanded building space for LPOE staff and other personnel.

Although the No Action Alternative does not meet the purpose of and need for the Lynden LPOE modernization and expansion project, this alternative is carried forward to provide a baseline for comparison of effects to the Proposed Action alternatives.

2.3.1.2 Lynden LPOE Alternative 2 - East-West Oriented LPOE Expansion

Lynden LPOE Alternative 2 would modernize and expand the LPOE to a capacity that would allow the port to meet its current and planned future operational needs. LPOE modernization and expansion would include potential land acquisition, site preparation (full or partial demolition, grading and filling, rock excavation), and construction. GSA may fully demolish all structures, foundations, and utilities in the project area, or they may reuse existing foundations and utilities. The extent of demolition activities would be determined during design. The maximum proposed limits of disturbance for Lynden LPOE Alternative 2 would be approximately 14.5 acres (see Figure 2.3-1).

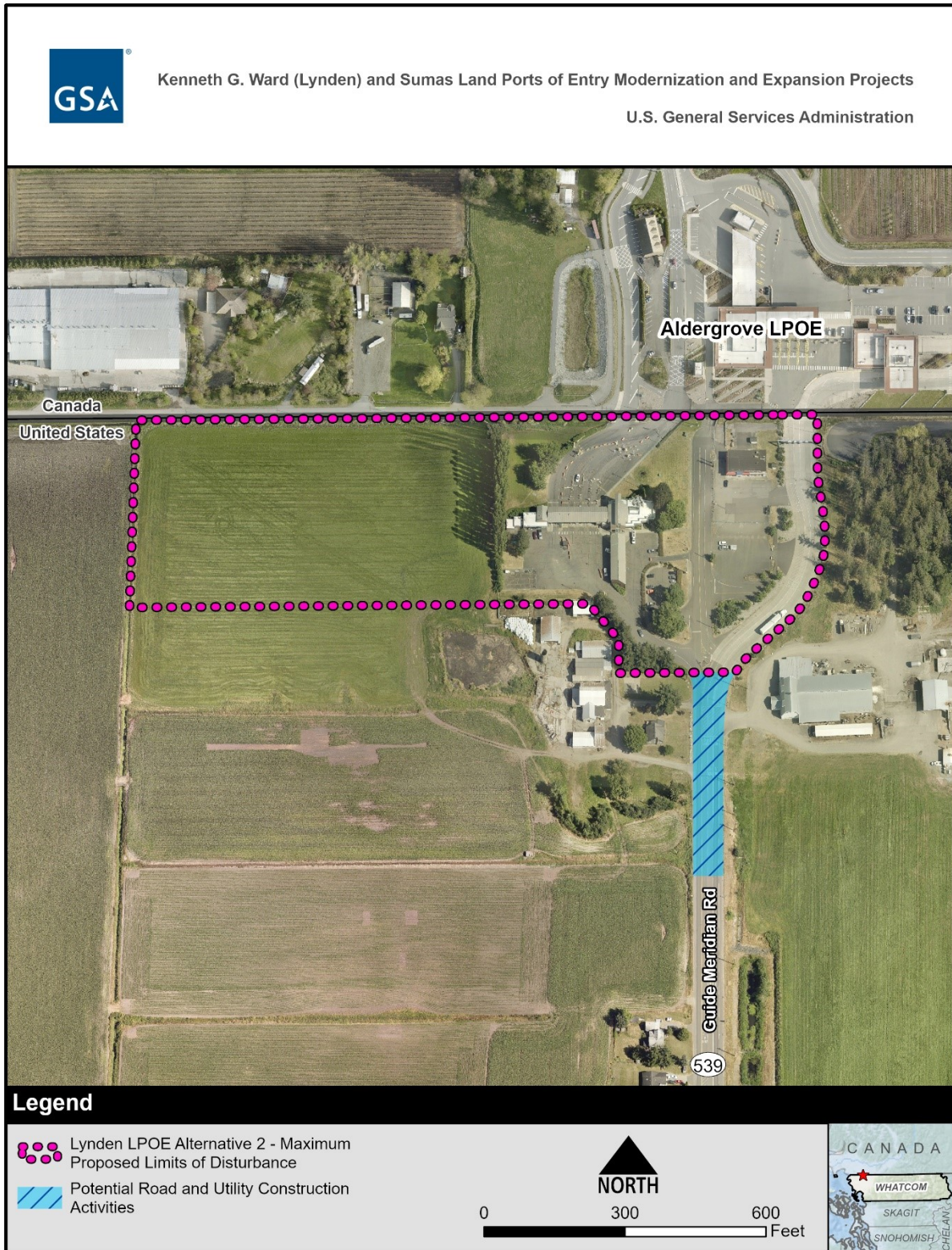


Figure 2.3-1. Lynden LPOE Alternative 2 – Maximum Proposed Limits of Disturbance

A majority of the modernization and expansion construction activities, including staging activities, would take place within the maximum proposed limits of disturbance. The expansion to the west would primarily support new commercial operations, while the parcel to the east of Guide Meridian Road would support reconfigured northbound traffic and outbound inspection requirements.

The proposed facilities to be constructed under Lynden LPOE Alternative 2 would generally include:

- Main Building and Head House
- NII Building
- Commercial Inspection Yard
- Inspection Booths and Canopies
- Parking (visitor and staff)
- Outbound Inspections Area
- Inbound Inspections Area (Non-Commercial)
- Utility infrastructure, including potable water supply, septic, stormwater detention, and generators

Facility functions may be consolidated or expanded pending final design. Construction activities such as connecting to existing utilities and repairing roadway or shoulder pavement may occur outside the maximum proposed limits of disturbance (see Figure 2.3-1). The extent of this construction activity would be determined during design. The roadway pavements and shoulders within these utility connection areas shown on Figure 2.3-1 would not be subject to the project's potential land acquisition. GSA would coordinate with various stakeholders, including the Washington State Department of Transportation (WSDOT), local municipalities, and associated utility providers regarding these connections and any service outages prior to commencing construction activities.

Under Lynden LPOE Alternative 2, the new Main Building would provide an established clear line-of-sight in both the north and south directions. The new Main Building would support port operations. The larger Main Building would also provide additional interior building space to better support port operational requirements and employees. A smaller building to be constructed on the east side of Guide Meridian Road would support the port's outbound commercial inspection requirements. In addition, parking and other paved surfaces would support expanded visitor (POV, bus, and pedestrian travelers), employee, and commercial vehicle parking requirements. Inspection lanes and facilities would be modernized and expanded, to include new fully operational commercial capabilities, and upgraded to handle traffic flows and improve operational efficiency.

Operations at the Lynden LPOE would be comparable to existing conditions but would be more efficient. Ongoing maintenance would be required for newly constructed facilities. The number of employees present onsite varies during peak and off-peak hours. Based on funding and resource availability, CBP may increase the current staff at the Lynden LPOE by approximately 20 personnel after the modernization and expansion project is completed.

2.3.1.3 Lynden LPOE Alternative 3 - North-South Oriented LPOE Expansion

Lynden LPOE Alternative 3 would include the same action as Lynden LPOE Alternative 2, with the one noted difference being the orientation of the LPOE alignment. The maximum proposed limits of disturbance for Lynden LPOE Alternative 3 would be approximately 10.3 acres (see Figure 2.3-2). Under Lynden LPOE Alternative 3, the new layout would be oriented north-south and located to the west and south of the existing port. This orientation option would facilitate more efficient commercial traffic flow (being in line or parallel to the proposed north-south oriented non-commercial flow) and would also generally mimic the port's existing north-south traffic flow. All other proposed work under Lynden LPOE Alternative 3, including potential development of the parcel on the east side of Guide Meridian Road, along with the other site preparation and construction, proposed number of buildings, inspection lanes, and phasing, would be the same as Lynden LPOE Alternative 2.

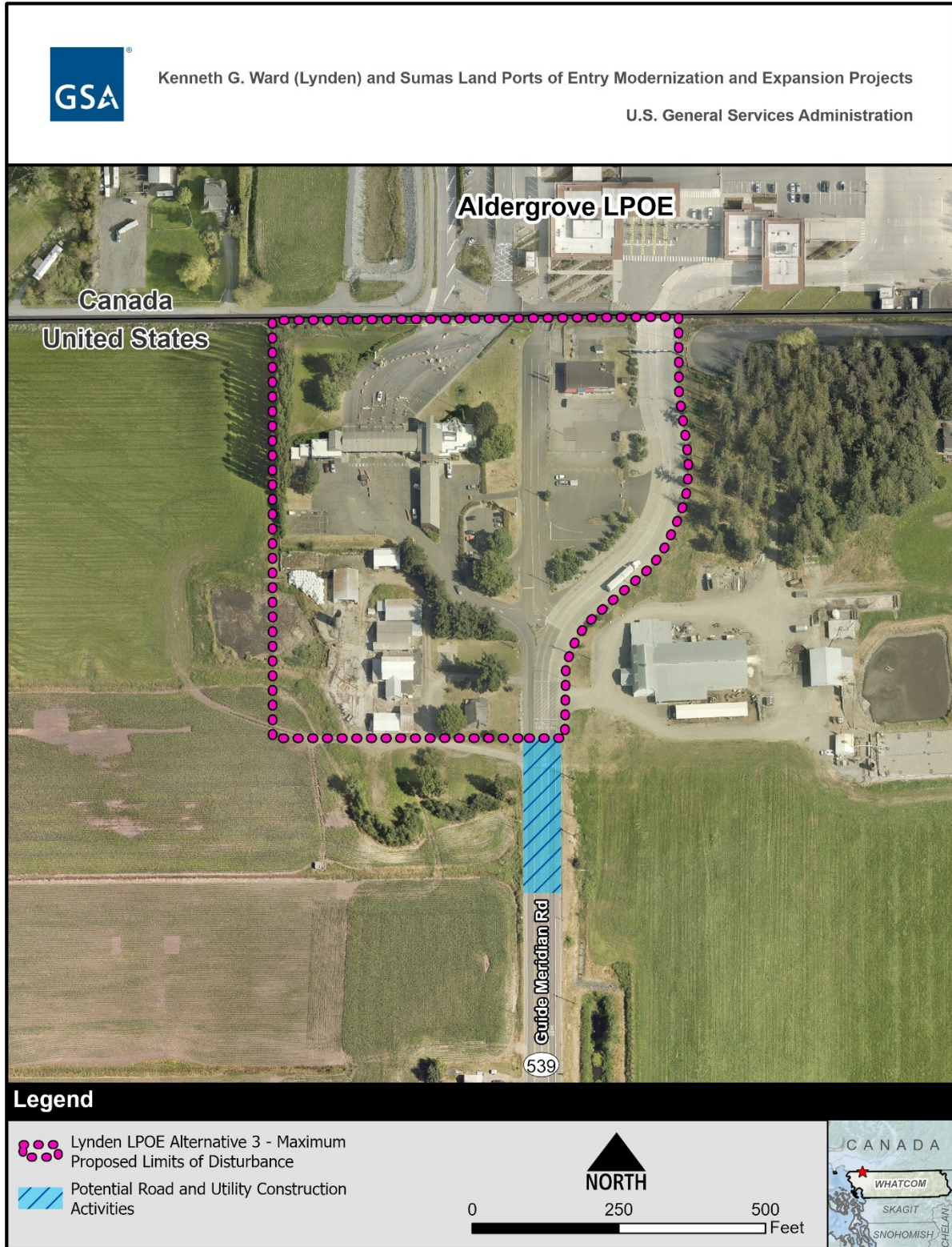


Figure 2.3-2. Lynden LPOE Alternative 3 – Maximum Proposed Limits of Disturbance

2.3.2 Sumas LPOE Alternatives

GSA is considering three action alternatives for the Sumas LPOE and the No Action Alternative for comparison purposes and as required by NEPA.

2.3.2.1 Sumas LPOE Alternative 1 – No Action Alternative

Sumas LPOE Alternative 1, No Action Alternative, assumes that there would be no demolition of existing facilities, no construction of newer and larger facilities, and no expansion of LPOE operations. This alternative would not meet the purpose and need of the project because the existing LPOE does not have the space or functionality to meet the current operational demands. The Sumas LPOE would continue to operate as under current conditions, with limited inspection areas, inefficient vehicle processing infrastructure, and with undersized and outdated workspace for staff and other personnel (including staff needing to drive against non-commercial vehicles on a one-way route to access the staff parking area). Minor repairs would occur as needed; however, this alternative would not enable the LPOE to meet its current operational needs, which require modernized and expanded inspection areas and LPOE infrastructure, revised lane formation for more efficient traffic flow and maneuverability and modernized and expanded building space for LPOE staff and other personnel.

Although the No Action Alternative does not meet the purpose of and need for the project, this alternative is carried forward to provide a baseline for comparison of effects from the Proposed Action alternatives.

2.3.2.2 Sumas LPOE Alternative 2 – Feasibility Study Preferred Alternative

Sumas LPOE Alternative 2 would modernize and expand the LPOE to a capacity that would allow the port to meet its current and future operational needs. LPOE modernization and expansion would include potential land acquisition, site preparation (full or partial demolition, grading and filling, rock excavation, and paving), and construction. GSA may fully demolish all structures, foundations, and utilities in the project area, or they may reuse existing foundations and utilities. The extent of demolition activities would be determined during design. The maximum proposed limits of disturbance for Sumas LPOE Alternative 2 would be approximately 12.6 acres (see Figure 2.3-3). Sumas LPOE Alternative 2 would have an orientation or layout of the commercial inspection facility, including loading docks, adjoining the Main Building toward the eastern side of the LPOE. A majority of the modernization and expansion construction activities, including staging activities, would take place within the maximum proposed limits of disturbance. Expansion to the west is not possible due to the existing BNSF railway located immediately west of the existing port. The expansion would support expanded inbound (southbound) and outbound (northbound) commercial and non-commercial operations, and significantly improve pedestrian traffic safety while traversing the port to and from the U.S.

The proposed facilities to be constructed under Sumas LPOE Alternative 2 would generally include:

- Main Building
- Inbound Commercial Inspection Area
- Outbound Inspections Area
- NII Building
- Inspection Booths and Canopies
- Hazardous Materials and Agriculture Inspection Platforms
- Commercial Inspection Yard
- Outdoor Parking and Staging Areas
- Utility infrastructure, including potable water supply, septic, stormwater detention, and generators

The LPOE would include a dedicated lane for the CBP NEXUS program. The NEXUS program allows pre-screened travelers expedited processing when entering the U.S. and Canada. With the exception of the NEXUS lane, all inbound POV and outbound POV lanes would be reversible as needed for seasonal traffic patterns.

Facility functions may be consolidated or expanded pending final design. Construction activities such as connecting to existing utilities and repairing roadway and shoulder pavement may occur outside the maximum proposed limits of disturbance (see Figure 2.3-3). The roadway pavements and shoulders within these utility connection areas shown on Figure 2.3-3 would not be subject to the project's potential land acquisition. GSA would coordinate with various stakeholders, including the WSDOT, local municipalities, and associated utility providers regarding these connections and any service outages prior to commencing construction activities.

Under Sumas LPOE Alternative 2, a new Main Building, complete with an adjoining commercial inspection facility, would provide an established clear line-of-sight in both the north and south directions. The new Main Building would support port operations. The larger Main Building would also provide additional interior building space to better support port operational requirements and employees. A separate smaller building would support the port's outbound commercial inspection requirements. In addition, parking and other paved surfaces would support expanded employee, visitor (POV, bus, and pedestrian travelers), and commercial vehicle parking requirements, and would provide enhanced safety for pedestrian visitors. Inspection lanes and facilities would be expanded and upgraded to handle traffic flows and improve operational efficiency.

Operations at the Sumas LPOE would be comparable to existing conditions but would be more efficient. Ongoing maintenance would be required for newly constructed facilities. The number of employees present onsite varies during peak and off-peak hours. Based on funding and resource availability, CBP may increase the current staff at the Sumas LPOE by approximately 26 personnel after the modernization and expansion project is completed.

2.3.2.3 Sumas LPOE Alternative 3 – Commercial Inspection West

Sumas LPOE Alternative 3 would include the same action as Sumas LPOE Alternative 2, with the one noted difference being the orientation of the commercial inspection facility adjoining the proposed Main Building. Under Sumas LPOE Alternative 3, the maximum proposed limits of disturbance would be approximately 12.6 acres (see Figure 2.3-3); however, the orientation or layout of the commercial inspection facility, including loading docks, adjoining the Main Building, would be "flipped" to the western side of the LPOE compared to Sumas LPOE Alternative 2. The Sumas LPOE Alternative 3 layout proposes to have the commercial hard secondary loading dock/garage area located on the building's west side, compared to Sumas LPOE Alternative 2 where this area would be located on the east side. This alternative configuration would facilitate a slight adjustment of commercial and non-commercial support facilities, resulting in a potentially smaller overall building footprint. This orientation option, compared to Sumas LPOE Alternative 2, would also potentially facilitate more efficient commercial traffic flow, particularly for any agricultural/livestock vehicles requiring U.S. Department of Agriculture (USDA) inspection at the port. All other proposed work under Sumas LPOE Alternative 3, including potential land acquisition and development of the port's east side area in support of outbound commercial inspections, along with the other site preparation and construction, proposed number of buildings, inspection lanes, and phasing, would be the same as Sumas LPOE Alternative 2.

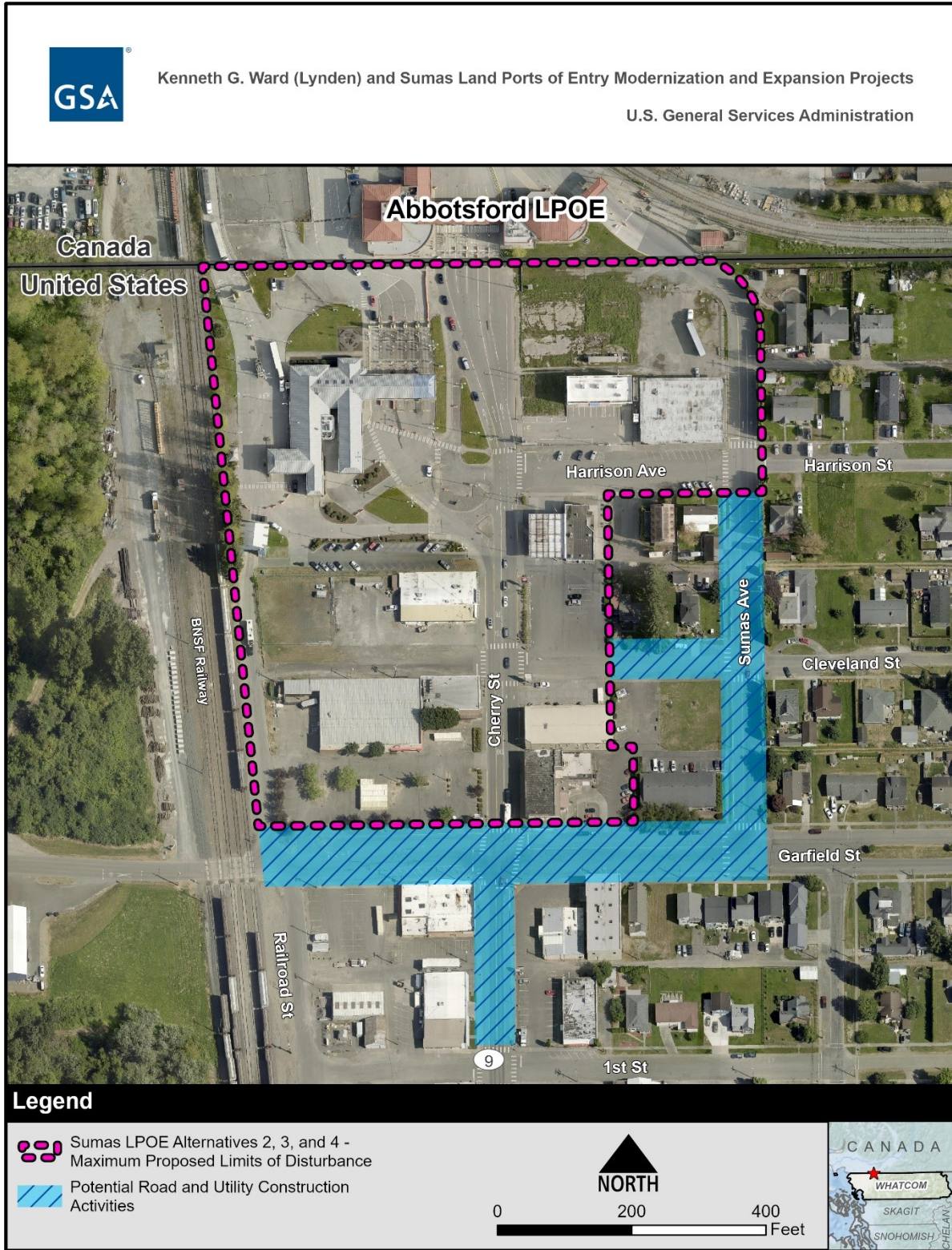


Figure 2.3-3. Sumas LPOE Alternatives 2, 3, and 4 – Maximum Proposed Limits of Disturbance

2.3.2.4 Sumas LPOE Alternative 4 – Multi-Story Construction LPOE Expansion

Sumas LPOE Alternative 4 would include the same action as Sumas LPOE Alternatives 2 or 3; however, GSA would construct a multi-story Main Building. Operational space within the Main Building would be consolidated on multiple levels, minimizing the overall building footprint. Sumas LPOE Alternative 4 would also potentially include an employee pedestrian bridge to be constructed across Cherry Street, linking the east side parking and commercial outbound inspection facility with the west side’s Main Building and adjoining commercial inspection facility, further increasing employee safety as they traverse the port. Under Sumas LPOE Alternative 4, the maximum proposed limits of disturbance would be approximately 12.6 acres (see Figure 2.3-3). All other proposed work under Sumas LPOE Alternative 4, including development of the port’s east side area in support of outbound commercial inspections, along with the other site preparation and construction, proposed number of buildings, inspection lanes, and phasing, would be similar to Sumas LPOE Alternatives 2 and 3.

2.3.3 Alternatives Considered and Dismissed from Further Consideration

2.3.3.1 Lynden LPOE

GSA considered two additional alternatives for the Lynden LPOE that were dismissed from further consideration due to operational and logistical constraints.

Feasibility Study Alternative 1 – Consolidating Inspection Booths: GSA initially considered an alternative that would consolidate the primary commercial and non-commercial inspection booths and minimize effects to residences south of the LPOE. This alternative, like all action alternatives, would have required additional land for expansion. The primary inspection would be oriented in a north-south configuration with a split secondary inspection in which commercial vehicles would head westward and non-commercial vehicles would continue south to secondary inspection. Visitor and staff parking lots would be located in the northwestern corner of the site providing direct access for pedestrians without the need to cross over travel lanes. To access the parking area a perimeter road would be required to circumnavigate the commercial infrastructure. The development of this alternative would follow a phased approach, starting with the construction of the primary inspection booths (GSA 2019a). This alternative was dismissed from further consideration because the proposed configuration would result in inefficient traffic patterns and security concerns.

Feasibility Study Alternative 3 – Consolidated primary inspection for commercial and non-commercial vehicles with high-low booths, north-south configuration: GSA initially considered an alternative that would consolidate the primary inspection for commercial and non-commercial vehicles with the use of high-low booths. In addition, commercial property would need to be potentially acquired, and the north-south LPOE configuration would be retained. Visitor and staff parking would be located adjacent to the building, and pedestrians would not be required to cross lanes of travel. There would be a consolidated Main Building/Non-commercial Inspection Building. Construction would be phased to allow for uninterrupted LPOE operations. This alternative was dismissed from further consideration because the proposed configuration would result in inefficient traffic flow and security concerns.

2.3.3.2 Sumas LPOE

GSA considered two additional alternatives for the Sumas LPOE that were dismissed from further consideration due to operational and logistical constraints.

Feasibility Study Alternative 1 – Minimizing Land Acquisition: GSA initially considered an alternative that would minimize potential land acquisition. Cherry Street would be maintained in its current alignment with both pedestrian and bicycle improvements. An outbound primary commercial booth would be placed on Sumas Avenue. The Main Building would be a two-story structure with non-operational functions on the second floor and would be connected to the Commercial Building. The existing LPOE site would be undisturbed under this alternative. Construction would be phased to allow for uninterrupted LPOE

operations. While potential land acquisition would be minimized, expansion south would be required down to Garfield Street, which would potentially require the acquisition of the two parcels to the south of the LPOE. Additional parcels would potentially need to be acquired to accommodate the outbound processing and parcels north of Harrison Street would be acquired for staff parking as well as outbound non-commercial and secondary commercial inspections. This alternative would also require that a pedestrian bridge be constructed from the staff parking area to the operation site. This alternative was dismissed from further consideration due to operational concerns; there would be inadequate space for truck maneuvering in the commercial lot, the commercial space configuration would be inefficient, and there would be little to no room for future expansion.

Feasibility Study Alternative 3 – No Demolition: GSA initially considered an alternative that would not require the demolition of the current Main Building or POV and commercial booths. The Main Building would remain a one-story structure; however, the existing Secondary Inspection Canopy and southern exterior walls would be demolished, a major southern addition would be incorporated, and there would be interior demolition and renovation to the space to update the floorplan. This alternative would allow for secondary soft and hard inspection flow improvement, additional visitor parking, and some staff parking near the Main Building. Overall, construction phasing under this alternative would be easier, and there would be increased capacity to meet emerging requirements during operations. However, this alternative would require significant land acquisition to the south and the realignment of Cherry Street, and an offset intersection at Garfield Street. Additionally, the Main Building and public areas would be separate from the Commercial Building with the Commercial Administration on the upper level. Therefore, this alternative was dismissed from further consideration.

2.3.4 Construction Sequencing Options

Construction sequencing refers to the manner and timing in which different parts of a project are built and completed, and how access to and through the construction area is maintained by the contractor. GSA and CBP are considering ways in which the Lynden and Sumas LPOEs modernization and expansion project could be constructed to minimize impacts on travelers and the communities directly adjacent to and surrounding the ports. Construction sequencing considerations must also include analysis of impacts on the cost of construction and the time it will take to complete construction activities. The efforts required to maintain access to and through a construction zone can be complex, including moving barricades and signage (also called access and safety controls). These same efforts can also impact the length of construction as construction activities must stop until access and safety controls are reset. Construction costs can be increased by the complexities of designing, setting and resetting controls, and by increasing the length of construction. As the available construction funding for these projects is fixed, the selected construction sequencing option must best balance impacts on travelers and the surrounding public with construction cost and schedule effects. The following discussion summarizes GSA and CBP efforts to determine the best-balanced construction sequencing option for the Proposed Action.

The least expensive and most efficient (quickest) way to construct a project is under a full shut down with no access to or through the construction zone. Due to the relationship between the Sumas LPOE and the city of Sumas, and by extension the larger communities served by the Sumas LPOE, a full shut down at the Sumas LPOE is not an option. The city of Sumas downtown businesses rely on the port and its closure, as happened during the COVID-19 pandemic, could result in major economic impacts to the city. In addition, the Sumas LPOE was the third highest pedestrian crossing along the northern border with over 22,200 pedestrians walking across the border in 2023 (U.S. DOT BTS 2024). The Sumas LPOE had the second highest pedestrian crossing in 2022. Based on public input, it is understood that pedestrian and, ideally, at least a minimum level of POV access must be maintained through the Sumas LPOE during construction. Therefore, a full shut down of both ports during construction is dismissed from further consideration.

Based on the above information, GSA and CBP considered two construction sequencing options for detailed analysis in this EIS: Concurrent Construction Option and Sequential Construction Option. The construction sequencing options are independent of the action alternatives that are under consideration and could be implemented under any combination of selected Action Alternatives at the two ports. Both options would require coordination of construction activities within the ports as they are constructed. The details of these internal construction activities are not discussed herein as those details are at the discretion of the selected contractor and would not be anticipated to have impacts on the resources analyzed in this EIS. The following discussion outlines each of the two construction sequencing options in general terms. Anticipated impacts of each option are discussed in Chapter 3 of this EIS.

2.3.4.1 Concurrent Construction Option

Under the Concurrent Construction option, both ports would remain open during construction. As under existing conditions, it is envisioned that the Lynden LPOE would be accessible for 16 hours per day and the Sumas LPOE for 24 hours per day, 7 days per week. Pedestrian access would be maintained through the ports by utilizing and resetting, as necessary, various access and safety controls. POV access would also be maintained through both ports using various controls, which may require limits on the number of open processing lanes and shifting of POVs to COV lanes for limited times. COVs may need to be detoured at times to other ports to permit adequate space for continued POV processing.

It would be anticipated that under this option construction would require approximately 24 months to complete and fully open both modernized and expanded LPOEs.

2.3.4.2 Sequential Construction Option

Under the Sequential Construction Option, GSA and CBP are considering the potential for temporary closure of the Lynden LPOE during construction. This would facilitate faster construction of the Lynden LPOE and would permit any required or impacted COV traffic to be diverted or re-routed from the Sumas LPOE (once it is under construction) to the Lynden LPOE once the newly constructed commercial inspection facilities are operational. The Lynden LPOE is located approximately 6 miles north of the city of Lynden, whereas the Sumas LPOE is located directly in the city of Sumas. Pedestrian, POV and COV crossings are also fewer at the Lynden LPOE than at the Sumas LPOE (see Section 3.9, Traffic and Transportation, for more information). Under this option, the Sumas LPOE would remain open in essentially the current condition while the Lynden LPOE is substantially closed and under construction. Keeping the Sumas LPOE open during construction of the Lynden LPOE would provide required access under a relatively short detour, if Lynden LPOE users decide to use the Sumas LPOE.

All traffic, pedestrians, POVs, and COVs that normally use the Lynden LPOE would be detoured to other LPOEs during the majority of the construction of the Lynden LPOE. It would be anticipated that most traffic would utilize either the Sumas, Pacific Highway, or Peace Arch LPOEs. Some increase in processing delay times at these LPOEs would be expected while Lynden LPOE is constructed. With this option it is possible that some construction at Lynden LPOE could occur while the facility is open to traffic (e.g., completing building finishes, installing final lighting fixtures, etc.) and some construction at Sumas LPOE that does not substantially impact traffic could occur while Lynden LPOE is under construction (e.g., vegetation clearing, full or partial demolition of structures outside of the general flow of traffic that are not necessarily essential to operations, etc.). GSA is considering this option with the intent of identifying the construction option that would best reduce impacts on the communities surrounding the LPOEs, with particular emphasis on the city of Sumas due commercial business and community reliance on the LPOE. It is likely that sequential construction could best limit the time required to complete construction of both projects.

Once the modernized and expanded Lynden LPOE is reopened, construction that impacts traffic (vehicular and pedestrian) would begin on the Sumas LPOE. The Sumas LPOE would remain open to pedestrians and POVs during construction to the greatest extent possible. COVs would be detoured from the Sumas LPOE

to other LPOEs during portions of the construction period. It would be anticipated that most COVs would use the newly modernized and expanded Lynden LPOE. Detouring COVs from the Sumas LPOE during construction would provide more space within the port for construction activities and for setting and resetting of access controls. It would also reduce potential processing delays through the Sumas LPOE as only pedestrian and POV traffic would be allowed. The modernized and expanded Lynden LPOE would remain a 16 hour per day, 7 day per week operation as under current conditions. Therefore, COVs traveling during the nighttime hours would likely use Pacific Highway or Peace Arch LPOEs during construction of the Sumas LPOE.

It would be anticipated that under this option construction would require approximately 18 months to complete and fully open both modernized and expanded LPOEs.

2.3.5 Renewable Energy Technologies

GSA is evaluating the use of renewable energy technologies. Renewable technologies that may be incorporated into the facility design include, but are not limited to, solar (photovoltaic [PV] or solar collectors) and certain types of geothermal heat pumps at the Lynden and Sumas LPOEs as part of the Proposed Action. Selection of each technology, to include final sizing, is dependent on final design. It is possible a combination of these technologies could be selected during final design. All associated infrastructure would be constructed within the newly expanded and modernized LPOE footprints as shown in Figures 2.3-1, 2.3-2, and 2.3-3. If additional technologies are identified throughout the design process, GSA would evaluate the need for follow-on NEPA analysis.

Note that wind turbines were considered as an option for renewable energy for the project; however, due to potential concerns with specialized maintenance requirements, as well as impacts to viewsheds, wind energy is not being further considered at this time.

2.3.5.1 Solar

Photovoltaic. PV panels are non-mechanical devices made of semiconductor material that convert sunlight directly into electricity (EIA 2023). PV systems generally consist of either roof-mounted or ground-mounted panels (see Photo 2.3-1). Ground-mounted panels generally include standalone solar panels mounted on a pole or carport. The size of any array would be dependent on the amount of energy generated by the system. PV panels would require hard wiring connection to serviced buildings, which could require underground connections. Placement of panels would consider solar insolation (i.e., the measurement of solar radiation in a specific area at a given time), shading and southern exposure, space availability, and structural stability (as applicable). Occasional maintenance would be required in the form of panel washing, snow removal, and panel replacement.



Source: Freedom Solar 2024



Source: Polar Racking 2020

PHOTO 2.3-1. REPRESENTATIVE PHOTOVOLTAIC SYSTEMS

Solar Collection. Solar collectors absorb the sun’s light energy and convert it into heat energy, which can then be used to provide heated water, space heating or cooling, or other applications where fossil fuels might otherwise be used (EIA 2024). These systems typically have two main parts: a solar collector and a storage tank. The most common collector is called a flatplate collector, which is typically roof-mounted and consists of a thin, flat, rectangular box with a transparent cover that faces the sun (see Photo 2.3-2). Small tubes run through the box and carry a liquid, either water or other fluid, such as an antifreeze solution, to be heated. Tubes are attached to an absorber plate, which is painted black to absorb the heat. As heat builds up in the collector, it heats the fluid passing through the tubes, and the storage tank then holds the hot liquid. Placement of solar collectors would have the same criteria as PV panels, (solar insolation, shading and southern exposure, space, and structural stability) and would also require periodic maintenance, similar to PV panels.



Source: Clark 2023

PHOTO 2.3-2. REPRESENTATIVE SOLAR THERMAL COLLECTOR SYSTEM

2.3.5.2 Geothermal Heat Pumps

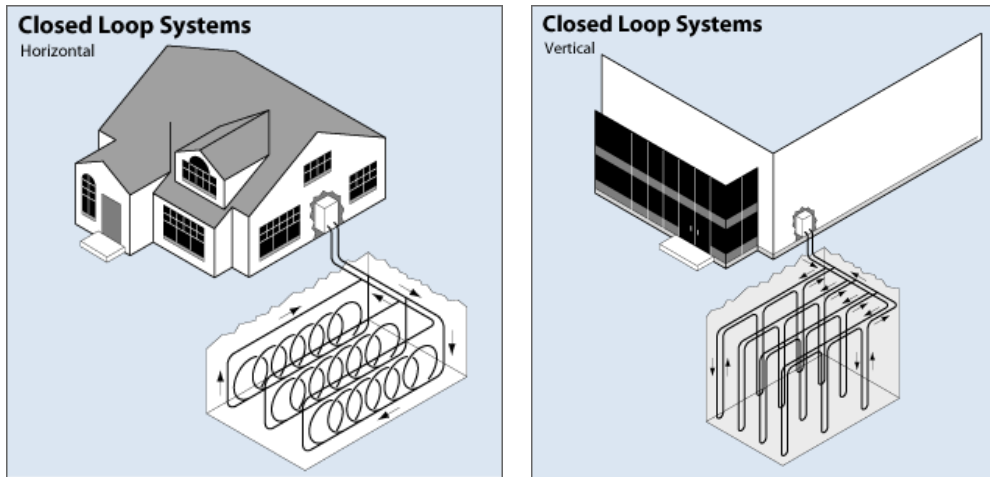
Geothermal heat pumps are a type of geothermal heating and cooling system that use the relatively constant temperature of the earth as an exchange medium to heat and cool buildings. During warmer periods, heat pumps extract heat from buildings and transfer it to a circulating fluid in a cooler ground loop system. During cooler periods, fluid circulating in the ground loop system absorbs heat from the earth and transfers it to the heat pumps. The heat pumps then extract the heat from the fluid, which is then used to increase the temperature of the air transported to the buildings (DOE 2024).

There are generally two types of heat pump systems, including open-loop and closed-loop systems. Open-looped systems rely on water sources (i.e., groundwater or surface water) as the heat exchanging fluid. These types of systems are not considered in this EIS due to lack of readily available water sources and prohibitive environmental concerns. Closed-loop systems rely on a circulating fluid, such as propylene glycol or ethanol, as the heat exchange fluid. There are generally three types of closed-loop systems, including horizontal and vertical layouts, and systems that rely on a nearby body of water (DOE 2024). Horizontal and vertical layouts function based on the fact that the earth below the frost line is generally a constant temperature. Closed-loop systems that rely on a nearby body of water are not considered in this EIS due to lack of readily available water sources and prohibitive environmental concerns.

For a horizontal layout, generally shallower trenches are dug in a linear layout with appropriately sized piping placed in the trenches (DOE 2024). A vertical layout, also known as a bored geothermal heat exchanger (BGHE) system, would require boring into the subsurface to install piping in bore holes typically at greater depths than a horizontal layout, depending on the local geology. While the designs for vertical closed loop systems vary widely, a general rule of thumb is to use one borehole per nominal ton of geothermal heat pump capacity (MNGHPA 2009).

The type of system to be employed and number of pump systems would be dependent on system sizing and geotechnical investigations to determine subsurface site conditions. Systems would require connections to the applicable buildings, and each building supported by geothermal heat pumps technology would require the design and installation of supply air ductwork.

See Photo 2.3-3 for an example schematic of horizontal and vertical installations, respectively.



Source: DOE 2024

PHOTO 2.3-3. HORIZONTAL AND VERTICAL GEOTHERMAL HEAT PUMPS

CHAPTER 3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Chapter 3 describes the existing environmental conditions of both project areas, which include the existing Lynden and Sumas LPOEs and the proposed expansion areas as described in Chapter 2. This chapter also identifies the potential environmental consequences of the Proposed Action Alternatives and the No Action Alternative. Resource areas analyzed in this EIS include:

- land use;
- water resources;
- biological resources;
- geology, topography, and soils;
- air quality, climate change, and greenhouse gases (GHGs);
- human health and safety;
- infrastructure and utilities;
- traffic and transportation;
- noise and vibration;
- socioeconomics; and,
- environmental justice and protection of children’s health and safety.

3.1 METHODOLOGIES

3.1.1 Affected Environment Methodology

The affected environment summarizes the current physical, biological, social, and economic environments of the area within the region of influence (ROI) of the Proposed Action. The ROI defines the extent of the area where direct effects from project-related construction and operation may be experienced and also encompasses the areas where indirect effects from the Proposed Action would most likely occur. As such, the extent of the ROI varies by environmental resource area depending upon the scope of potential impacts from the Proposed Action and No Action Alternative (i.e., site-specific versus regional baseline conditions). For example, the geographic area of analysis for some environmental resources extends beyond the property line of the existing Lynden and Sumas LPOEs to encompass the city- or county-level analysis (e.g., air quality); however, the ROI for the majority of the resource areas in this EIS are generally contained within the footprint of the project area boundary (e.g., geology, topography, and soils).

3.1.2 Environmental Consequences Methodology

The impacts analysis considers effects to a resource for each alternative and describes the types of impacts that would occur (Section 3.1.2.1) and assigns significance criteria (Section 3.1.2.2).

GSA intends on selecting an alternative for the Lynden LPOE and the Sumas LPOE (see Section 2.3) as part of the decision-making process (i.e., two alternatives would be selected). Environmental consequences are presented individually for each alternative throughout Chapter 3 and 4, although implementation of both alternatives is also considered following the impact analysis for individual alternatives. Environmental consequences are presented individually for each alternative throughout Chapter 3 and 4, and implementation of both alternatives is also considered following the impact analysis for individual alternatives.

3.1.2.1 Types of Impacts

The terms “impacts” and “effects” are used interchangeably in this chapter. According to the CEQ NEPA Regulations at 40 CFR 1500-1508, *direct* and *indirect* effects are defined as:

- **Direct effects** – Effects, *which are caused by the action and occur at the same time and place* (1508.1(g)(1)). In other words, direct impacts are those that are caused directly and immediately from project-related activities, such as excavation of land to construct the proposed LPOEs that could cause soil erosion. Most direct effects are confined to the project area (e.g., geology), but some may extend beyond the project boundary (e.g., noise).
- **Indirect effects** – Effects, *which are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable*. Indirect effects may include changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems (1508.1(g)(2)). Indirect effects are spatially removed from project-related activities and/or occur later in time but are reasonably certain to occur. For example, soil erosion could lead to adverse impacts on water quality, such as causing turbidity and sedimentation in streams during rain events. These types of impacts tend to be diffuse, resource-specific, and less amenable to quantification or mapping than direct effects.

Effects resulting from an action, program, or policy can be either adverse or beneficial. Adverse effects have a negative impact on a resource, whereas beneficial effects have a positive impact.

3.1.2.2 Impact Intensity Thresholds

Potential impacts are described in terms of effect, duration, intensity, geographic context, and type, as applicable. Definitions for intensity thresholds for the resources analyzed in this chapter are provided in Table 3.1-1. A discussion of measures that GSA would implement to reduce impacts is at the end of each resource area section.

Criteria were defined as a means of measuring the size of the impact and its significance. The significance of impacts was determined systematically by assessing the magnitude (how much) and duration (how long) of an impact. Table 3.1-1 summarizes how each parameter is categorized. Significance thresholds are further defined for each resource within the respective sections.

Table 3.1-1. Summary of Environmental Impact Parameters

Duration	
Short-term	Impacts would occur only during construction (temporary).
Long-term	Impacts would occur after construction.
Intensity	
Negligible	The impact is not measurable or discernable from current conditions.
Minor	The impact is slight but detectable.
Moderate	The impact is readily apparent, and there would be a noticeable change from current conditions.
Major	The impact is severe, significant, and highly noticeable; major impacts may be above a threshold of significance.
Geographic Context	
Site-Specific	Impacts are limited to the LPOEs and associated project boundaries.
Local	Impacts extend beyond the LPOEs and associated project boundaries, affecting the area in the general vicinity of the project area.
Regional	Impacts affect a larger area such as Whatcom County.

3.1.3 Resources Considered and Dismissed from Further Consideration

The following resources are considered and dismissed from further consideration in this EIS for the reasons documented in the following subsections.

3.1.3.1 Visual Resources

Visual resources include protected landscapes or features that are valued for their aesthetics and historic resources where the visual setting of the resource may change as a result of the project. There are no identified protected landscapes or features within the Lynden and Sumas LPOEs, their maximum proposed limits of disturbance, or within viewshed (0.25 miles) of these areas under the Proposed Action. No historic resources have been identified at the Lynden LPOE's maximum proposed limits of disturbance, or within viewshed (0.25 miles) of these areas under the Proposed Action. Exterior lighting would follow applicable LPOE design standards which specify measures to meet physical security and safety requirements at both the Lynden and Sumas LPOEs, and would be controlled to minimize light trespass (e.g., direct light downward and minimize glare). As such, overall impacts from increased lighting as a result of the expanded LPOE footprints would be negligible.

3.1.3.2 Recreation

No recreational facilities exist within the LPOEs or the maximum proposed limits of disturbance. Further, no recreational facilities are located directly adjacent to the limits of disturbance or would otherwise be indirectly impacted during construction. There are no recreational facilities within 0.5 miles of the Lynden LPOE. The closest recreational facilities to the Sumas LPOE are outdoor tennis and basketball courts and a city park in the city of Sumas, which are located over 500 feet south and southwest of the southernmost proposed limits of disturbance (City of Sumas 2016).

3.1.3.3 Wetlands

The USFWS National Wetlands Inventory website (USFWS 2024a) was consulted to determine if wetlands occurred within or adjacent to the project areas. There are no wetlands within the existing Lynden and Sumas LPOEs or their maximum proposed limits of disturbance. In the vicinity of the Lynden LPOE, the nearest mapped wetland occurs approximately 400 feet east of the project area. In the vicinity of the Sumas LPOE, the nearest mapped wetlands occur approximately 520 feet southwest and 730 feet south of the project area, corresponding to Sumas Creek and Johnson Creek, respectively (see Section 3.3, Water Resources). No permits would be anticipated to be required under Section 404 of the Clean Water Act (CWA) as there would be no discharge of dredge or fill materials into a water of the U.S. (WOTUS).

3.1.3.4 Cultural Resources

In compliance with Section 106 of the NHPA, cultural resources studies were conducted for both project areas to determine the presence or absence of historic properties within the respective APEs and to determine the projects' potential to impact identified cultural resources. These studies included historic properties record searches and historic property surveys within each project area. The historic properties literature search included records held at the Washington State Department of Archaeology and Historic Preservation (i.e., the SHPO), utilizing the Washington Information System for Architectural and Archaeological Records Data.

The historic properties surveys identified six structures within the Lynden LPOE APE and seven structures within the Sumas LPOE APE that are greater than 50 years old. GSA determined that none of the structures are eligible for the National Register of Historic Places (ASM Affiliates 2023a; ASM Affiliates 2023b). The SHPO concurred with GSA's eligibility determinations regarding both the Lynden LPOE and Sumas LPOE APEs. Details regarding Section 106 consultation, including coordination with affected tribes, may be found in Chapter 6, Consultation and Coordination, and Appendix A.

GSA conducted pedestrian historic properties surveys between April 22 and 24, 2024 to examine exposed ground surfaces for cultural resources and subsurface excavations using shovel test probes to determine if previously documented or unknown sites were present on the Lynden and Sumas LPOEs and maximum potential limits of disturbance. The historic properties surveys did not identify any cultural resources within either study area; therefore, GSA determined that there would be No Historic Properties Affected as part of the undertaking (ASM Affiliates 2024). As such GSA proposed that this project move forward with an Inadvertent Discovery Plan (IDP) in place prior to construction. The SHPO concurred with the Determination of No Historic Properties Affected with the stipulation for an IDP. Details regarding Section 106 consultation, including coordination with affected tribes, can be found in Chapter 6, Consultation and Coordination, and Appendix A.

If historic properties are inadvertently identified during construction activities, GSA would coordinate with the SHPO and appropriate THPOs to mitigate any potential adverse effects under NHPA, which would reduce impacts to less than significant under NEPA.

3.2 LAND USE

This section describes the baseline conditions for land use surrounding the project areas and assesses the potential for existing land use patterns and development trends within the project area to affect, or be affected by, implementing the Proposed Action and No Action Alternative as discussed in Chapter 2. Land use is described by land activities, ownership, and the governing entities' management plans. Local zoning defines land use types and regulates development patterns. This section also describes the land uses within the project area ROI.

3.2.1 Affected Environment

3.2.1.1 *Region of Influence*

The ROI for land use focuses on the existing Lynden and Sumas LPOEs, maximum proposed limits of disturbance by alternative for each LPOE, and adjacent land uses surrounding these areas.

3.2.1.2 *Regulatory Setting*

State, County, and City Zoning. Washington State's laws require that counties and cities prepare a Comprehensive Plan consistent with the Growth Management Act (GMA) enacted in 1990 (RCW 2024a), which is a document that provides a policy framework for land development and for the refinement of existing implementation tools such as zoning regulations. The GMA establishes a series of goals that act as the basis of all comprehensive plans and includes provisions related to urban growth, reducing sprawl, transportation, housing, economic development, property rights, permits, natural resource industries, open space and recreation, environment, citizen participation and coordination, public facilities and services, historic preservation, climate change and resiliency, and shoreline management (WADC 2024).

Whatcom County has prepared the *Whatcom County Comprehensive Plan*, which establishes the framework for the County's goals and policies to guide growth, land use, capital facility and transportation planning, and environmental protection (Whatcom County 2023).

The city of Lynden has prepared the *City of Lynden Comprehensive Plan* to help guide decision making on population growth, transportation needs, capital projects, housing options and design, economic development, and cultural and environmental enhancement (City of Lynden 2017).

The city of Sumas has prepared the *City of Sumas Comprehensive Land Use Plan* to help guide decision making on seven mandatory elements including land use, capital facilities, housing, transportation, utilities, economic development, and parks and recreation (City of Sumas 2016).

GSA and CBP Facilities Standards. GSA has a series of policy guides that address a variety of planning issues for federal facilities, including site security, site selection, project planning, and facility design standards. In addition, GSA has programs in place related to community planning to help create federal facilities that are consistent with good neighbor principles and that support positive community development and neighborhood urban design goals. Key principles of GSA's *Urban Development/Good Neighbor Program* (GSA 2020) include:

- Locate new owned and leased federal facilities in places that support public plans;
- Design new facilities to create outstanding federal workplaces and support neighborhood urban design goals;
- Renovate existing federal properties to improve their public spaces, create positive first impressions, and encourage stakeholders to improve neighborhood conditions;
- Manage federal properties to encourage public use and openness; and
- Participate in neighborhood physical and management improvement efforts around federal properties.

3.2.1.3 Existing Conditions

3.2.1.3.1 Lynden LPOE GSA Land Use

GSA currently owns and manages the Lynden LPOE (4.7 acres), which is a multi-tenant facility with CBP being the primary federal tenant, is located at the end of SR 539, approximately 6 miles north of the city of Lynden (see Figure 1.2-1). The Lynden LPOE is located outside the incorporated and unincorporated zones of the city of Lynden as specified in the *City of Lynden Comprehensive Plan* (City of Lynden 2017). The Lynden LPOE is located within the unincorporated zone of Whatcom County, which is designated as part of the Tourist Commercial (TC) District for rural business (Whatcom County 2023). The purpose of the TC District is to supply sufficient areas arranged in a concentrated form that would allow land use activities which serve the traveling public (WCC 2024a). The Lynden LPOE is considered federal property and county and local zoning is not enforceable on federal lands. For a description and figure of the existing facilities within the Lynden LPOE see Section 1.2.1.1 and Figure 1.2-2.

3.2.1.3.2 Lynden LPOE Surrounding Land Use

The land surrounding the Lynden LPOE within the U.S. is located within the unincorporated area of Whatcom County and has been designed as part of the Agriculture (AG) District (Whatcom County 2023). The purpose of the AG District is to preserve, enhance, and support the production of food and fiber in Whatcom County and to maintain a sufficiently large agricultural land base to ensure a viable agricultural industry and economic feasibility of supporting services (WCC 2024b).

The LPOE is adjacent to the U.S. – Canada border and CBSA Aldergrove LPOE to the north; structures for dairy and corn production and privately owned residences to the south; a commercial business and a small, forested area to the east; and agricultural land to the west. SR 539 (Guide Meridian Road) bisects the LPOE and runs along the eastern edge of the LPOE (see Figure 3.2-1).

The agricultural land to the west is privately owned and is separated from the Lynden LPOE by a row of trees. There is also a strip of land owned by GSA, which starts at the western edge of the LPOE and provides a buffer between the agricultural lands and Canada. Immediately south of the LPOE are privately owned farming facilities, a farmhouse, and other agricultural lands. SR 539, the primary transportation network allowing egress to and from the U.S., is owned and managed by WSDOT. On the eastern side of SR 539, there is a commercial property, which houses a small, two-story Duty-free store; a single-story pump house for an onsite water supply well; a parking lot; and a small, forested area.

Figure 3.2-1 shows the Whatcom County parcels for the existing Lynden LPOE, Lynden LPOE Alternative 2, and surrounding land use. Figure 3.2-2 shows the Whatcom County parcels for existing Lynden LPOE, Lynden LPOE Alternative 3, and surrounding land use. Table 3.2-1 lists the parcels, owners, zoning category, and current land use for the existing Lynden LPOE and the properties being considered for land acquisition under Lynden LPOE Alternatives 2 and 3.

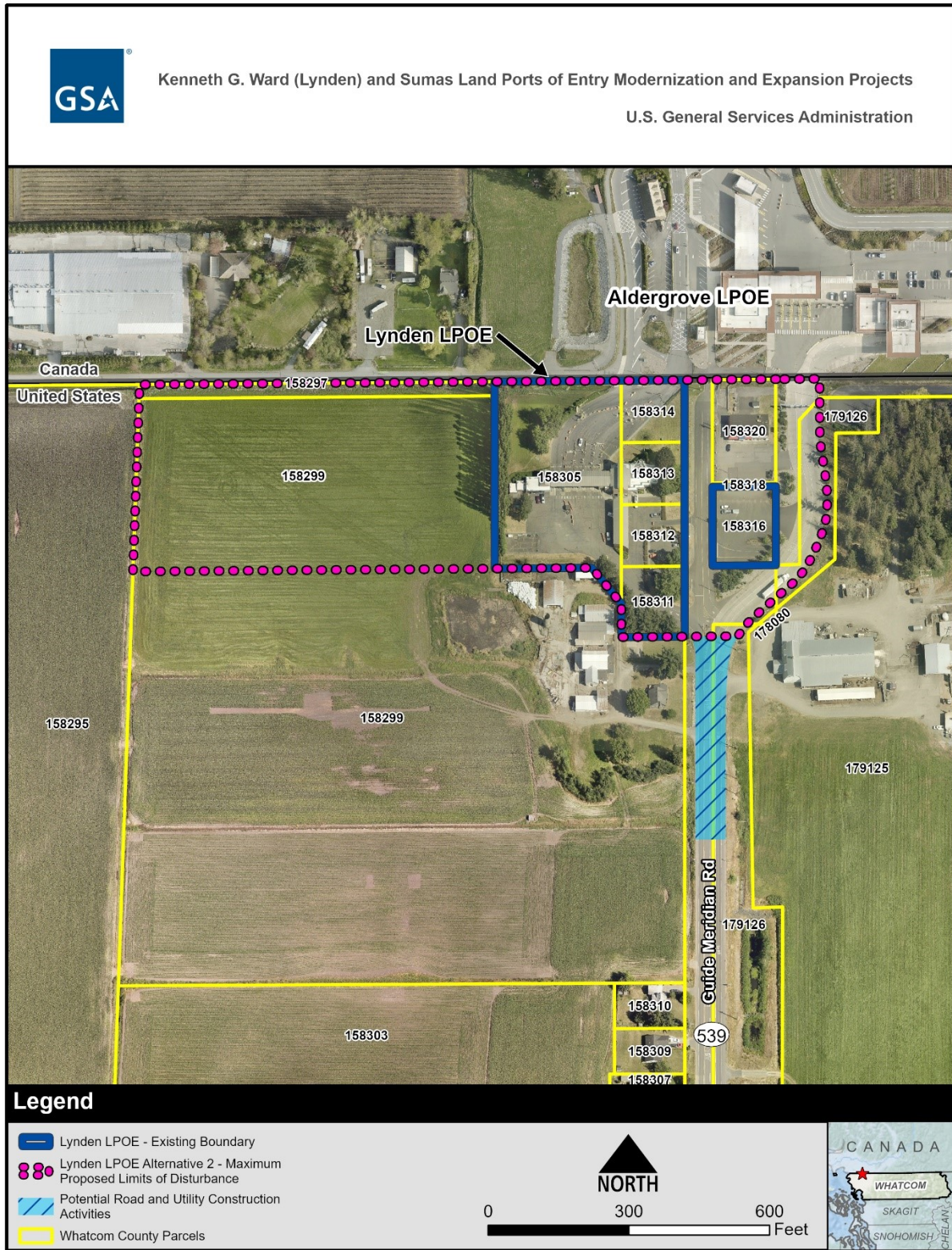


Figure 3.2-1. Land Use and Ownership of Lynden LPOE Alternative 2 and Surrounding Area

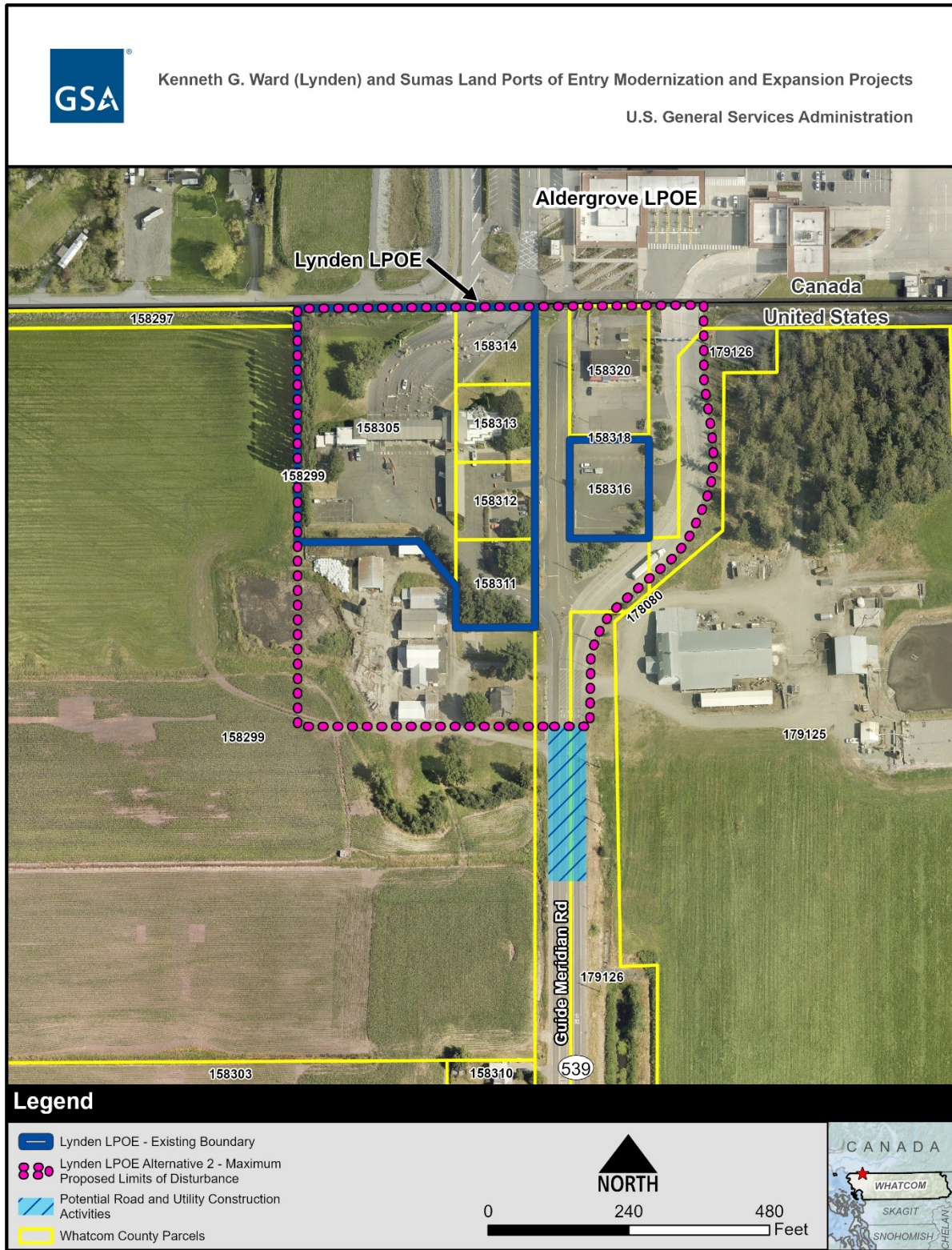


Figure 3.2-2. Land Use and Ownership of Lynden LPOE Alternative 3 and Surrounding Area

Table 3.2-1. Land Use and Ownership of the Existing Lynden LPOE and Lynden LPOE Alternatives 2 and 3 Maximum Proposed Limits of Disturbance

Parcel Number ^a	Owner	Zoning ^b	Current Land Use
Lynden LPOE and Other Federal Lands			
158297	Federal	Agriculture	U.S. – Canada Border easement
158305	Federal	Agriculture	Existing LPOE
158311	Federal	Agriculture	Existing LPOE
158312	Federal	Agriculture	Existing LPOE
158313	Federal	Agriculture	Existing LPOE
158314	Federal	Agriculture	Existing LPOE
158316	Federal	Agriculture	Existing LPOE
Maximum Proposed Limits of Disturbance			
158299	Private	Agriculture	Farmland, commercial, and private residence
158318	Private	Agriculture	Commercial
158320	Private	Agriculture	Commercial
178080	Private	Agriculture	Transportation roadway
179126	State	Agriculture	Transportation roadway

Source: ^a Whatcom County 2024, ^b Whatcom County 2023

3.2.1.3.3 Sumas LPOE Land Use

GSA currently owns and manages the Sumas LPOE (4.0 acres), which is a multi-tenant facility with CBP being the primary federal tenant, is located at the end of SR 9, directly within the north-central portion of the city of Sumas. The Sumas LPOE is located within the city of Sumas’ Business General zoning district, which is a commercial zone that provides day-to-day goods and services to residents (City of Sumas 2016). The Sumas LPOE is considered federal property and county and local zoning is not enforceable on federal lands. For a description and figure of the existing facilities within the Sumas LPOE see Section 1.2.1.2 and Figure 1.2-3 respectively.

3.2.1.3.4 Sumas LPOE Surrounding Land Use

The land surrounding the Sumas LPOE, within the U.S., is located within the city of Sumas’ Business General and industrial zoning districts (City of Sumas 2016). The Sumas LPOE is located adjacent to the U.S. – Canada border and CBSA Abbotsford LPOE to the north; mixed-use commercial buildings and residential properties to the south and the east; and BNSF tracks and residential area to the west (see Figure 3.2-2).

SR 9 (Cherry Street), the primary transportation network allowing egress to and from the U.S., bisects and is located on the eastern edge of the LPOE and is owned and managed by WSDOT. The properties to the south of the LPOE include commercial businesses used for shipping and receiving parcels, a closed grocery store now used for small-scale book printing, a hotel/motel, a mixed-use facility, a church, and City Hall. The properties to the east of the LPOE include commercial businesses consisting of a Duty-free shop, American Legion building, a gasoline station and mini mart; and the old U.S. Customs House and a parking lot. Further to the east and southeast of the LPOE there are single family residences. Figure 3.2-3 shows the Whatcom County parcels for the existing Sumas LPOE, Sumas LPOE Alternatives 2, 3, and 4; and surrounding land use.

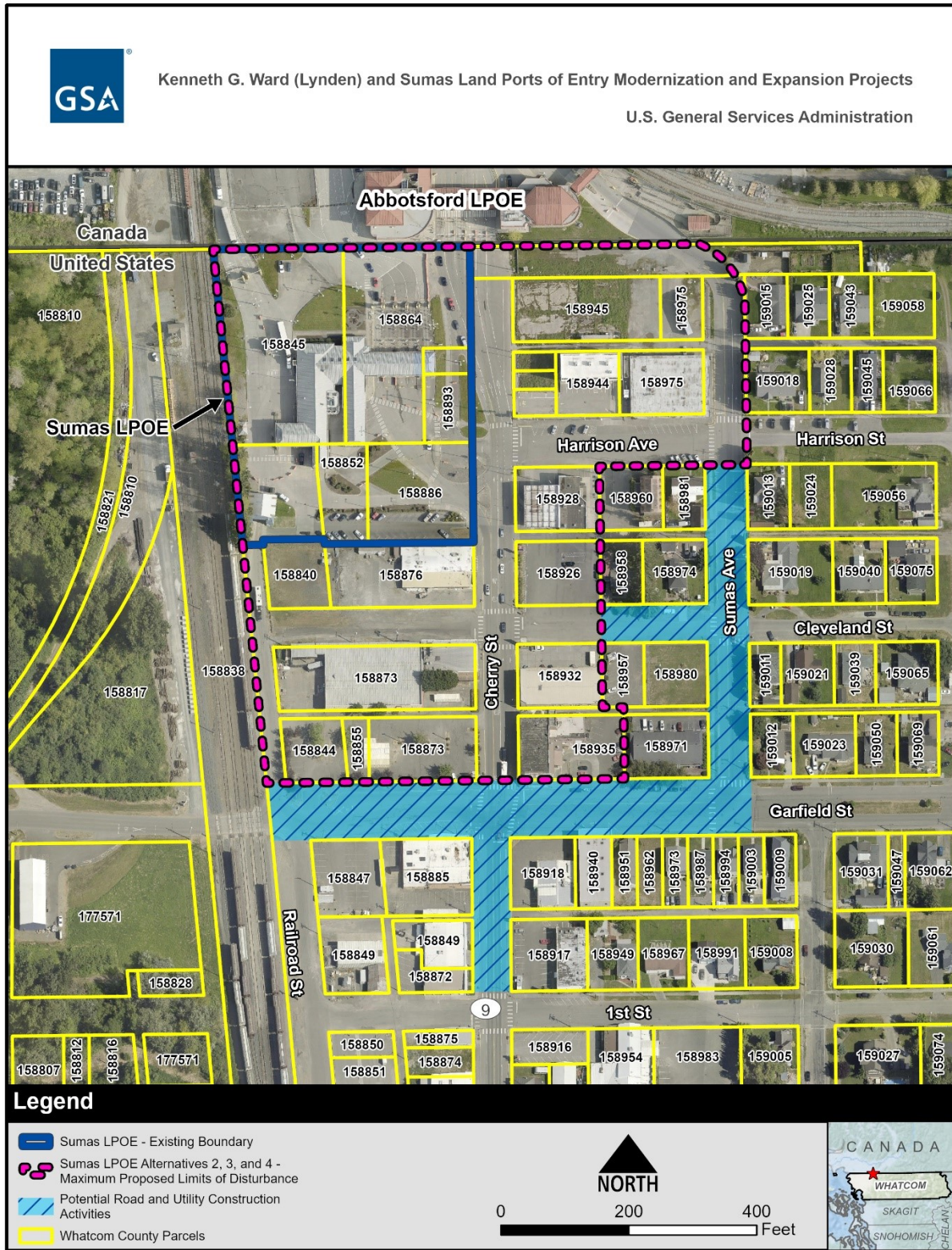


Figure 3.2-3. Land Use and Ownership of Sumas LPOE Alternative 2, 3, and 4 and Surrounding Area

Table 3.2-2 lists the parcels, owners, zoning category, and current land use for the existing Sumas LPOE and the properties being considered for land acquisition under Sumas LPOE Alternatives 2, 3, and 4.

Table 3.2-2. Land Use and Ownership of the Existing Sumas LPOE and Sumas LPOE Alternative 2, 3, and 4 Maximum Proposed Limits of Disturbance

Parcel Number ^a	Owner	Zoning ^b	Current Land Use
Sumas LPOE and Other Federal Lands			
158842	Federal	Business General	Existing LPOE
158845	Federal	Business General	Existing LPOE
158852	Federal	Business General	Existing LPOE
158864	Federal	Business General	Existing LPOE
158886	Federal	Business General	Existing LPOE
158893	Federal	Business General	Existing LPOE
158894	Federal	Business General	Existing LPOE
Maximum Proposed Limits of Disturbance			
158840	Private	Business General	Parking lot
158844	Private	Business General	Parking lot
158855	Private	Business General	Commercial and parking lot
158873	Private	Business General	Commercial and parking lot
158876	Private	Business General	Warehouse/Storage
158919	Private	Business General	Commercial
158920	Private	Business General	Commercial
158923	Private	Business General	Commercial
158926	Private	Business General	Gasoline Service Station
158928	Private	Business General	Gasoline Service Station
158932	Private	Business General	Hotel/Motel
158935	Private	Business General	Commercial
158944	Private	Business General	Commercial
158945	Private	Business General	Commercial
158975	Private	Business General	Civic Social

Sources: ^a Whatcom County 2024, ^b City of Sumas 2016

3.2.2 Environmental Consequences

3.2.2.1 Methodology

To evaluate potential impacts on land use, GSA reviewed the project alternatives to determine whether any activities have the potential to cause the following within the ROI:

- Changes in land use and zoning;
- Changes in land ownership;
- Changes in the amount of open space in an undeveloped area.

A major adverse impact to land use would occur if the Proposed Action would result in:

- A conflict with land use or a land use restriction on adjacent properties, including the proposed expansion areas of all the Lynden and Sumas LPOEs alternatives;
- Conflicts with regional or local land use plans and zoning; or
- Elimination of a large area of undeveloped open space.

3.2.2.2 Lynden LPOE Alternatives

3.2.2.2.1 Lynden LPOE Alternative 1 – No Action Alternative

Lynden LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impact on land use. Under Lynden LPOE Alternative 1, GSA would not modernize or expand the Lynden LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure or changes to onsite operations would occur. Land acquisition would not be needed and the LPOE would operate in its current condition. The current LPOE would continue to have space limitations resulting in delays in processing times and congestion in the COV lanes; and security vulnerabilities would continue to exist.

3.2.2.2.2 Lynden LPOE Alternative 2 – East-West Oriented LPOE Expansion

Construction

Lynden LPOE Alternative 2 construction and demolition activities would be anticipated to have direct, long-term, minor, local, adverse impacts on land use. Under Lynden LPOE Alternative 2, the buildings and structures within the LPOE would be demolished and replaced with new facilities and infrastructure. Additionally, GSA would need to acquire approximately 9.8 acres of land and would convert this land into buildings, paved surfaces, and landscaped areas which would be determined during design. Lynden LPOE Alternative 2 would include land acquisition, which would be transferred to federal ownership and redesignated as GSA property. For properties selected for land acquisition, that are eligible for relocation assistance under the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* (the Uniform Act), as enacted; GSA would provide relocation assistance for applicable stakeholders in accordance with the *Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally-Assisted Programs* (49 CFR Part 24).

As shown on Figure 3.2-1 and Table 3.2-1 the properties being considered for acquisition under this alternative include a portion of farmland and a commercial business and associated parking lot. This alternative would also include modifying portions of SR 539. GSA may need to acquire the portions of SR 539 that fall within the maximum proposed limits of disturbance. Lynden LPOE Alternative 2 would not result in any land use conflicts and would not eliminate large portions of open space; and the portion of the AG District properties being considered for land acquisition would be transferred to federal ownership and redesignated as GSA property.

Operations

Lynden LPOE Alternative 2 operations would be anticipated to have a direct, long-term, minor, regional, beneficial impacts on land use. The modernized and expanded LPOE would be constructed consistent with GSA and CBP design standards; the proposed LPOE would be designed to be more efficient; traffic flow and safety to and from the LPOE would be improved; and operational safety and national security would be increased for LPOE staff and visitors.

3.2.2.2.3 Lynden LPOE Alternative 3 – North-South Oriented LPOE Expansion

Construction

Lynden LPOE Alternative 3 construction and demolition activities would be anticipated to have direct, long-term, moderate, local, adverse impacts on land use during construction. Impacts would be similar to Lynden LPOE Alternative 2 as described in Section 3.2.2.2.2 under *Construction*; however, impacts would be slightly greater due to the potential acquisition of a residence. In addition, other properties being considered for acquisition under this alternative include farmland commercial facilities and a commercial business and associated parking lot (see Figure 3.2-1 and Table 3.2-1). This alternative would also include modifying portions of SR 539.

GSA would need to acquire approximately 5.6 acres of land and would convert this land into buildings, paved surfaces, and landscaped areas which would be determined during design.

Similar to Lynden LPOE Alternative 2, Lynden LPOE Alternative 3 would not result in any land use conflicts or eliminate large portions of open spaces; and the LPOE and properties being considered for acquisition would be transferred to federal ownership and redesignated as GSA property. The process for land acquisition and eligibility for relocation assistance would be the same as those discussed under Lynden LPOE Alternative 2 (See Section 3.2.2.2.2, under *Construction*).

Operations

Lynden LPOE Alternative 3 operations would be anticipated to have a direct, long-term, minor, regional, beneficial impacts on land use, similar to Lynden LPOE Alternative 2 as described in Section 3.2.2.2.2 under *Operation*.

3.2.2.3 Sumas LPOE Alternatives

3.2.2.3.1 Sumas LPOE Alternative 1 – No Action Alternative

Sumas LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impact on land use. Under Sumas LPOE Alternative 1, GSA would not modernize or expand the Sumas LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure or changes to onsite operations would occur. Land acquisition would not be needed and the LPOE would operate in its current condition. The current LPOE would continue to have space limitations resulting in delays in processing times and congestion in the COV lanes; and security vulnerabilities would continue to exist.

3.2.2.3.2 Sumas LPOE Alternative 2 – Feasibility Study Preferred Alternative

Construction

Sumas LPOE Alternative 2 construction and demolition activities would be anticipated to have direct, long-term, moderate, local, adverse impacts on land use. As shown on Figure 3.2-2 and Table 3.2.2 the properties being considered for acquisition under this alternative include commercial businesses used for shipping and receiving parcels, a closed grocery store now used for small-scale book printing, a hotel/motel, a mixed-use facility, a Duty-free shop, an American Legion building, a gasoline station and mini mart, and their associated parking lots. This alternative would also include modifying portions of SR 9. GSA may need to acquire the portions of SR 9 that fall within the maximum proposed limits of disturbance. Under Sumas LPOE Alternative 2, the buildings and structures within the LPOE would be demolished and replaced with new facilities and infrastructure. Additionally, GSA would need to acquire approximately 8.6 acres of land and would convert this land into buildings, paved surfaces, and landscaped areas which would be determined during design. The process for land acquisition and eligibility for relocation assistance would be the same as those discussed under Lynden LPOE Alternative 2 (See Section 3.2.2.2.2, under *Construction*).

Sumas LPOE Alternative 2 would not result in any land use conflicts or eliminate large portions of open spaces; and the LPOE and portion of the city of Sumas Business General zoning district properties being considered for land acquisition would be transferred to federal ownership and redesignated as GSA property (City of Sumas 2016).

During the scoping period, a commenter indicated Kneuman Road and Moe's Hill are utilized by the local community for exercise activities. There would be no impacts to access these areas during construction. If any detours are necessary, they would be appropriately signed and implemented during construction to minimize or eliminate any local access issues during construction activities (see Section 3.9, Traffic and Transportation).

Operations

Sumas LPOE Alternative 2 operations would be anticipated to have direct, long-term, minor, regional, beneficial impacts on land use, similar to Lynden LPOE Alternative 2 as described above in Section 3.2.2.2.2 under *Operations*.

3.2.2.3.3 Sumas LPOE Alternative 3 – Commercial Inspection West

Construction

Sumas LPOE Alternative 3 construction and demolition activities would have direct, long-term, moderate, local, adverse impacts on land use similar to Sumas LPOE Alternative 2 as described above in Section 3.2.2.3.2 under *Construction*.

Operations

Sumas LPOE Alternative 3 operations would have direct, long-term, minor, regional, beneficial impacts on land use similar to Sumas LPOE Alternative 2 as described above in Section 3.2.2.3.2 under *Operations*.

3.2.2.3.4 Sumas LPOE Alternative 4 – Multi-Story Construction LPOE Expansion

Construction

Sumas LPOE Alternative 4 construction and demolition activities would have direct, long-term, moderate, local, adverse impacts on land use similar to Sumas LPOE Alternative 2 as described above in Section 3.2.2.3.2 under *Construction*.

Operations

Sumas LPOE Alternative 4 operations would have direct, long-term, minor, regional, beneficial impacts on land use similar to Sumas LPOE Alternative 2 as described above in Section 3.2.2.3.2 under *Operations*.

3.2.2.4 Construction Sequencing Options

Impacts to land use under both the Concurrent Construction Option and the Sequential Construction Option would not differ from the impacts described above in Sections 3.2.2.2 and 3.2.2.3.

3.2.2.5 Lynden and Sumas LPOE Combined Alternative Implementation

Potential land use impacts from construction and operational activities for all Lynden and Sumas LPOE action alternatives discussed in Sections 3.2.2.2 through 3.2.2.4 would be primarily local. Therefore, considering the distance between the two LPOEs, the combined impacts from construction and operation of any combination of Lynden and Sumas LPOE action alternatives would not result in any greater level of impacts to land use beyond those discussed in Sections 3.2.2.2 through 3.2.2.4. If Lynden LPOE Alternative 1 and Sumas LPOE Alternative 1 (No Action Alternatives) are both selected there would be no direct or indirect, short- or long-term, local or regional, adverse impact on land use.

3.2.2.6 Impacts Reduction Measures

Although local governments cannot regulate or permit activities of the federal government on federally owned land, GSA would consider local zoning laws for construction and operation of the proposed LPOE and all design requirements of state and local governments to the extent practicable. This could include both the incorporation of exterior design elements to reflect the unique character of the area and the emphasis on pedestrian circulation and amenities, such as landscaped plazas and walkways, to the extent practicable and consistent with GSA design standards. To ensure minimal conflicts with land use, GSA would continue coordination efforts during the design process with city and county governments, WSDOT, utility providers, and other stakeholders.

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3.3 WATER RESOURCES

This section describes the baseline conditions for water resources and assesses the potential for local and regional water resources to be affected by implementing the Proposed Action and No Action Alternative as discussed in Chapter 2. Water resources discusses the regional geographic and hydrological setting and analyzes water resources based on three different areas: surface waters, including water quality and supply and consideration of the overall watershed; floodplains; and groundwater, including water quality and supply. Wetlands are not discussed in this section, as detailed in Section 3.1.3.3.

3.3.1 Affected Environment

3.3.1.1 *Region of Influence*

The ROI for surface water and floodplains includes those resources that exist within and adjacent to the Lynden and Sumas LPOEs and the proposed expansion areas as described in Chapter 2, including the areas proposed for potential road and utility construction activities under the Lynden LPOE and Sumas LPOE action alternatives. The ROI also includes surface waters that could receive runoff and wastewater discharges from the project alternatives. The ROI for groundwater resources includes any aquifer that underlies the project areas.

3.3.1.2 *Regulatory Setting*

Water Quality

Water quality is regulated within the context of meeting standards established for compliance with the CWA. Under the CWA, states are required to adopt water quality standards to protect their water resources and the designated uses for these waters (e.g., drinking water, recreation, and aquatic life). The Washington State Department of Ecology (Department of Ecology) is the agency responsible for regulating water quality standards in the State of Washington. Washington water quality and CWA requirements relevant to this project include:

- **Washington Administrative Code (WAC) 173-200** – This chapter implements Title 90 of the Revised Code of Washington State (RCW), specifically, chapters 90.48 RCW (the Water Pollution Control Act) and 90.54 RCW (the Water Resources Act of 1971). The Department of Ecology defines water quality standards for groundwater to protect existing and future beneficial uses, including but not limited to use for domestic, stock watering, industrial, commercial, agricultural, irrigation, mining, fish and wildlife maintenance and enhancement, recreation, generation of electric power, and preservation of environmental and aesthetic values.
- **WAC 173-201A** – This chapter implements 90.48 RCW and defines water quality standards for surface waters to protect four types of designated uses: aquatic life, recreation, drinking water supply, and miscellaneous uses. WAC 173-201A Part II summarizes the four types of designated uses and identifies their associated criteria (i.e., water quality standards that must be met for a waterbody to continue meeting its designated use(s)), which include requirements related to water temperature, turbidity, pH, and presence of contaminants, among other criteria. Part VI provides use designations for specific waterbodies in the state.
- **CWA Sections 303(d) and 305(b)** – Section 303(d) requires states, territories, and authorized Tribes to identify and develop a list of “impaired” waterbodies for which water quality standards for at least one designated use are not met and to develop Total Maximum Daily Load (TMDL) studies for those impaired waterbodies. A TMDL establishes the maximum amount of a pollutant allowed in a waterbody and serves as a planning tool to restore a waterbody so that it can support its intended designated use. States, territories, and authorized Tribes are also required to submit a Section 305(b) water quality assessment report that provides information on the water quality status

of all waters in the state. Both the 303(d) list and 305(b) report are typically integrated into a single watershed assessment report.

- **CWA Section 402, National Pollutant Discharge Elimination System (NPDES)** – Section 402 establishes the federal NPDES program. Although the Department of Ecology administers the NPDES program in the State of Washington generally, the USEPA retains authority to administer the program for federal facilities. The NPDES permit regulates a treatment and disposal system that discharges a specified amount of a pollutant into surface water and is required for sewer discharges and stormwater discharges from developments, construction sites, or other areas of soil disturbance. Depending on the extent and intensity of risk to water quality anticipated by the proposed discharges, the USEPA would issue the Construction General Permit (CGP) or an Individual Permit, which would authorize stormwater discharges from construction activities under the NPDES program. The CGP requires the implementation of erosion and sediment controls and pollution prevention practices throughout the entirety of construction, including the development of a Stormwater Pollution Prevention Plan (SWPPP). The CGP further requires documentation of site inspections, which must be conducted by a qualified person who has either completed the appropriate training (provided by the USEPA) or holds a current certification or license from a program that covers the same core material as the USEPA training. The CGP also states that the applicant must comply with any state, tribal, or territory-specific requirements listed in Part 9 of the permit (including those outlined by CWA Section 401, described below). An Individual Permit would include project-specific requirements to protect water quality, and like the CGP would need to be certified by the Department of Ecology, as required by CWA Section 401.
- **CWA Section 401, Water Quality Certification** – Section 401 requires that before a federal permit or license may be issued for an activity with potential to discharge into a WOTUS, the State or authorized Tribe with authority over the area in which the activity will occur must certify that the activity will not violate applicable water quality standards set under the CWA. Federal permits subject to Section 401 include CWA Section 402 and 404 permits. In Washington, the Department of Ecology reviews the project Section 401, when required, to ensure that it will not violate the water quality standards that have been established for that body of water under WAC 173-201A.

The Washington State Department of Health (Department of Health) also plays a role in regulating water quality through establishing programs set forth by the Safe Drinking Water Act and by enforcing state and federal drinking water regulations. In Whatcom County, the Whatcom County Health Department ensures access to safe drinking water by maintaining publicly available drinking water data and providing community education, providing oversight for certain water systems and permits, and managing wells in cooperation with the state Departments of Health and Ecology.

Section 438 of the EISA provides stormwater management guidance for federal development or redevelopment projects with more than 5,000 square feet of land disturbance in any manner that diverges from the area's present-day use and composition. Section 438 requires federal projects maintain or restore the "pre-development hydrology" of the area affected by construction or operation of a proposed project. "Pre-development hydrology" is defined as the stormwater runoff characteristics of the site in its natural state, prior to human development; it does not pertain to the current state of the site (e.g., a parking lot) (GSA 2019b).

Floodplains

Federal Emergency Management Agency (FEMA) defines a floodplain as being any land area susceptible to inundation by water from any source (FEMA 2023). From a management standpoint, floodplains are usually low-lying land adjacent to a stream or a body of standing water. Furthermore, FEMA categorizes floodplains by the frequency of flooding. For example, the 1-percent-annual chance floodplain (also referred to as the base flood or 100-year floodplain) and 0.2-percent-annual chance floodplain (also referred to as the 500-year floodplain) are land areas that have a 1 percent and 0.2 percent chance, respectively, of

experiencing a flood each year. FEMA prepares Flood Insurance Rate Maps (FIRMs) that delineate floodways and flood hazard areas for regulators, developers, and communities. These maps are used to administer floodplain regulations and to reduce flood damage.

Federal activities within floodplains must comply with EO 11988, *Floodplain Management*, and EO 13690, *Establishing a Federal Flood Risk Management Standard and a Process for Further Soliciting and Considering Stakeholder Input*. Per EO 11988 and EO 13690, federal agencies are required to take action to reduce the risk of flood loss and to avoid, to the extent possible, long- and short-term adverse effects associated with the occupancy and modification of floodplains and the direct or indirect support of floodplain development wherever there is a practicable alternative. An eight-step decision-making process for floodplain management is outlined in 44 CFR 9.6. In accordance with EO 13690, GSA issued the *Floodplain Management Desk Guide*, which provides procedures and guidance to implement GSA Order PBS 1095.8A, *Floodplain Management* (GSA 2023b).

GSA is coordinating with CBP to obtain a critical action determination from CBP for the Lynden and Sumas LPOEs. The Final EIS will include the critical action determination letter in Appendix B. If CBP considers their proposed use of the Lynden and Sumas LPOEs a critical action, then even a slight chance of flooding would be too great.

Groundwater

Groundwater in the State of Washington is used for irrigation, agriculture, industry, and drinking water for over 60 percent of the population. The Department of Ecology, Department of Health, and the Whatcom County Health Department all play roles in protecting groundwater resources and ensuring public access to safe drinking water (Department of Ecology 2024a). Water quality standards for groundwater are set in WAC 173-200, introduced above under *Water Quality*.

3.3.1.3 Existing Conditions

3.3.1.3.1 Lynden LPOE

Geographic and Hydrologic Setting

The ROI is located in Land Resource Region (LRR) A (Northwestern Forest, Forage, and Specialty Crop Region) as designated by the USDA Natural Resources Conservation Service (NRCS). This region is characterized by a wet and mild climate with abundant forest. Within LRR A, the ROI occurs within Major Land Resource Area (MLRA) 1 (Northern Pacific Coast Range, Foothills, and Valleys). Water is abundant in MLRA 1 due to high precipitation and the presence of spring-fed perennial streams (USDA 2022).

The ROI occurs within the U.S. Geological Survey (USGS) 8-digit Hydrologic Unit Code (HUC) Nooksack (17110004) (USGS 2024a), which is approximately 1,018 square miles. Glaciers, snowmelt, groundwater, and rainfall feed the 1,400 streams and river miles that comprise the HUC (GSA 2019a).

Surface Water

Watershed

The Department of Ecology delineates the State of Washington into 62 Water Resource Inventory Area (WRIAs), or watersheds. The Lynden LPOE is located in WRIA 1 (Nooksack), which includes all areas that drain to the Nooksack River, and also includes the Sumas River (Department of Ecology 2024b). WAC 173-501 (Instream Resources Protection Program – Nooksack WRIA 1) preserves and manages the use of waterbodies within WRIA 1 to meet the requirements of the Streamflow Restoration Act (RCW 90.94). WAC 173-501 (also referred to as the instream flow rule) sets minimum flow levels and creates year-round or seasonal closures for some streams to protect existing flows from new appropriations (Department of Ecology 2024c; Department of Ecology 2022).

Surface Water Resources in ROI

No surface water resources occur within the boundaries of the existing LPOE, the proposed expansion area, or the areas proposed for potential road and utility construction activities. The nearest named surface waterbody is Bertrand Creek, located approximately 6,200 feet west (GSA 2019a; USGS 2024b). Bertrand Creek flows south from the U.S. – Canada border into the Nooksack River, which ultimately discharges into the Puget Sound (USGS 2024b). There is also an unnamed tributary located approximately 2,200 feet west/southwest of the project area (USGS 2024c). Figure 3.3-1 presents the locations of named surface waterbodies near the project area.

The most recent CWA Section 303(d) list and 305(b) assessment report for Washington is dated 2018 and was approved by the USEPA in 2022 (Department of Ecology 2024d). The segment of Bertrand Creek closest to the project area is considered impaired, failing to meet the dissolved oxygen and temperature parameters necessary to support its aquatic life designated use, specifically for core summer salmonid habitat, and failing to support its use for primary contact recreation due to fecal coliform bacteria levels. The nearby unnamed tributary to Bertrand Creek was not included in the online Water Quality Atlas Map that presents the results of the 2018 assessment report (Department of Ecology 2024d).

Floodplains

Based on a review of FEMA mapping (FIRM panel 53073C0200D), the project area is not located within the 1-percent annual chance or 0.2-percent annual chance floodplain (FEMA 2004).

Groundwater

The Puget-Willamette Trough regional aquifer system, which in the U.S. extends from central Oregon to the Canadian border, underlies the project area. A regional aquifer system consists of two or more aquifers that are hydraulically connected and function as a single system. The Puget-Willamette Trough regional aquifer system is composed of unconsolidated-deposit aquifers and Miocene basaltic-rock aquifers.

The type of aquifer within this regional system that occurs below the project area is the unconsolidated-deposit aquifer. Unconsolidated-deposit aquifers consist primarily of sand and gravel and occur along present and ancestral stream valleys and in lowlands associated with structural or erosional basins. While deposits consist primarily of alluvium, in some areas eolian, glacial, or volcanic deposits also occur. Basins filled with unconsolidated deposits were formed by fault activity, erosion, or a combination of the two (USGS 1994).

The project area overlies the principal aquifer in WRIA 1, the Sumas Blaine surficial aquifer, which is in northern Whatcom County and is part of the transboundary Abbotsford-Sumas aquifer. The Sumas Blaine surficial aquifer extends for approximately 150 square miles and is comprised of stratified sand, silt, and gravel outwash deposits with minor clay lenses, especially near the city of Lynden, and contains alluvial deposits from the Nooksack and Sumas Rivers. This aquifer is the sole source of drinking water in the area and is susceptible to contamination due to its shallow depth to water (less than ten feet in most areas), heavy seasonal rainfall, and heavy presence of overlying agriculture (Department of Ecology 2017a).

Ambient groundwater monitoring by the Department of Ecology began in 2009 after the aquifer was identified as one of the most contaminated aquifers in the state, primarily due to high nitrate concentrations (Department of Ecology 2024e). Sampling conducted between 2009 and 2016 indicated that a statistically significant decreasing trend for nitrate was present for nine of 25 wells tested, an upward trend existed for one, and no significant trend was detected for the remaining wells (Department of Ecology 2017a).

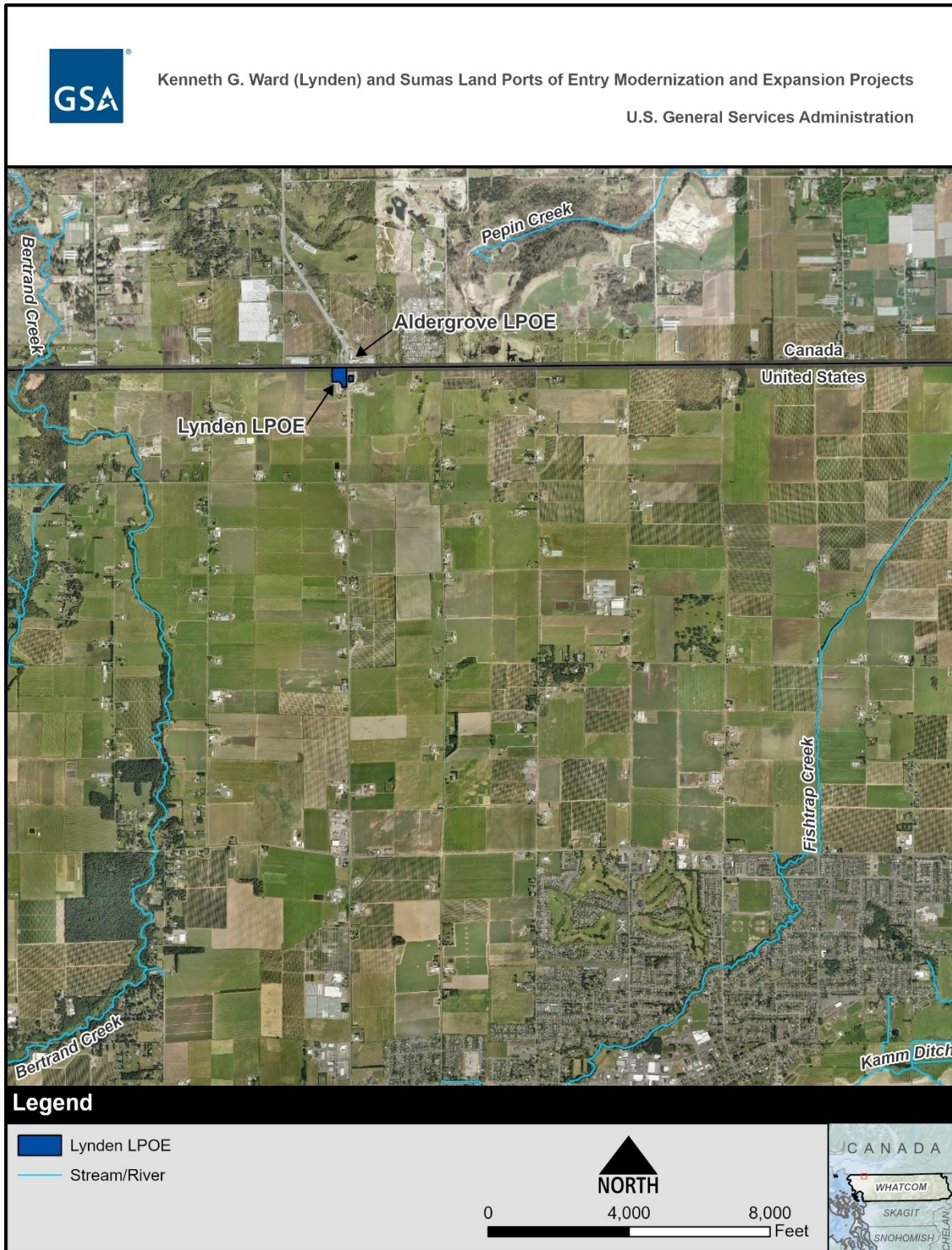


Figure 3.3-1. Surface Waters in Proximity to the Lynden LPOE Project Area

Irrigation water for the existing Lynden LPOE is provided by an onsite, 12-inch diameter well installed in 1986 (GSA 2019a). Bottled water is provided by truck deliveries for drinking and lavatory use. A total of 62 wells are present within the project area, with most serving as monitoring or injection wells for onsite treatment of existing groundwater contamination (GSA 2023c). The Department of Ecology identifies two additional groundwater wells located approximately 450 and 560 feet east of the existing LPOE, just south of East Boundary Road (Department of Ecology 2024f). A Phase I Environmental Site Assessment (ESA) conducted in 2023 identified groundwater contamination in concentrations greater than Washington's Model Toxics Control Act (MTCA) cleanup levels. The contaminants were determined to have originated from a leaking underground storage tank (LUST) located within the project area, at 208 Cherry Street. Additional sources of groundwater contamination were identified in the Phase I ESA, including contaminants migrating from adjacent properties. Remediation to address groundwater contamination is ongoing (GSA 2023c). Section 3.7, Human Health and Safety, discusses contamination in more detail.

3.3.1.3.2 Sumas LPOE

Geographic and Hydrologic Setting

The ROI is located in LRR A and MLRA 1, described in Section 3.3.1.3.1 (USDA 2022). Additionally, the ROI occurs within the USGS 8-digit HUC Fraser (1711001) (USGS 2024a). Climatic conditions at the Sumas LPOE are the same as those described in Section 3.3.1.3.1, as both the Sumas and Lynden LPOEs are located in the same region (NOAA 2024b).

Surface Water

Watershed

The Sumas LPOE is located in WRIA 1 (Nooksack), which is described in Section 3.3.1.3.1 (Department of Ecology 2024b).

Surface Water Resources in ROI

No surface water resources occur within the boundaries of the existing LPOE, the proposed expansion area, or the areas proposed for potential road and utility construction activities. The nearest named surface waterbody is Sumas Creek, located approximately 500 feet southwest. Sumas Creek originates to the west of the project area, flowing east and southeast into Johnson Creek south of the existing LPOE, near Cherry Street (Department of Ecology 2018). Johnson Creek originates southwest of the project area and flows northeast before converging with the Sumas River at a point southeast of the project area. The Sumas River flows northeast over the U.S. – Canada border, discharges into the Fraser River in Canada which flows into the Strait of Georgia; ultimately discharging to the Pacific Ocean (USGS 2024b). Figure 3.3-2 presents the locations of named surface waterbodies near the project area.

The segments of Sumas Creek, Johnson Creek, and Sumas River closest to the project area are listed as impaired due to a failure to meet their designated uses for aquatic life (salmonid spawning, rearing, and migration) and primary contact recreation, due to temperature, dissolved oxygen levels, and fecal coliform bacteria levels. Additionally, Sumas River in this area is listed as a water of concern (i.e., defined as showing evidence of a water quality problem and that should continue to be assessed) due to pH levels, associated with the waterbody's designated use for aquatic life (Department of Ecology 2024d).

Floodplains

Based on a review of FEMA mapping (FIRM panels 53073C0219E and 53073C0732E), the maximum proposed limit of disturbance includes 6.7 acres and 5.9 acres of FEMA-designated 1-percent annual chance (also referred to as the base floodplain or 100-year floodplain) and 0.2-percent annual chance (also referred to as the 500-year floodplain) floodplains along Johnson Creek, respectively. Additionally, the areas proposed for potential road and utility construction activities include 2.1 acres and 0.8 acres of FEMA-designated 1-percent annual chance and 0.2-percent annual chance floodplains, respectively (see Figure 3.3-3). The 1-percent annual chance flood elevation is approximately 48 feet (FEMA 2019). The city of Sumas, including the project area, has a history of damaging flood events (City of Sumas 2021).

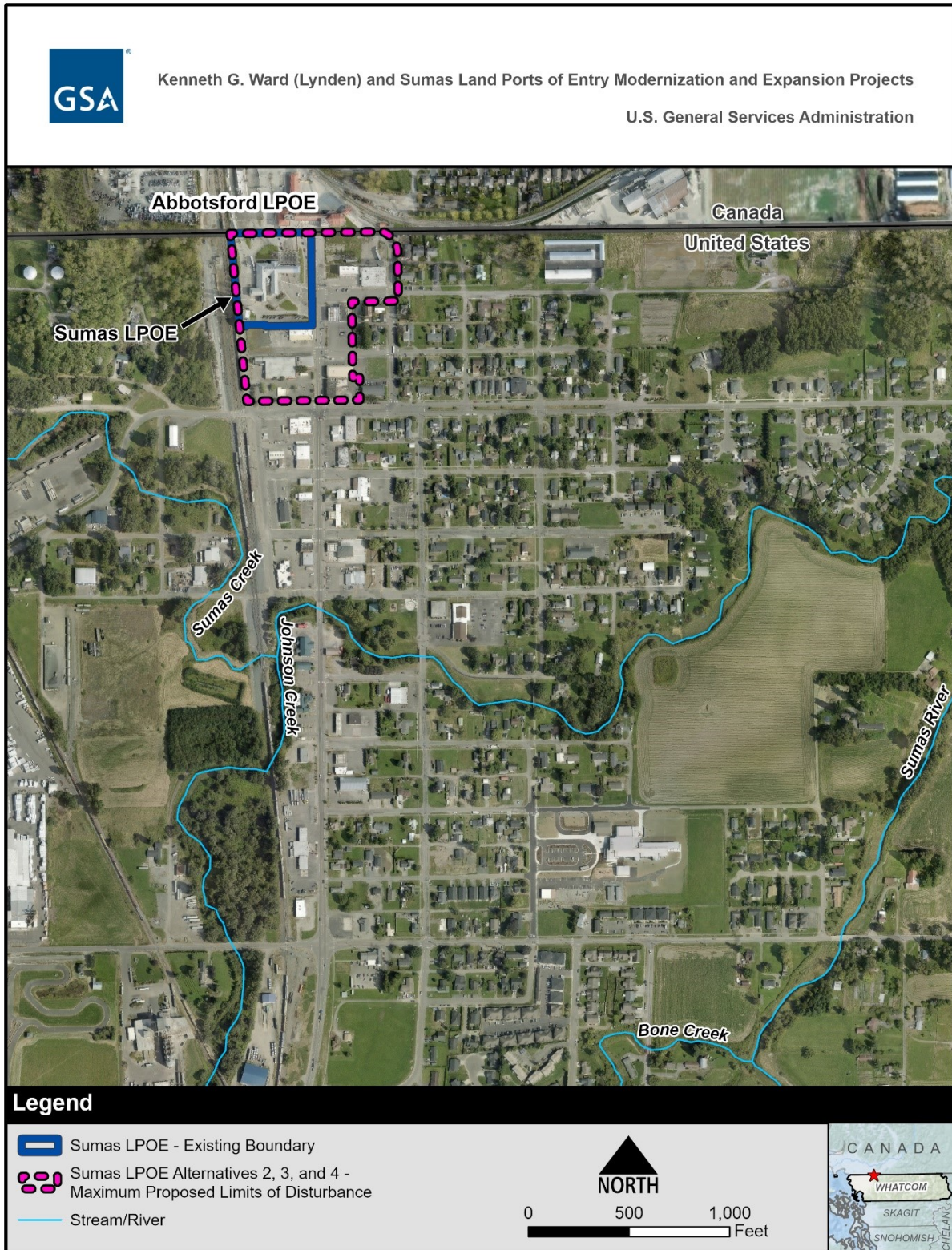


Figure 3.3-2. Surface Waters in Proximity to the Sumas LPOE Project Area

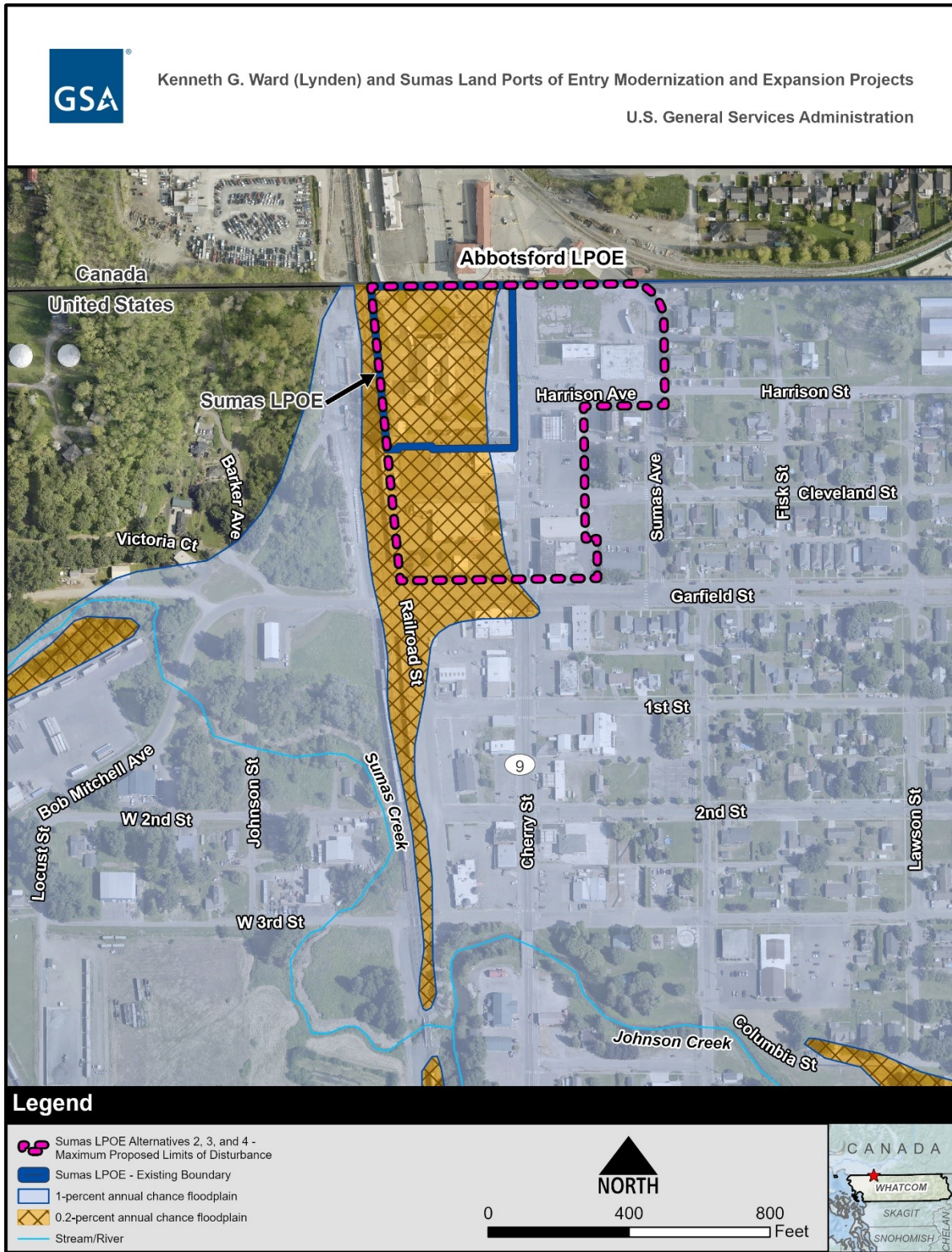


Figure 3.3-3. FEMA Floodplains within the Sumas LPOE Project Area

The most recent flood event occurred in November 2021. This flood impacted the project area when three rainfall events occurred over a 72-hour period, resulting in 9.88 inches of rain and flooding breakouts of the Sumas River and Johnson Creek. According to aerial drone footage on November 19, 2021, within the project area, sections of Cherry Street, the La Gloria Groceries and Food Truck (444 Cherry Street) parking lot, 430 Cherry Street, and Garfield Street were flooded (GSA 2023d).

Groundwater

Groundwater resources underlying or adjacent to the Sumas LPOE are the same as those described for the Lynden LPOE in Section 3.3.1.3.1. The project area is located east of the eastern extent of the Sumas Blaine surficial aquifer (Department of Ecology 2017a).

Water for the existing Sumas LPOE is provided by the city of Sumas through an underground utility vault located on the west side of the site (GSA 2018). The Department of Ecology identifies a cluster of monitoring and remediation wells at the existing LPOE at the site of a gas station located at 208 Cherry Street (Department of Ecology 2024f). The wells were installed in 2015 in response to a past release from an underground storage tank (UST). Groundwater monitoring was conducted on a quarterly basis through August 2017, and then on an annual basis until monitoring was considered complete in 2023. It was determined that no remediation work was required at the site (Montrose Environmental 2023).

A Phase II Soil and Groundwater Sampling Investigation was completed at the Cherry Street Market at 725 Cherry Street (approximately 1,000 feet south of the maximum proposed limits of disturbance) in 2013 and found that concentrations of petroleum products in groundwater at the site exceeded cleanup standards set by the MTCA (Stratum Group 2014). A Phase I ESA conducted in 2023 indicated that the Cherry Street Market site is awaiting cleanup (GSA 2023d). Section 3.7, Human Health and Safety, discusses contamination in more detail.

3.3.2 Environmental Consequences

3.3.2.1 Methodology

To evaluate potential impacts on water resources, GSA reviewed the project alternatives to determine whether any activities have the potential to cause the following within the ROI:

- Alteration of stormwater discharges or infiltration rates
- Alteration of groundwater recharge rates
- Discharge to or modification of surface waters or groundwater
- Use of surface water or groundwater
- Disturbance to floodplains

A major adverse impact to water resources would occur if the project alternatives would result in:

- Substantial alteration of stormwater discharges or infiltration rates, which could adversely affect drainage patterns, flooding, erosion, and sedimentation;
- Substantial alteration of groundwater recharge rates, which could adversely affect availability of groundwater;
- Violation of any federal, state, or regional water quality standards or discharge limitations;
- Modification of surface waters such that water quality no longer meets water quality criteria or standards established in accordance with the CWA, state regulations, or permits (including downgrades of surface water use classification or listing on the Nationwide Rivers Inventory);
- Changes to the availability of surface water or groundwater resources for current or future uses;

- Change in stream channel morphology (i.e., slope and stability); or
- Increased flooding (flooding risk to nearby properties) through altered land uses (e.g., development in floodplain areas) that change current flooding levels or patterns.

3.3.2.2 Lynden LPOE Alternatives

3.3.2.2.1 Lynden LPOE Alternative 1 – No Action Alternative

Lynden LPOE Alternative 1 would have no direct or indirect, short- or long-term, site-specific, local or regional, adverse or beneficial impact on water resources. Under Lynden LPOE Alternative 1, GSA would not modernize or expand the Lynden LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure or changes to onsite operations would occur.

3.3.2.2.2 Lynden LPOE Alternative 2 – East-West Oriented LPOE Expansion

Construction

Surface Waters

Lynden LPOE Alternative 2 would have no direct impacts to surface waters because there are no surface waters within the boundaries of the existing LPOE, the proposed expansion area, or the areas proposed for potential road and utility construction activities. Lynden LPOE Alternative 2 could have indirect, short-term, negligible, local and regional, adverse impacts to the unnamed tributary located approximately 2,200 feet west/southwest of the project area due to land disturbance (up to approximately 14.5 acres) and altered drainage patterns, potentially leading to increased erosion, sedimentation, and pollutants to receiving waters. Potential indirect impacts to the unnamed tributary would be reduced by implementing the impact reduction measures and best management practices (BMPs) described in Section 3.3.2.6. Lynden LPOE Alternative 2 would not be expected to affect surface water impairments discussed in Section 3.3.1.3.1, under *Surface Water – Surface Water Resources in ROI*.

GSA would be required to apply for a CGP or Individual Permit from the USEPA under the NPDES Program, and have it certified by the Department of Ecology. The conditions of the CGP would require the development of appropriate documentation, including a SWPPP, implementation of erosion and sediment controls and pollution prevention practices, routine inspections conducted by a qualified person, and compliance with any additional requirements listed in Part 9 of the permit, including those that might be required by the Department of Ecology under Section 401 of the CWA. A SWPPP is required to address control of pollutant discharges using BMPs selected for the project and to address stormwater monitoring. These BMPs include, but are not limited to, the measures outlined in Section 3.3.2.6. If required, an Individual Permit would include project-specific requirements to protect local water quality. Post-construction, GSA would be required to meet the conditions of the Notice of Termination, which involves a closeout process to certify that: the site has been stabilized with vegetation; the drainage system is stable; temporary BMPs have been removed; and final housekeeping tasks are completed. Adherence to the conditions of the NPDES permit would minimize potential impacts to surface waters.

Floodplains

The Lynden LPOE Alternative 2 project area does not occur within the FEMA-mapped 1-percent annual chance or 0.2-percent annual chance floodplain; therefore, no direct or indirect, short- or long-term, site-specific, local, or regional, adverse or beneficial floodplain impacts would occur.

Groundwater

Lynden LPOE Alternative 2 would be anticipated to result in indirect, short-term, minor, site-specific and local, adverse impacts to groundwater depending on groundwater depth-to-water since construction could affect groundwater flow or further degrade existing groundwater quality. The USGS Washington Water

Science Center measured groundwater depth at 7.02 feet at the well located at the existing Lynden LPOE (GSA 2023c). Additionally, if GSA decides to implement a geothermal energy system, construction of a trench or boreholes could result in direct, short-term, minor, local, adverse impacts on groundwater quality. As previously stated, a geotechnical investigation would be conducted to determine subsurface conditions and depth to groundwater prior to any construction activities.

GSA would implement appropriate measures to prevent any groundwater contamination, such as that arising from hazardous materials used during construction or accidental releases of petroleum from construction equipment (see Section 3.7, Human Health and Safety). Prior to any construction activities, a geotechnical investigation would be conducted to determine subsurface conditions and depth to groundwater. Decisions regarding the depth of foundations and footers would be made at that time. Should dewatering be required during construction, GSA would obtain appropriate permits as needed for groundwater dewatering discharge (i.e., NPDES permit).

Operations

Surface Waters

Lynden LPOE Alternative 2 operations would be anticipated to have no direct impacts to surface waters in the region. Lynden LPOE Alternative 2 operations could have indirect, long-term, negligible, local and regional, adverse impacts to the unnamed tributary located approximately 2,200 feet west/southwest of the project area due to the increase in impervious surfaces and stormwater runoff volume. A net increase in impervious area under Lynden LPOE Alternative 2 would result in an increased potential for additional surface runoff volume from the site. Based on a conservative assumption, Lynden LPOE Alternative 2 could add up to 9.5 acres of new impervious area within the project area. This acreage conservatively assumes that the entire operational footprint of the modernized and expanded LPOE would be converted to hard surfaces and does not account for proposed stormwater and other sustainable site features that GSA would incorporate into the final design; therefore, the overall acreage of converted impervious surfaces is likely to be less than 9.5 acres. Increases to impervious surfaces would result in increased potential for runoff, but stormwater measures would be designed such that the project would not increase the amount of stormwater discharge from the site.

According to requirements outlined under the NPDES program, permittees must design and construct a temporary stormwater treatment system to treat the water quality volume if the Proposed Action replaces vegetation and/or other pervious surfaces creating a net increase of one or more acres of cumulative impervious surface. Further, Section 438 of the EISA specifies that federal agencies are required, to the maximum extent technically feasible, to maintain or restore the “pre-development” hydrology of the area affected by construction or operation of a proposed project. Therefore, it is expected that a permanent stormwater treatment system would be required for the project, which would provide upgraded stormwater infrastructure to the project area and would be designed to minimize the potential for an increase in stormwater discharged from the site. Further, such systems would ensure any stormwater discharged from the modernized and expanded LPOE would not result in a violation of water quality standards, including nuisance conditions, or cause erosion in receiving channels or on downslope properties. Further, GSA intends to include low impact development as part of project design, which would further limit impacts from increased runoff as a result of site expansion. Inclusion of these design features and measures would reduce the overall converted impervious surface to less than 9.5 acres.

GSA would consider the Department of Ecology’s Stormwater Manual for Western Washington when designing the permanent stormwater management system for the modernized and expanded LPOE. This manual provides specific measures to control the quantity and quality of stormwater produced by new development and outlines the appropriate approach for implementing construction BMPs and documenting them in a SWPPP (Department of Ecology 2019). An update to the 2019 manual is being published in 2024.

Depending on the amount of aboveground oil storage onsite, GSA would develop a spill prevention, control, and countermeasures (SPCC) plan to minimize the risks of a potential discharge of oil into a stormwater system or receiving waterbody. Potential indirect impacts to the unnamed tributary would be further reduced by implementing the impact reduction measures and BMPs described in Section 3.3.2.6.

Floodplains

The Lynden LPOE Alternative 2 operational project area does not occur within the FEMA-mapped 1-percent annual chance or 0.2-percent annual chance floodplain; therefore, no direct or indirect, short- or long-term, site-specific, local, or regional, adverse or beneficial floodplain impacts would occur.

Groundwater

Lynden LPOE Alternative 2 operations would not be anticipated to have any direct or indirect, short- or long-term, site-specific, local, or regional, adverse or beneficial impacts to groundwater. Based on funding and resource availability, CBP may increase the current staff at the Lynden LPOE by approximately 20 personnel after the modernization and expansion project is complete; however, anticipated water usage during operations of the modernized and expanded LPOE would be expected to remain consistent with current conditions. Additionally, the potential for adverse impacts from contamination of groundwater during use of a well or drilled boreholes associated with a geothermal energy system, if installed, would be negligible, as the construction, maintenance, and sealing would be in compliance with all applicable regulations.

It is possible that existing groundwater monitoring wells would be replaced under Lynden LPOE Alternative 2. Final design would determine whether removal/replacement of existing wells is required, and GSA would coordinate with the Department of Ecology and other appropriate agencies to determine whether installation of new groundwater wells would be necessary in other locations.

3.3.2.2.3 Lynden LPOE Alternative 3 – North-South Oriented LPOE Expansion

Construction

Surface Waters

Lynden LPOE Alternative 3 would have no direct impacts to surface waters because no surface waters occur within the boundaries of the existing LPOE, the proposed expansion area or the areas proposed for potential road and utility construction activities. Lynden LPOE Alternative 3 could have indirect, short-term, negligible, local and regional, adverse impacts to the unnamed tributary located approximately 2,200 feet west/southwest of the project area similar to Lynden LPOE Alternative 2 as described in Section 3.3.2.2.2 under *Construction – Surface Waters*. Under Lynden LPOE Alternative 3, the operational footprint of the modernized and expanded Lynden LPOE would expand east and south, with a total increase in functional area of 5.6 acres. Construction activities would result in up to approximately 10.3 acres of ground disturbance. Conservatively assuming that the entire 10.3-acre project area would consist of impervious surfaces post-construction, Lynden LPOE Alternative 3 would result in a maximum overall increase in impervious area of approximately 3.5 acres from existing conditions. However, potential impacts may be less than those described for Lynden LPOE Alternative 2, as implementation of Lynden LPOE Alternative 3 would result in less overall ground disturbance. Permitting requirements and impact minimization measures under Lynden LPOE Alternative 3 would be the same as those described for Lynden LPOE Alternative 2.

Floodplains

The Lynden LPOE Alternative 3 project area does not occur within the FEMA-mapped 1-percent annual chance or 0.2-percent annual chance floodplain; therefore, no direct or indirect, short- or long-term, site-specific, local, or regional, adverse or beneficial floodplain impacts would occur.

Groundwater

Lynden LPOE Alternative 3 would be anticipated to result in indirect, short-term, minor, site-specific and local, adverse impacts to groundwater similar to Lynden LPOE Alternative 2 as described in Section 3.3.2.2.2 under *Construction – Groundwater*. Permitting requirements and impact minimization measures under Lynden LPOE Alternative 3 would be the same as those described for Lynden LPOE Alternative 2.

Operations

Surface Waters

Lynden LPOE Alternative 3 operations would be anticipated to have no direct impacts to surface waters in the region. Lynden LPOE Alternative 3 operations could have indirect, long-term, negligible, local and regional, adverse impacts to the unnamed tributary located approximately 2,200 feet west/southwest of the project area due to the increase in impervious surfaces and stormwater runoff volume similar to Lynden LPOE Alternative 2 as described in Section 3.3.2.2.2 under *Operations – Surface Waters*.

Under Lynden LPOE Alternative 3, approximately 3.5 acres of new impervious area would be added. This acreage conservatively assumes that the entire operational footprint of the modernized and expanded LPOE would be converted to hard surfaces and does not account for proposed stormwater and other sustainable site features (e.g., low impact development) that GSA would incorporate into the final design. Potential impacts would be less than those described for Lynden LPOE Alternative 2, as implementation of Lynden LPOE Alternative 3 would result in less overall conversion of impervious surface. Permitting requirements and impact minimization measures would be the same as those described for Lynden LPOE Alternative 2.

Floodplains

The Lynden LPOE Alternative 3 operational project area does not occur within the FEMA-mapped 1-percent annual chance or 0.2-percent annual chance floodplain; therefore, no direct or indirect, short- or long-term, site-specific, local, or regional, adverse or beneficial floodplain impacts would occur.

Groundwater

Lynden LPOE Alternative 2 operations would not be anticipated to have any direct or indirect, short- or long-term, site-specific, local, or regional, adverse or beneficial impacts to groundwater similar to Lynden LPOE Alternative 2 discussed in Section 3.3.2.2.2. under *Operations – Groundwater*

3.3.2.3 Sumas LPOE Alternatives

3.3.2.3.1 Sumas LPOE Alternative 1 – No Action Alternative

Sumas LPOE Alternative 1 would have no direct or indirect, short- or long-term, site-specific, local or regional, adverse or beneficial impact on water resources. Under Sumas LPOE Alternative 1, GSA would not modernize or expand the Sumas LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure or changes to onsite operations would occur.

3.3.2.3.2 Sumas LPOE Alternative 2 – Feasibility Study Preferred Alternative

Construction

Surface Waters

Sumas LPOE Alternative 2 would have no direct impacts to surface waters because no surface waters occur within the boundaries of the existing LPOE, the proposed expansion area, or the areas proposed for potential road and utility construction activities. Sumas LPOE Alternative 2 could have indirect, short-term, negligible, local and regional, adverse impacts to Sumas Creek located approximately 500 feet southwest of the project area due to land disturbance (up to approximately 12.6 acres within the maximum proposed

limits of disturbance, with the potential for additional disturbance associated with utility connection and repair associated with roadway and shoulder pavements adjacent to the limits of disturbance) and altered drainage patterns, potentially leading to increased erosion, sedimentation, and pollutants to receiving waters. Potential indirect impacts to Sumas Creek would be reduced by implementing the impact reduction measures and BMPs described in Section 3.3.2.6. Sumas LPOE Alternative 2 would not be expected to affect surface water impairments as discussed in Section 3.3.1.3.2, under *Surface Water – Surface Water Resources in ROI*.

GSA would be required to apply for a CGP or Individual Permit from the USEPA under the NPDES Program, as described in Section 3.3.2.2.2 (under *Construction – Surface Waters*) for the Lynden LPOE Alternative 2, which would minimize potential impacts to surface waters.

Floodplains

Sumas LPOE Alternative 2 would be anticipated to have direct and indirect, long-term, negligible to minor, site-specific, adverse impacts to floodplains. Complete avoidance of floodplains for this project is not considered practicable, as the LPOE is spatially constrained by a railroad, residences, and other surrounding infrastructure. Approximately 6.7 acres of the project area is located within the 1-percent annual chance floodplain, and approximately 5.9 acres of the project area is located within the 0.2-percent annual chance floodplain. In accordance with EO 11988, *Floodplain Management*, GSA would follow the eight-step floodplain decision making process for floodplain management outlined in 44 CFR 9.6. Per GSA's *Desk Guide for Floodplain Management* (GSA 2023b), GSA prepared a Floodplain Assessment and Statement of Findings, which is included in Appendix B of this EIS.

GSA is coordinating with CBP to obtain a critical action determination from CBP for the Lynden and Sumas LPOEs. The Final EIS will include the critical action determination letter in Appendix B. If CBP considers their proposed use of the Lynden and Sumas LPOEs a critical action, then even a slight chance of flooding would be too great. For critical actions, critical infrastructure (e.g., electrical and mechanical equipment) must be elevated above either the base flood elevation with an additional 3 feet (i.e., the elevation of the 1-percent annual chance floodplain plus 3 feet) or the elevation of the 0.2-percent annual chance floodplain, whichever is higher. This vertical elevation requirement is considered sufficient to address current and future flood risks.

GSA's final site layout would use strategies to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the disturbed areas. As the project area is currently developed, it would not be anticipated that construction would result in elevation changes within the 1-percent annual chance or 0.2-percent annual chance floodplains that would increase the chance of flooding. Final design would incorporate standard measures, including those specified in P100 Standards, to reduce or manage stormwater flows as well as impacts to the floodplain and from flooding on proposed structures. GSA would construct the proposed facilities in accordance with the American Society of Civil Engineers' ASCE-24 standard (Flood Resistant Design and Construction), which FEMA has determined meets or exceeds the National Flood Insurance Program (NFIP), where applicable (GSA 2022a). The standard for flood resistant design and construction in the P100 Standards is consistent with the construction standards in NFIP unless the community has adopted a higher standard, in which case GSA would determine whether following the community's standard is appropriate or is demonstrably inappropriate for the action.

In accordance with Section 438 of the 2007 EISA, GSA would use site planning, design, construction, and maintenance strategies to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow. GSA would consider green infrastructure and low impact development practices, such as reducing impervious surfaces, using vegetated swales and revegetation, and using porous pavements.

Groundwater

Sumas LPOE Alternative 2 would be anticipated to result in indirect, short-term, minor, site-specific and local, adverse impacts to groundwater depending on groundwater depth-to-water, as construction activities have the potential to affect groundwater flow or further degrade existing groundwater quality. Groundwater levels vary from five to eight feet within 0.25 mile of the existing LPOE (GSA 2023d). Additionally, if GSA decides to implement a geothermal energy system, construction of a trench or boreholes could result in direct, short-term, minor, local, adverse impacts on groundwater quality. As previously stated, a geotechnical investigation would be conducted to determine subsurface conditions and depth to groundwater prior to any construction activities.

GSA would implement appropriate measures to prevent any groundwater contamination, conduct a geotechnical investigation, and obtain any necessary permits, similar to as described in Section 3.3.2.2.2 (under *Construction – Groundwater*) for the Lynden LPOE Alternative 2.

Operations

Surface Waters

Sumas LPOE Alternative 2 operations would be anticipated to have no direct impacts to surface waters in the region. Sumas LPOE Alternative 2 operations could have indirect, long-term, negligible, local and regional, adverse, impacts to Sumas Creek located approximately 500 feet southwest of the project area due to the increase in impervious surfaces and stormwater runoff volume. A net increase in impervious area under Sumas LPOE Alternative 2 would result in an increase in surface runoff volume. Based on a conservative assumption, Sumas LPOE Alternative 2 could add up to 1.8 acres of new impervious area within the project area. This acreage of impervious area conservatively assumes that the entire operational footprint of the modernized and expanded LPOE would be converted to hard surfaces and does not account for proposed stormwater and other sustainable site features that GSA would incorporate into the final design. Increases to impervious surfaces would result in increased potential for runoff, but stormwater measures would be designed such that the project would not increase the amount of stormwater discharge from the site.

Impact minimization measures (including compliance with NPDES permits) for operation of the modernized and expanded the LPOE would be the same as those discussed in Section 3.3.2.2.2 (under *Operations – Surface Waters*), for operation of the modernized and expanded Lynden LPOE. GSA also intends to include low impact development as part of project design, which would further limit impacts from increased runoff as a result of site expansion.

Floodplains

Sumas LPOE Alternative 2 operations would not be anticipated to result in additional impacts to floodplains occurring within the project area beyond those described in the *Construction* subsection above. Following construction, activities occurring within the 1-percent annual chance and 0.2-percent annual chance floodplains would be similar to activities occurring under existing conditions (e.g., pedestrian crossings, vehicle inspections, routine maintenance of facilities), which would not be expected to have an effect on floodplains within the project area. Due to a history of major flood events in this area, it is possible that operations of the modernized and expanded LPOE could be impacted by future flood events. Potential impacts associated with flooding would be minimized with adherence to design standards and requirements, as described in the *Construction* subsection above.

Groundwater

Sumas LPOE Alternative 2 operations would not be anticipated to have any direct or indirect, short- or long-term, site-specific, local, or regional, adverse or beneficial impacts to groundwater. Based on funding and resource availability, CBP may increase the current staff at the Sumas LPOE by approximately 26 personnel after the modernization and expansion project is complete; however, anticipated water usage

during operations of the modernized and expanded LPOE would be expected to remain consistent with current conditions. Additionally, the potential for adverse impacts from contamination of groundwater during use of a well or drilled boreholes associated with a geothermal energy system, if installed, would be negligible, as the construction, maintenance, and sealing would be in compliance with all applicable regulations.

3.3.2.3.3 Sumas LPOE Alternative 3 – Commercial Inspection West

Construction

Surface Waters

Sumas LPOE Alternative 3 would have no direct impacts to surface waters because no surface waters occur within the boundaries of the existing LPOE or proposed expansion area. Sumas LPOE Alternative 3 could have indirect, short-term, negligible, local and regional, adverse impacts to Sumas Creek similar to Sumas LPOE Alternative 2 as discussed in Section 3.3.2.3.2 under *Construction – Surface Waters*. Permitting requirements and impact minimization measures would be the same as those described for Sumas LPOE Alternative 2.

Floodplains

Sumas LPOE Alternative 3 would be anticipated to have direct and indirect, long-term, negligible to minor, site-specific, adverse impacts to floodplains similar to Sumas LPOE Alternative 2 as discussed in Section 3.3.2.3.2 under *Construction – Floodplains*.

Groundwater

Sumas LPOE Alternative 3 would be anticipated to result in indirect, short-term, minor, site-specific and local, adverse impacts to groundwater similar to Sumas LPOE Alternative 2 as discussed in Section 3.3.2.3.2 under *Construction – Groundwater*. Permitting requirements and impact minimization measures would be the same as those described for Sumas LPOE Alternative 2. If GSA decides to implement a geothermal energy system, impacts would be direct, short-term, minor, local, and adverse, as discussed in Section 3.3.2.3.2 under *Construction – Groundwater*.

Operations

Surface Waters

Sumas LPOE Alternative 3 operations would be anticipated to have no direct impacts to surface waters because no surface waters occur within the boundaries of the existing LPOE or proposed expansion area. Sumas LPOE Alternative 3 could have indirect, short-term, negligible, local and regional, adverse impacts to Sumas Creek similar to Sumas LPOE Alternative 2 as discussed in Section 3.3.2.3.2 under *Operations – Surface Waters*. Permitting requirements and impact minimization measures would be the same as those described for Sumas LPOE Alternative 2.

Floodplains

Sumas LPOE Alternative 3 operations would not be anticipated to result in additional impacts to floodplains occurring within the project area similar to Sumas LPOE Alternative 2 as discussed in Section 3.3.2.3.2 under *Operations – Floodplains*.

Groundwater

Sumas LPOE Alternative 3 operations would not be anticipated to have any direct or indirect, short- or long-term, site-specific, local, and regional, adverse or beneficial impacts to groundwater similar to Sumas LPOE Alternative 2 as discussed in Section 3.3.2.3.2 under *Operations – Groundwater*.

3.3.2.3.4 Sumas LPOE Alternative 4 – Multi-Story Construction LPOE Expansion

Construction

Surface Waters

Sumas LPOE Alternative 4 would have no direct impacts to surface waters because no surface waters occur within the boundaries of the existing LPOE or proposed expansion area. Sumas LPOE Alternative 4 could have indirect, short-term, negligible, local and regional, adverse impacts to Sumas Creek similar to Sumas LPOE Alternative 2 as discussed in Section 3.3.2.3.2 under *Construction – Surface Waters*. Permitting requirements and impact minimization measures would be the same as those described for Sumas LPOE Alternative 2.

Floodplains

Sumas LPOE Alternative 4 would be anticipated to have direct and indirect, long-term, negligible to minor, site-specific, adverse impacts to floodplains similar to Sumas LPOE Alternative 2 as discussed in Section 3.3.2.3.2 under *Construction – Floodplains*.

Groundwater

Sumas LPOE Alternative 4 would be anticipated to result in indirect, short-term, minor, site-specific and local, adverse impacts to groundwater similar to Sumas LPOE Alternative 2 as discussed in Section 3.3.2.3.2 under *Construction – Groundwater*. Permitting requirements and impact minimization measures would be the same as those described for Sumas LPOE Alternative 2. If GSA decides to implement a geothermal energy system, impacts would be direct, short-term, minor, local, and adverse, as discussed in Section 3.3.2.3.2 under *Construction – Groundwater*.

Operations

Surface Waters

Sumas LPOE Alternative 4 operations would be anticipated to have no direct impacts to surface waters because no surface waters occur within the boundaries of the existing LPOE or proposed expansion area. Sumas LPOE Alternative 4 could have indirect, short-term, negligible, local and regional adverse impacts to Sumas Creek similar to Sumas LPOE Alternative 2 as discussed in Section 3.3.2.3.2 under *Operations – Surface Waters*. Permitting requirements and impact minimization measures would be the same as those described for Sumas LPOE Alternative 2.

Floodplains

Sumas LPOE Alternative 4 operations would not be anticipated to result in additional impacts to floodplains occurring within the project area similar to Sumas LPOE Alternative 2 as discussed in Section 3.3.2.3.2 under *Operations – Floodplains*.

Groundwater

Sumas LPOE Alternative 4 operations would not be anticipated to have any direct or indirect, short- or long-term, site-specific, local, or regional, adverse or beneficial impacts to groundwater similar to Sumas LPOE Alternative 2 as discussed in Section 3.3.2.3.2 under *Operations – Groundwater*.

3.3.2.4 Construction Sequencing Options

Impacts to water resources under both the Concurrent Construction Option and the Sequential Construction Option would be similar; the primary difference would be the length of time that temporary, construction related impacts would be expected (e.g., increased potential for runoff of pollutants, increased risk of contamination via leaks or spills, etc.). Such impacts would occur within the watershed for a longer period of time under the Concurrent Construction Option.

Under the Sequential Construction Option, ground disturbance would occur within only one project area at a time. This would isolate ground disturbance associated with the project to one area of the overall watershed, limiting the geographic extent of construction-related water resource impacts. Given the distance between the Lynden and Sumas LPOEs, it is unlikely that this sequential order would have a noticeable, beneficial effect on the overall watershed, when compared with the Concurrent Construction Option. As a result, it would be anticipated that impacts to water resources would not substantially differ under the implementation of either construction sequencing option.

3.3.2.5 Lynden and Sumas LPOE Combined Alternative Implementation

When considered together, implementation of port construction at both Lynden and Sumas could result in a net increase of up to 27.1 acres of temporary land disturbance during construction and 11.3 net acres of impervious surface within the Nooksack River watershed; however, considering implementation of stormwater permitting and design measures, as well as distances between the two LPOEs, impacts would not exceed those described in Sections 3.3.2.2 through 3.3.2.4. Both projects could result in a net increase of up to 46 personnel at the ports, which would both be reliant upon the Sumas Blaine surficial aquifer for various operational water sources; however, even when considered together, impacts would not exceed those described in Sections 3.3.2.2 through 3.3.2.4. All other water resource impacts from a result of the implementation of any combination of Lynden and Sumas action alternatives would remain the same as described under Construction and Operations for each alternative (see Sections 3.3.2.2 through 3.3.2.4). If Lynden LPOE Alternative 1 and Sumas LPOE Alternative 1 (No Action Alternatives) are both selected there would be no direct or indirect, short- or long-term, local or regional, adverse impact on water resources.

3.3.2.6 Impacts Reduction Measures

GSA requires that new construction and substantial renovation of its facilities obtain a LEED® Gold certification (GSA 2022a). The LEED® certification for the project is based on an accumulation of several scored green building features that include objectives for reducing adverse impacts to water quality and minimizing risks from flooding hazards. In addition, GSA requires a minimum SITES Silver rating. Regarding water, all major capital projects with a scope of site work exceeding 5,000 square feet must meet the equivalent of the following SITES certification credits:

- SITES credit 3.1, “Manage Precipitation On Site” to reduce adverse impacts to aquatic resources, channel morphology, and dry weather base flow by replicating natural hydrologic conditions and retaining precipitation onsite.
- SITES credit 3.3, “Manage Precipitation Beyond Baseline” with the goal to capture and manage the equivalent of the 95th percentile precipitation event.

GSA would follow the impact reduction measures and BMPs outlined in the NPDES permit. GSA would also take into account BMPs listed in the Stormwater Manual for Western Washington (Department of Ecology 2019). This would include potential BMPs, such as infiltration or filtration, to reduce suspended solids, phosphorus, and salts. Additional methods for reducing phosphorus could include evaluating land application products for phosphorus content and limiting the use of these products.

As a best practice and in consideration of existing flooding issues in the Sumas area, new construction within the Sumas area would strive to adhere to the city of Sumas’ critical area ordinance (Sumas Municipal Code Chapter 15.20) to address current and future flood risks.

GSA additionally commits to:

- Developing in compliance with Section 438 of the 2007 EISA with the objective of restoring the hydrology to predevelopment conditions;
- Considering green infrastructure and low impact development practices, such as reducing impervious surfaces, using vegetated swales and revegetation, and using porous pavements; and
- Developing an SPCC plan, as applicable.

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3.4 BIOLOGICAL RESOURCES

This section describes the baseline conditions for biological resources in the project area and potential impacts that could result from implementing the Proposed Action and No Action Alternative as discussed in Chapter 2. The biological resources that have been identified for consideration in this EIS are vegetation, wildlife, and special status species (including federally and state-listed threatened and endangered species and migratory birds).

3.4.1 Affected Environment

3.4.1.1 *Region of Influence*

The ROI for biological resources includes vegetation, wildlife, and special status species found within 1,000 feet of the project area, which includes the existing Lynden and Sumas LPOEs and the maximum proposed limits of disturbance associated with each of the considered alternatives (see Sections 2.3.1 and 2.3.2).

3.4.1.2 *Regulatory Setting*

Endangered Species Act. The Endangered Species Act (16 U.S.C. 1531 *et seq.*) establishes a national policy for conserving threatened and endangered species of fish, wildlife, and plants, and the habitat on which they depend. Under Section 3 of the Endangered Species Act:

- An endangered species is defined as any species in danger of extinction throughout all or a significant portion of its range.
- A threatened species is any species likely to become an endangered species within the near future throughout all or a significant portion of its range.
- A proposed species is a species found to warrant listing as either threatened or endangered, and for which listing has been officially proposed in the *Federal Register*.
- A candidate species is any species that has been announced in the *Federal Register* as undergoing a status review but has not yet been listed. Candidate species do not receive federal protection under the Endangered Species Act until officially listed as a threatened or endangered species.

Critical habitat for federally listed threatened and endangered species is a specific geographic area (or areas) that contain physical or biological features essential to the conservation of the threatened or endangered species and may require management or protection.

Under Section 7 of the Endangered Species Act, federal agencies must consult with the USFWS when any action the agency carries out, funds, or authorizes may affect either a species listed as threatened or endangered under the Endangered Species Act, or any critical habitat designated for it.

Washington Endangered and Threatened Species Protections. The WA Department of Fish and Wildlife (WDFW) administers the Washington Endangered and Threatened Species Statute (WAC Title 220, Chapter 610, *Endangered Species Act*), which imposes a variety of restrictions, sets up a permit program, and identifies management and exemptions related to species designated as endangered, threatened, and sensitive within the state. The endangered, threatened, and sensitive species are legally established in the Washington State Administrative Code. Washington also recognizes candidate species of concern, which are established by WDFW policies. Washington monitored species are those that require management, survey, or data emphasis for one or more of the following reasons: 1) they were classified as endangered, threatened, or sensitive within the previous five years; 2) they require habitat that is of limited availability during some portion of their life cycle; 3) they are indicators of environmental quality; or 4) there are unresolved taxonomic questions that may affect their candidacy for listing as endangered, threatened, or sensitive species.

Federally and state-protected threatened and endangered species, as well as Washington species of special concern, are all identified as species in greatest conservation need. The WDFW identifies species in greatest conservation need within the Washington State Wildlife Action Plan (WDFW 2015) in order to prioritize species and habitats for conservation.

Washington has also established the Washington Natural Heritage Program (WNHP), which is located within the Washington Department of Natural Resources. The primary tool used by WNHP to prioritize individual plant and animal species is the global and state ranking system used by NatureServe and its member Natural Heritage programs. The ranking system used by NatureServe and WNHP facilitates a quick assessment of a species' rarity. For individual species, the global and state ranks are used as the starting point in the process of assigning priorities.

Bald and Golden Eagle Protection Act. The Bald and Golden Eagle Protection Act (BGEPA) prohibits taking without a permit, or taking with wanton disregard, any bald or golden eagle or their body parts, nests, chicks, or eggs, which includes collection, molestation, disturbance, or killing. The BGEPA protections include provisions such as the protection of unoccupied nests and prohibition on disturbing eagles. The BGEPA includes limited exceptions to its prohibitions through a permitting process, including exceptions to take bald or golden eagle nests that interfere with resource development or recovery operations.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703 *et seq.*) protects birds that have common migration patterns between the U.S. and Canada, Mexico, Japan, or Russia. The MBTA makes it unlawful to pursue, hunt, take, capture, kill, or sell birds (including any parts, dead or alive, feathers, eggs, and nests) that are listed in the statute. Currently there are approximately 1,106 species on the list (USFWS 2023). Birds of conservation concern (BCC) are migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent the highest conservation priority (USFWS 2021).

Invasive Species. EO 13112, *Invasive Species*, as amended in 2016, states the national policy is to prevent the introduction and spread of invasive species or to control and eradicate populations of invasive species that have already become established. In this context, an invasive species is “a non-native organism whose introduction causes or is likely to cause economic or environmental harm, or harm to human, animal, or plant health.”

3.4.1.3 Existing Conditions

Vegetation

The Lynden and Sumas LPOEs are located in Whatcom County, which is within the Puget Trough ecoregion (WDFW 2015). The Puget Trough ecoregion encompasses about 8 percent of Washington, runs the length of Washington, and rising to about 1,000 feet elevation between the Cascade Mountains on the east and the Olympic Mountains and Willapa Hills on the west (LandScope America 2024).

Vegetation typically found in Whatcom County include Douglas-fir (*Pseudotsuga menziesii*), western redcedar (*Thuja plicata*), western hemlock (*Tsuga heterophylla*), red alder (*Alnus rubra*), and black cottonwood (*Populus trichocarpa*); with an understory of western sword fern (*Polystichum munitum*), salal (*Gaultheria shallon*), Oregon grape (*Berberis aquifolium*), vine maple (*Acer circinatum*), western bracken fern (*Pteridium aquilinum*), and trailing blackberry (*Rubus ursinus*).

The Lynden area ROI contains the highly developed LPOE, farmlands, and a small, wooded area to the east of the LPOE. The vegetation within the Lynden LPOE includes several maintained landscaped areas consisting of grass with small bushes and several larger trees (see Figure 3.2-1). The vegetation within the maximum proposed limits of disturbance includes farmland and small, landscaped areas with grass, small bushes, and several larger trees (see Figures 1.2-2, 2.3-1, and 2.3-2).

The Sumas ROI is a highly developed industrial, commercial, and residential area with a large, wooded area located to the west of the BNSF railroad industrial area. The vegetation within the Sumas LPOE includes several maintained landscaped areas consisting of grass with small bushes and several larger trees

(see Figure 3.2-2). The vegetation within the maximum proposed limits of disturbance includes small, landscaped areas with grass, small bushes, and several larger trees (see Figures 1.2-3 and 2.3-3).

Wildlife

The Lynden ROI has limited undisturbed wildlife habitat due to the rural, agricultural nature of the ROI, but does contain a small, wooded area east of the LPOE. The Sumas LPOE has very little high-quality wildlife habitat due the area being highly developed with the exception of the large, wooded area west of the BNSF railroad. Species most likely to be encountered within each ROI include those highly adaptable species common to disturbed or urban areas. Some of the common species of wildlife that are known to occur in Whatcom County and in the vicinity of Lynden and Sumas include: mule deer (*Odocoileus hemionus*), eastern gray squirrel (*Sciurus carolinensis*), Douglas squirrel (*Tamiasciurus douglasii*), eastern cottontail (*Sylvilagus floridanus*), racoon (*Procyon lotor*), coyote (*Canis latrans*), common gartersnake (*Thamnophis sirtalis*), western toad (*Anaxyrus boreas*), American robin (*Turdus migratorius*), dark-eyed junco (*Junco hyemalis*), Canada goose (*Branta canadensis*), house finch (*Haemorhous mexicanus*), northern flicker (*Colaptes auratus*), spotted towhee (*Pipilo maculatus*), song sparrow (*Melospiza melodia*), American crow (*Corvus brachyrhynchos*), Steller’s jay (*Cyanocitta stelleri*), black-capped chickadee (*Poecile atticapillus*), and pileated woodpecker (*Dryocopus pileatus*).

Special Status Species

The USFWS’s Information for Planning and Consultation (IPaC) was queried for federally listed, proposed, or candidate threatened and endangered species and designated critical habitats potentially occurring within the ROI. The WDFW was queried for Washington state-designated threatened and endangered species that may be found within Whatcom County. Although GSA is a federal agency and therefore not subject to state laws for listed species, GSA considers it a good practice to avoid any potential impacts to state-listed species and has included these species in this analysis. The species lists generated by the USFWS IPaC and WDFW database search includes a total of eight species (two mammals, two birds, two fish, one amphibian, and one insect; see Table 3.4-1). Table 3.4-1 also includes a brief assessment of each species’ likelihood of occurrence in the ROI based on the species’ range/distribution and habitat requirements. The closest USFWS-designated critical habitat is for the bull trout (*Salvelinus confluentus*), which is located 1.2 miles to the west of the Lynden LPOE within Bertrand Creek and 3 miles to the east of Lynden LPOE within Fishtrap Creek. There are no USFWS-designated critical habitats for special status species within the ROIs.

Table 3.4-1. Federal and State Special Status Species with Potential to Occur within ROI

Species	Federal Status	State Status	Habitat	Which LPOE?	Expected to Occur?
Mammal					
North American wolverine (<i>Gulo gulo luscus</i>)	T	C	This species does not appear to specialize in specific vegetation or geological aspects, but instead selects areas that are cold and receive enough cold precipitation to maintain persistent snow late into the warm season. This species is primarily found in remote reaches of boreal forests and subarctic and alpine tundra.	Lynden and Sumas	No. The Lynden and Sumas ROIs do not contain boreal forests or areas with persistent snow late into the warm season.
Gray wolf (<i>Canis lupus</i>)	E	E	Highly adaptable species able to inhabit a range of areas including temperate forests, mountains, tundra, taiga, and grasslands. In Washington, usually occurs in areas with few roads.	Sumas	No. This species primarily preys upon large, hooved mammals such as moose, elk, deer, caribou, and bison. The highly developed nature of the Sumas ROI and the presence of humans deters the presence of prey species and of gray wolves.

Table 3.4-1. Federal and State Special Status Species with Potential to Occur within ROI

Species	Federal Status	State Status	Habitat	Which LPOE?	Expected to Occur?
Bird					
Marbled murrelet (<i>Brachyramphus marmoratus</i>)	T	E	Species spends most of its time on the ocean, resting and feeding near-shore marine waters and comes inland to nest. Species generally nests in old growth, mature coniferous forests or in rocky slopes near coastal areas.	Lynden and Sumas	No. The Lynden and Sumas ROIs do not contain old growth forests or rocky slopes. In addition, the ocean ranges from 15 to 25 miles from the LPOEs.
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	T	E	This species uses wooded habitat with dense cover and water nearby, including woodlands with low, scrubby, vegetation, overgrown orchards, abandoned farmland, and dense thickets along streams and marshes.	Lynden and Sumas	Possibly. The Lynden and Sumas ROIs contain wooded areas and / or farmlands. If found within the ROIs it would be considered transient.
Fish					
Bull trout (<i>Salvelinus confluentus</i>)	T	C	Species prefers cold, clean, complex, and connected habitats and are most common in high mountain areas where snowfields and glaciers are present. They mainly occur in deep pools of large, cold rivers, lakes, and streams.	Lynden and Sumas	No. The Lynden and Sumas ROIs do not contain any surface waters such as pools, rivers, lakes, or streams.
Dolly varden trout (<i>Salvelinus malma</i>)	T	NL	Species prefers cold, clean, complex, and connected habitats and are most common in high mountain areas where snowfields and glaciers are present. They mainly occur in deep pools of large, cold rivers, lakes, and streams.	Lynden and Sumas	No. The Lynden and Sumas ROIs do not contain any surface waters such as pools, rivers, lakes, or streams.
Amphibian					
Oregon spotted frog (<i>Rana pretiosa</i>)	T	E	This species is highly aquatic and is rarely found away from water. Populations occur in large shallow wetland systems associated with streams and stream networks.	Sumas	No. The Sumas ROI does not contain any surface waters such as wetlands or streams.
Insect					
Monarch butterfly (<i>Danaus plexippus</i>)	C	C	This species requires secure patches of milkweed and nectar sources in weedy fields and sparsely vegetated habitats, typically near wetlands or riparian areas. Suitable breeding habitat associated with presence of milkweed plants, which grow in sunny areas with soils ranging from well-drained to those occurring near water.	Lynden and Sumas	Possibly. This species is known to breed in and travel through Washington, although the population of this species in Washington is considered low. The Lynden ROI contains farmland, fields, and grassy and forested areas and the Sumas ROI contains some limited grassy and forested areas, which could contain floral nectar for nutrition.

Source: USFWS 2024b, WDFW 2015, WDFW 2023, WDFW 2024

C = Candidate

E = Endangered

NL = Not Listed

T = Threatened

Migratory Birds

Birds migrating through the area may occasionally stop at or near the project area to rest or forage. The USFWS IPaC was queried for migratory birds that could occur in the Lynden and Sumas ROIs. Table 3.4-2 lists the migratory bird species identified as birds of particular concern in the Lynden and Sumas ROIs either because they occur on the USFWS BCC regional lists (USFWS 2021) or warrant special attention. Table 3.4-2 also describes common habitat and breeding season for each species. The Lynden ROI contains farmlands, wooded areas, bushes, maintained lawns and the Sumas ROI contains wooded areas, bushes, and maintained lawns which could be potential habitat for some migratory bird species, although most species would use the ROIs as migratory stopover spots.

Table 3.4-2. Migratory Birds with Potential to Occur in the ROI

Species	Habitat	Breeding Season	Which LPOE?	Expected to Occur?
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Coasts, rivers, large lakes, mountains, and open country typically close to water.	January 1 to September 30	Lynden and Sumas	Unlikely. Although this species is known to occur in the ROIs, the Lynden and Sumas ROIs do not support suitable foraging and resting habitat.
Chestnut-backed chickadee (<i>Poecile rufescens rufescens</i>)	Moist conifer trees, adjacent oaks, and shade trees.	March 1 to July 31	Lynden and Sumas	Possibly. Both the Lynden and Sumas ROIs contain areas with trees, bushes, and maintained lawns and the Lynden ROI also contains farmland that this species could use for foraging and resting habitat.
Black swift (<i>Cypseloides niger</i>)	Mountains, coastal cliffs, and ledges or crevices in steep cliffs, along the coast or near streams or waterfalls.	June 15 to September 10	Sumas	Unlikely. The Sumas ROI does not contain mountains, cliffs, streams, or waterfalls. This species may be encountered within the ROI on stopovers during migration. However, the low-quality habitat existing within the ROI is unlikely to support suitable foraging or resting habitat during migration stopovers.
Lesser yellowlegs (<i>Tringa flavipes</i>)	Marshes, mudflats, shores, ponds, and open boreal woods.	Breeds elsewhere	Sumas	Unlikely. The Sumas ROI does not contain marshes, mudflats, ponds, or other surface water areas. This species may be encountered within the ROI on stopovers during migration. However, the low-quality habitat existing within the ROI is unlikely to support suitable foraging or resting habitat during migration stopovers.

Table 3.4-2. Migratory Birds with Potential to Occur in the ROI

Species	Habitat	Breeding Season	Which LPOE?	Expected to Occur?
Evening grosbeak (<i>Coccothraustes vespertinus</i>)	Conifer forests, box elders, maples, fruiting shrubs, and deciduous groves.	May 15 to August 10	Lynden and Sumas	Possibly. The Lynden and Sumas ROIs contain areas with trees, bushes, and maintained lawn and the Lynden ROI also contains farmland that this species could use for foraging and resting habitat.
Olive-sided flycatcher (<i>Contopus cooperi</i>)	Conifer forests, bogs, ponds, burn areas, and clearings.	May 20 to August 31	Lynden and Sumas	Possibly. The Lynden and Sumas ROIs contain areas with trees, bushes, and maintained lawn and the Lynden ROI also contains farmland that this species could use for foraging and resting habitat.
Rufous hummingbird (<i>Selasphorus rufus</i>)	Forest edges, stream sides, mountain meadows, clearings, and bushy second growth areas.	April 15 to July 15	Lynden and Sumas	Possibly. The Lynden and Sumas ROIs contain areas with trees, bushes, and maintained lawn and the Lynden ROI also contains farmland that this species could use for foraging and resting habitat.
Western gull (<i>Larus occidentalis</i>)	Coastal waters, estuaries, beaches, and city waterfronts.	April 21 to August 25	Lynden and Sumas	Possibly. The Lynden and Sumas ROIs contain areas with trees, bushes, and maintained lawn and the Lynden ROI also contains farmland that this species could use for foraging and resting habitat.
California gull (<i>Larus californicus</i>)	Sea coasts, lakes, farms, and urban centers.	March 1 to July 31	Sumas	Possibly. The Sumas ROI contains areas with urban centers, trees, bushes, and maintained lawn that this species could use for foraging and resting habitat.

Source: USFWS 2024b, USFWS 2024c

3.4.2 Environmental Consequences

3.4.2.1 Methodology

To evaluate potential impacts on biological resources, GSA reviewed the project alternatives to determine whether any activities have the potential to cause the following within the ROI:

- Displacement of terrestrial communities or loss of habitat;
- Diminished value of habitat for wildlife and plants;
- Interference with the movement of native resident or migratory wildlife species;
- Introduction of noxious or invasive plant species;
- Impacts on or displacement of endangered, threatened, or other protected status species; or

A major adverse impact to biological resources would occur if the project alternatives would result in:

- Long-term loss, degradation, or loss of diversity within unique or high-quality plant communities;
- Unpermitted “take” of federally listed species;
- Local extirpation of rare or sensitive species not currently listed under the Endangered Species Act; or
- Violation of the MBTA or BGEPA.

3.4.2.2 Lynden LPOE Alternatives

3.4.2.2.1 Lynden LPOE Alternative 1 – No Action Alternative

Lynden LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impact on biological resources. Under Lynden LPOE Alternative 1, GSA would not modernize or expand the Lynden LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure, or changes to onsite operations would occur.

3.4.2.2.2 Lynden LPOE Alternative 2 – East-West Oriented LPOE Expansion

Construction

Vegetation

Lynden LPOE Alternative 2 would have direct, short-term, minor, site-specific, adverse impacts on vegetation during demolition and construction activities planned within the project area. Construction of the new facilities and infrastructure would require disturbance and removal of existing vegetation including a portion of the farmland west of the LPOE, small areas of maintained grass and landscaping, and a limited number of trees.

The trees located on the western border of the LPOE may be removed to improve line-of-sight and security along the U.S. – Canada border. The removal of these trees would represent a long-term, minor adverse impact to vegetation in the project area. Grass and other landscaping would be incorporated throughout the project area as part of the project design using native species and seed mixes.

Wildlife

Lynden LPOE Alternative 2 would have direct and indirect, short-term, minor, local, adverse impacts on wildlife. Construction within the proposed expansion area would remove existing vegetation and disturb wildlife inhabiting the ROI. However, the vegetation currently present within the proposed expansion area generally consists of active farmland, maintained grass, and a limited number of trees and does not represent high-quality habitat for wildlife. Species may temporarily relocate during construction as a result of noise and increased human activity, but those species that currently utilize the area are likely to return following the construction period and would not be permanently displaced.

Special Status Species

Table 3.4-3 summarizes the potential impacts to yellow-billed cuckoo and monarch butterfly as they have potential to occur in the project area. With implementation of impact avoidance measures specified in Section 3.4.2.6, Lynden LPOE Alternative 2 may affect but would not likely adversely affect federally and state-protected species. No other federally or state-protected species are expected to be encountered within the project area; as such, they would not be affected by implementation of Lynden LPOE Alternative 2. GSA is consulting with the USFWS in accordance with Section 7 of the ESA regarding the potential impacts to protected species. The Final EIS will include all correspondence related to GSA's consultation with the USFWS in Appendix A.

Table 3.4-3. Potential Effects to Threatened and Endangered Species

Species	Status	Effects Determination	Potential Impact Summary
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	Federal Threatened State Endangered	May affect, not likely to adversely affect	Potentially suitable habitat may exist within the Lynden ROI, and this species may experience indirect effects from increased human activity, noise, or disturbance of vegetation (specifically several trees, bushes, and farmland) in the proposed expansion area. This species may migrate through the ROI to stop, rest, and forage. However, construction and operation of Lynden LPOE Alternative 2 would not reduce the overall availability of nesting habitat or high-quality foraging habitat. In addition, potential impacts would be further reduced or avoided with implementation of the measures discussed in Section 3.4.2.6.
Monarch butterfly (<i>Danaus plexippus</i>)	Federal Candidate State Candidate	May affect, not likely to adversely affect	Potentially suitable habitat may exist within the Lynden ROI, and this species may experience indirect effects from increased human activity, noise, or disturbance of vegetation (specifically milkweed, if present) in the proposed expansion area. However, these impacts would be further reduced or avoided with implementation of the measures discussed in Section 3.4.2.6.

Migratory Birds

Lynden LPOE Alternative 2 would be anticipated to have direct and indirect, short-term, negligible, local, adverse impacts on migratory bird species. Trees located within and near the Lynden LPOE could support nesting migratory birds. As shown in Table 3.4-2, the chestnut-backed chickadee, evening grosbeak, olive-sided flycatcher, rufous hummingbird, and western gull have the potential to occur within the ROI. However, because the LPOE is active and surrounding area does not support ideal habitat, it is more likely that these migrating species would pass through the area on the way to other stopover, foraging, or breeding habitat. In addition, these negligible impacts would be further reduced or avoided with implementation of the measures discussed in Section 3.4.2.6.

Operations

No additional impacts to vegetation or wildlife habitat would be anticipated during operations of Lynden LPOE Alternative 2. The change in noise associated with operation would be negligible as the site would continue its operations as a LPOE. The noise and human activity associated with operation of the modernized and expanded Lynden LPOE is not expected to result in measurable indirect effects to protected species within the ROI.

3.4.2.2.3 Lynden LPOE Alternative 3 – North-South Oriented LPOE Expansion

Construction

Vegetation

Lynden LPOE Alternative 3 would have direct, short- and long-term, minor, site-specific, adverse impacts on vegetation during demolition and construction activities planned within the project area similar to Lynden LPOE Alternative 2 as described in Section 3.4.2.2.2 under *Construction – Vegetation*. However, Lynden LPOE Alternative 3 would disturb a lesser amount of vegetation than Lynden LPOE Alternative 2 because it would remove a smaller portion of the adjacent farmland.

Wildlife

Lynden LPOE Alternative 3 would have direct and indirect, short-term, minor, local, adverse impacts on wildlife during demolition and construction activities planned within the project area similar to Lynden LPOE Alternative 2 as described in Section 3.4.2.2.2 under *Construction – Wildlife*.

Special Status Species

Lynden LPOE Alternative 3 may affect but is not likely to adversely affect the yellow-billed cuckoo and monarch butterfly (see Table 3.4-3). Construction of Lynden LPOE Alternative 3 is not anticipated to affect any other federally or state-protected species, similar to Lynden LPOE Alternative 2 as described in Section 3.4.2.2.2 under *Construction – Special Status Species*.

Migratory Birds

Lynden LPOE Alternative 3 would be anticipated to have direct and indirect, short-term, negligible, local, adverse impacts on migratory bird species similar to Lynden LPOE Alternative 2 as described in Section 3.4.2.2.2 under *Construction – Migratory Birds*.

Operations

Lynden LPOE Alternative 3 operational impacts to biological resources would be similar to Lynden LPOE Alternative 2 as described in Section 3.4.2.2.2 under *Operations*.

3.4.2.3 Sumas LPOE Alternatives

3.4.2.3.1 Sumas LPOE Alternative 1 – No Action Alternative

Sumas LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impact on biological resources. Under Sumas LPOE Alternative 1, GSA would not expand or modernize the Sumas LPOE; current facilities and infrastructure at the existing LPOE would remain. No ground disturbance from new facilities or infrastructure construction would occur.

3.4.2.3.2 Sumas LPOE Alternative 2 – Feasibility Study Preferred Alternative

Construction

Vegetation

Sumas LPOE Alternative 2 would have direct, short-term, minor, site-specific, adverse impacts on vegetation during demolition and construction activities planned within the project area. Construction of the new facilities and infrastructure would require disturbance and removal of existing vegetation. The vegetated areas within the project area are of low quality and consist of small areas of maintained grass and landscaping with a limited number of trees.

It has not been determined if the existing trees located on the western border of the Sumas LPOE would be removed or if they would remain in place. If the trees are removed it would result in a long-term, minor adverse impact to vegetation in the project area. Grass and other landscaping would be incorporated throughout the project area as part of the project design using native species and seed mixes.

Wildlife

Sumas LPOE Alternative 2 would have direct and indirect, short-term, minor, local, adverse impacts on wildlife. Construction within the proposed expansion area would remove existing vegetation and disturb wildlife inhabiting the ROI. However, the vegetation currently present within the proposed expansion area generally consists of maintained grass and a limited number of trees and does not represent high-quality habitat for wildlife. Species may temporarily relocate during construction as a result of noise and increased human activity, but those species that currently utilize the area are likely to return following the construction period and would not be permanently displaced.

Special Status Species

Table 3.4-4 summarizes the potential impacts to the yellow-billed cuckoo and monarch butterfly as these species have the potential to occur in the project area. With implementation of impact avoidance measures specified in Section 3.4.2.6, Sumas LPOE Alternative 2 may affect but would not likely adversely affect federally and state-protected species. No other federally or state-protected species are expected to be encountered within the project area; as such, they would not be affected by implementation of Sumas LPOE Alternative 2. GSA is consulting with the USFWS in accordance with Section 7 of the ESA regarding the potential impacts to protected species. The Final EIS will include all correspondence related to GSA's consultation with the USFWS in Appendix A.

Table 3.4-4. Potential Effects to Threatened and Endangered Species

Species	Status	Effects Determination	Potential Impact Summary
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	Federal Threatened State Endangered	May affect, not likely to adversely affect	Potentially suitable habitat may exist within the Sumas ROI, and this species may experience indirect effects from increased human activity, noise, or disturbance of vegetation (specifically several trees, bushes, and farmland) in the proposed expansion area. This species may migrate through the ROI to stop, rest, and forage. However, construction and operation of Sumas LPOE Alternative 2 would not reduce the overall availability of nesting habitat or high-quality foraging habitat. In addition, potential impacts would be further reduced or avoided with implementation of the measures discussed in Section 3.4.2.6.
Monarch butterfly (<i>Danaus plexippus</i>)	Federal Candidate State Candidate	May affect, not likely to adversely affect	Potentially suitable habitat may exist within the Sumas ROI, and this species may experience indirect effects from increased human activity, noise, or disturbance of vegetation (specifically milkweed, if present) in the proposed expansion area. However, these negligible impacts would be reduced or avoided with implementation of the measures discussed in Section 3.4.2.6.

Migratory Birds

Sumas LPOE Alternative 2 would be anticipated to have direct and indirect, short-term, negligible, local, adverse impacts on migratory bird species, similar to Lynden LPOE Alternative 2 as described in Section 3.4.2.2.2 under *Construction – Migratory Birds*. Trees located within and near the Sumas LPOE could support the same nesting migratory birds as described for Lynden LPOE Alternative 2, but would also include the California gull (see Table 3.4-2).

Operations

No additional impacts to vegetation or wildlife habitat would be anticipated during operations of Sumas LPOE Alternative 2. The change in noise associated with operation would be negligible in relation to the current, built-up nature of the area and the proposed location along an existing highway. The noise and human activity associated with operation of the modernization and expansion of the Sumas LPOE is not expected to result in measurable indirect effects to protected species within the ROI.

3.4.2.3.3 Sumas LPOE Alternative 3 – Commercial Inspection West

Construction

Vegetation

Sumas LPOE Alternative 3 would have direct, short-term, minor, site-specific, adverse impacts on vegetation during demolition and construction activities planned within the project area similar to Sumas LPOE Alternative 2 as described in Section 3.4.2.3.2 under *Construction – Vegetation*.

Wildlife

Sumas LPOE Alternative 3 would have direct and indirect, short-term, minor, local, adverse impacts on wildlife during demolition and construction activities planned within the project area similar to Sumas LPOE Alternative 2 as described in Section 3.4.2.3.2 under *Construction – Wildlife*.

Special Status Species

Sumas LPOE Alternative 3 may affect but is not likely to adversely affect the yellow-billed cuckoo or monarch butterfly (see Table 3.4-4). Construction of Sumas LPOE Alternative 3 is not anticipated to affect any other federally or state-protected species, similar to Sumas LPOE Alternative 2 as described in Section 3.4.2.3.2 under *Construction – Special Status Species*.

Migratory Birds

Sumas LPOE Alternative 3 would be anticipated to have direct and indirect, short-term, negligible, local, adverse impacts on migratory bird species similar to Sumas LPOE Alternative 2 as described in Section 3.4.2.3.2 under *Construction – Migratory Birds*.

Operations

Sumas LPOE Alternative 3 operational impacts to biological resources would be similar to Sumas LPOE Alternative 2 as described in Section 3.4.2.3.2 under *Operations*.

3.4.2.3.4 Sumas LPOE Alternative 4 – Multi-Story Construction LPOE Expansion

Construction

Vegetation

Sumas LPOE Alternative 4 would have direct, short-term, minor, site-specific, adverse impacts on vegetation during demolition and construction activities planned within the project area similar to Sumas LPOE Alternative 2 as described in Section 3.4.2.3.2 under *Construction – Vegetation*.

Wildlife

Sumas LPOE Alternative 4 would have direct and indirect, short-term, minor, local, adverse impacts on wildlife during demolition and construction activities planned within the project area similar to Sumas LPOE Alternative 2 as described in Section 3.4.2.3.2 under *Construction – Wildlife*.

Special Status Species

Sumas LPOE Alternative 4 may affect but is not likely to adversely affect the yellow-billed cuckoo or monarch butterfly (see Table 3.4-4). Construction of Sumas LPOE Alternative 4 is not anticipated to affect any other federally or state-protected species, similar to Sumas LPOE Alternative 2 as described in Section 3.4.2.3.2 under *Construction – Special Status Species*.

Migratory Birds

Sumas LPOE Alternative 4 would be anticipated to have direct and indirect, short-term, negligible, local, adverse impacts on migratory bird species similar to Sumas LPOE Alternative 2 as described in Section 3.4.2.3.2 under *Construction – Migratory Birds*.

Operations

Sumas LPOE Alternative 4 operational impacts to biological resources would be similar to Sumas LPOE Alternative 2 as described in Section 3.4.2.3.2 under *Operations*.

3.4.2.4 Construction Sequencing Options

Impacts to biological resources under both the Concurrent Construction Option and the Sequential Construction Option would be similar; the primary difference would be the length of time that temporary, construction related impacts would be expected (e.g., human activity and construction noise). Such impacts would occur within the ROIs for a longer period of time under the Concurrent Construction Option.

Under the Sequential Construction Option, construction at each LPOE would be shorter, limiting the amount of time wildlife would be exposed to construction activities. This would result in a slightly less adverse effect on surrounding wildlife. Overall, impacts to biological resources would not substantially differ under the implementation of either construction sequencing option above and impacts would be similar to as described in Sections 3.4.2.2 and 3.4.2.3.

3.4.2.5 Lynden and Sumas LPOE Combined Alternative Implementation

Potential biological resource impacts from construction and operational activities for all Lynden and Sumas LPOE action alternatives would be primarily local as described in Sections 3.4.2.2 through 3.4.2.4. Therefore, considering the distance between the two LPOEs, the combined impacts from construction and operation of any combination of Lynden and Sumas LPOE action alternatives would not result in any greater level of impacts to biological resources beyond those discussed in Sections 3.4.2.2 through 3.4.2.4. Implementation of any combination of Lynden and Sumas action alternatives may affect but would not likely adversely affect the yellow-billed cuckoo and monarch butterfly, with implementation of impact avoidance measures specified in Section 3.4.2.6, similar to those described in Tables 3.4-3 and 3.4-4. If Lynden LPOE Alternative 1 and Sumas LPOE Alternative 1 (No Action Alternatives) are both selected there would be no direct or indirect, short- or long-term, local or regional, adverse impact on biological resources.

3.4.2.6 Impacts Reduction Measures

General measures to reduce or avoid construction impacts on biological resources would include:

- Only approved, native species would be used for revegetation. When possible, pollinator-friendly plant species would be used. These plant species would not be invasive or noxious species, and disturbed areas would be promptly restored or revegetated to the extent practicable following construction.
- Construction equipment would be washed before and after coming to the site to the extent practicable to limit the transport of invasive species. If non-native invasive species are present in the project area, these plants would be eradicated and removed from the site before earthmoving activities begin.
- All buildings scheduled for demolition would be inspected for nests prior to any demolition activities. Any further requirements would be determined in coordination with applicable state and federal resource agencies pending survey results.

- If construction activities occur within the nesting periods of migratory birds that may be found within the ROI (see Table 3.4-2) or the yellow-billed cuckoo (June to early August), surveys would be conducted for nests prior to initiating demolition or construction activities. Any further requirements would be determined in coordination with applicable federal resource agencies pending survey results.
- If milkweed plants are observed within the proposed expansion areas, they would be avoided to the extent practicable in order to reduce potential impacts to the federal candidate monarch butterfly.
 - If avoidance is not practicable, milkweed plants would be transplanted outside of the project area. When transplanting milkweed plants, care would be taken to retain as much of the tap root as possible. Digging 4 inches away from each side of the plant would help avoid cutting the tap root. Transplanting in early spring or in late summer/late fall may also increase success (Gomez 2018).
- If the project is determined to have potential to disturb or kill eagles, a permit under the BGEPA would be obtained.

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3.5 GEOLOGY, TOPOGRAPHY, AND SOILS

This section describes the baseline conditions for geological resources in the project area and potential geological impacts that could result from implementing the Proposed Action and No Action Alternative as discussed in Chapter 2. Geological resources consist of the Earth's surface and subsurface materials and are typically described in terms of geology, topography, soils, and geologic hazards. Geology is the study of the Earth's physical structure and composition, as well as the configuration of the surface and subsurface features. Topography describes the general shape and arrangement of the natural and artificial physical features of a land surface. Soils are the unconsolidated material overlying bedrock, and are typically described in terms of type, slope, and physical characteristics, such as permeability, strength, and erosion potential. Geologic hazards are natural geologic events that can endanger human lives and threaten property, such as seismicity. The conditions described in the affected environment focus on geology, topography, and soils.

3.5.1 Affected Environment

3.5.1.1 Region of Influence

The geology, topography, and soils ROI focuses on the footprint of the project areas, which includes the existing LPOE facilities, proposed expansion areas, and the areas proposed for potential road and utility construction activities under the Lynden LPOE and Sumas LPOE action alternatives.

3.5.1.2 Regulatory Setting

The Farmland Protection Policy Act (FPPA) (7 U.S.C. 4201 et seq.) of 1981 states that federal agencies must "minimize the extent to which federal programs contribute to the unnecessary conversion of farmland to nonagricultural uses." Prime and unique farmland, which is categorized by the USDA NRCS based on underlying soil characteristics, is protected by the FPPA.

See Section 3.3, Water Resources, for details on the NPDES and stormwater permitting, which addresses measures to implement erosion and sediment controls at construction sites.

3.5.1.3 Existing Conditions

3.5.1.3.1 Lynden LPOE

Geology

The ROI is located in the Cascade-Sierra Mountains physiographic province, which is defined by the presence of the Sierra Nevada and Cascade mountain ranges (NPS 2017). The general geology of the area consists of Quaternary sediments, predominantly glacial drift, and including alluvium (DNR n.d.). The surface geology beneath the project area consists of Quaternary alluvium, which is described by the Washington Geological Survey's Geologic Information Portal as Quaternary unconsolidated or semi consolidated alluvial clay, silt, sand, gravel, and/or cobble deposits that locally may include peat, muck, and diatomite; beach, dune, lacustrine, estuarine, marsh, landslide, lahar, glacial, or colluvial deposits; volcaniclastic or tephra deposits; and/or modified land and artificial fill (DNR 2024a).

The USGS 2018 Seismic Hazard Map shows the ROI within an area of moderate to high risk (hazard level five out of seven) (USGS 2018). Small earthquakes occur frequently in Washington. Large earthquakes are less common but are anticipated to occur in the future due to the presence of the Cascadia subduction zone, which produces some of the most damaging earthquakes in the world (DNR 2024b). The nearest active faults to the project area are the Drayton Harbor fault scarp, approximately 8 miles west; the Birch Bay fault, approximately 13 miles southwest; the Sandy Point fault, approximately 18 miles southwest; and the Boulder Creek-Canyon Creek fault, approximately 23 miles southeast, all of which are classified as Latest Quaternary age faults (less than 15,000 years). As of 2018, the Quaternary period is defined as the period of time occurring within the past 2.58 million years. A Quaternary Age fault has demonstrated geological evidence of seismic activity within that time period (DNR 2024a; USGS 2024d).

The liquefaction susceptibility of the project area is low. Liquefaction refers to a phenomenon in which saturated, sandy soils lose strength and cohesion during a strong seismic event, essentially behaving as a liquid. The existing Lynden LPOE occurs within an area determined to have low liquefaction susceptibility, and a portion of the proposed expansion area consists of peat, which is not subject to liquefaction (DNR 2024a).

Topography

According to the 2014 USGS 7.5-minute topographic quadrangle for the ROI, the project area is at an elevation of approximately 135 to 145 feet above mean sea level (msl), sloping southwesterly (GSA 2023a; USGS 2023). The topography of the project area is relatively level, with the existing LPOE consisting of flat, paved roads and support facilities with associated parking. The area surrounding the LPOE, including the proposed expansion areas under both action alternatives, consists generally of level agricultural fields and a small stand of evergreen trees to the east, south of E Boundary Road.

Soils

Two soil map units are present within the project area (see Figures 3.5-1 and 3.5-2). The soil map unit that occurs beneath the existing LPOE, the maximum proposed limits of disturbance to the east (Alternatives 2 and 3) and to the south (Alternative 3) is Birchbay silt loam, 3 to 8 percent slopes (soil map unit #13). According to the USDA NRCS Web Soil Survey (WSS), this soil is moderately well drained, has a moderate erosion hazard, and is not hydric. Soil map unit #13 is classified as farmland of statewide importance (USDA 2023).

The soil map unit present beneath the maximum proposed limits of disturbance to the west (Alternative 2) is Pangborn muck, drained, 0 to 2 percent slopes (soil map unit #116). According to the WSS, this soil is very poorly drained, has a slight erosion hazard, and is classified as a hydric soil (i.e., those soils found in wetlands). Soil map unit #116 is classified as prime farmland if drained (USDA 2023). Table 3.5-1 presents the distribution of soil units within the existing Lynden LPOE and maximum proposed limits of disturbance for Lynden LPOE Alternatives 2 and 3, respectively.

Table 3.5-1. Soil Units within the Existing Lynden LPOE and Lynden LPOE Alternatives 2 and 3 Project Areas

Surface Type	Existing LPOE (acre)	Lynden LPOE Alternative 2 (acre)	Lynden LPOE Alternative 3 (acre)
Birchbay	3.78	6.57	9.35
Pangborn	0.95	7.92	0.95
Total	4.73	14.49	10.30

A Phase I ESA conducted in 2023 identified soil contamination in concentrations greater than MTCA cleanup levels, originating from a LUST. Additional sources of soil contamination were identified in the Phase I ESA, including contaminants migrating from adjacent properties. Remediation to address soil contamination is ongoing (GSA 2023c). Section 3.7, Human Health and Safety, discusses soil contamination in more detail.

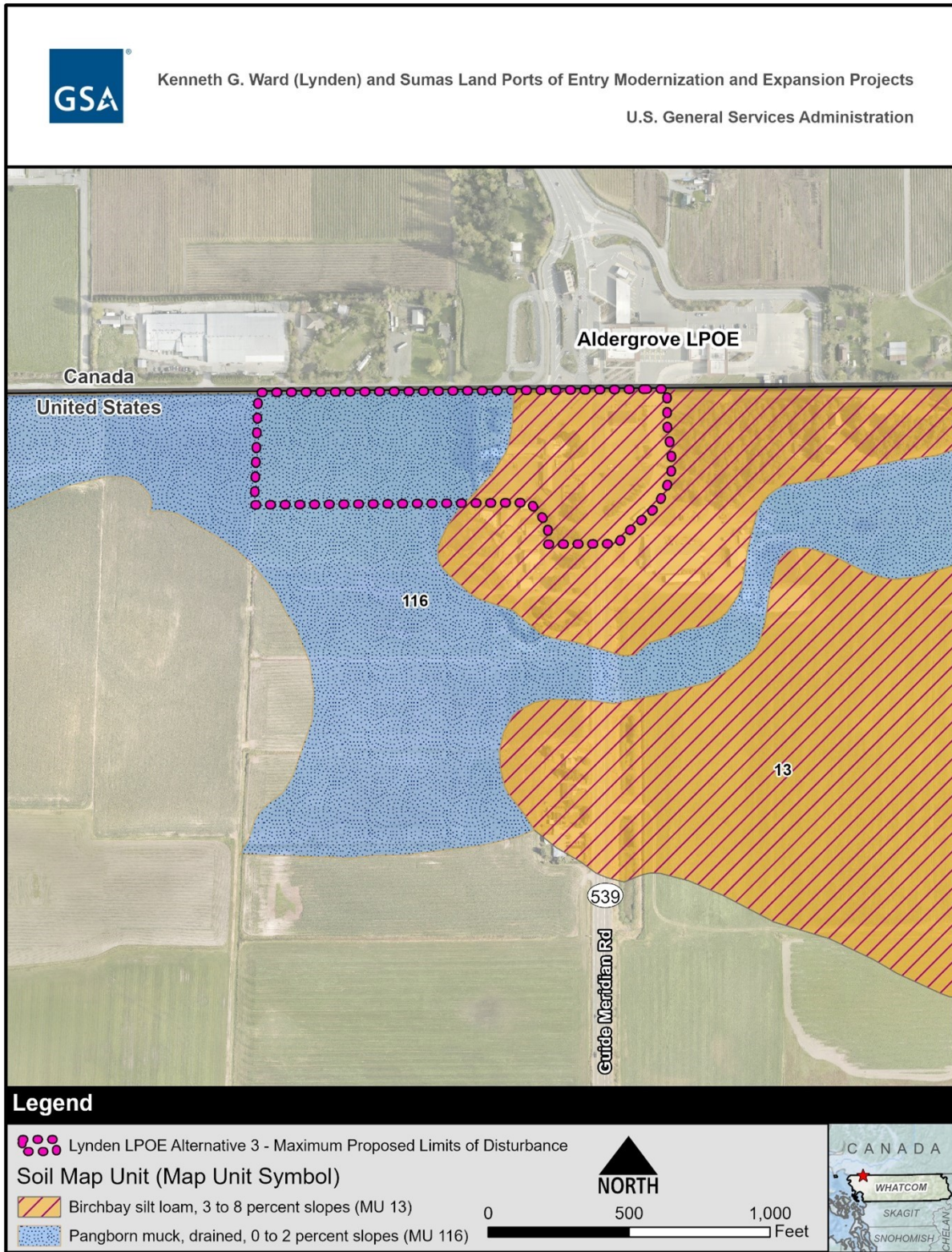


Figure 3.5-1. Soil Types within the Lynden LPOE Alternative 2 Project Area

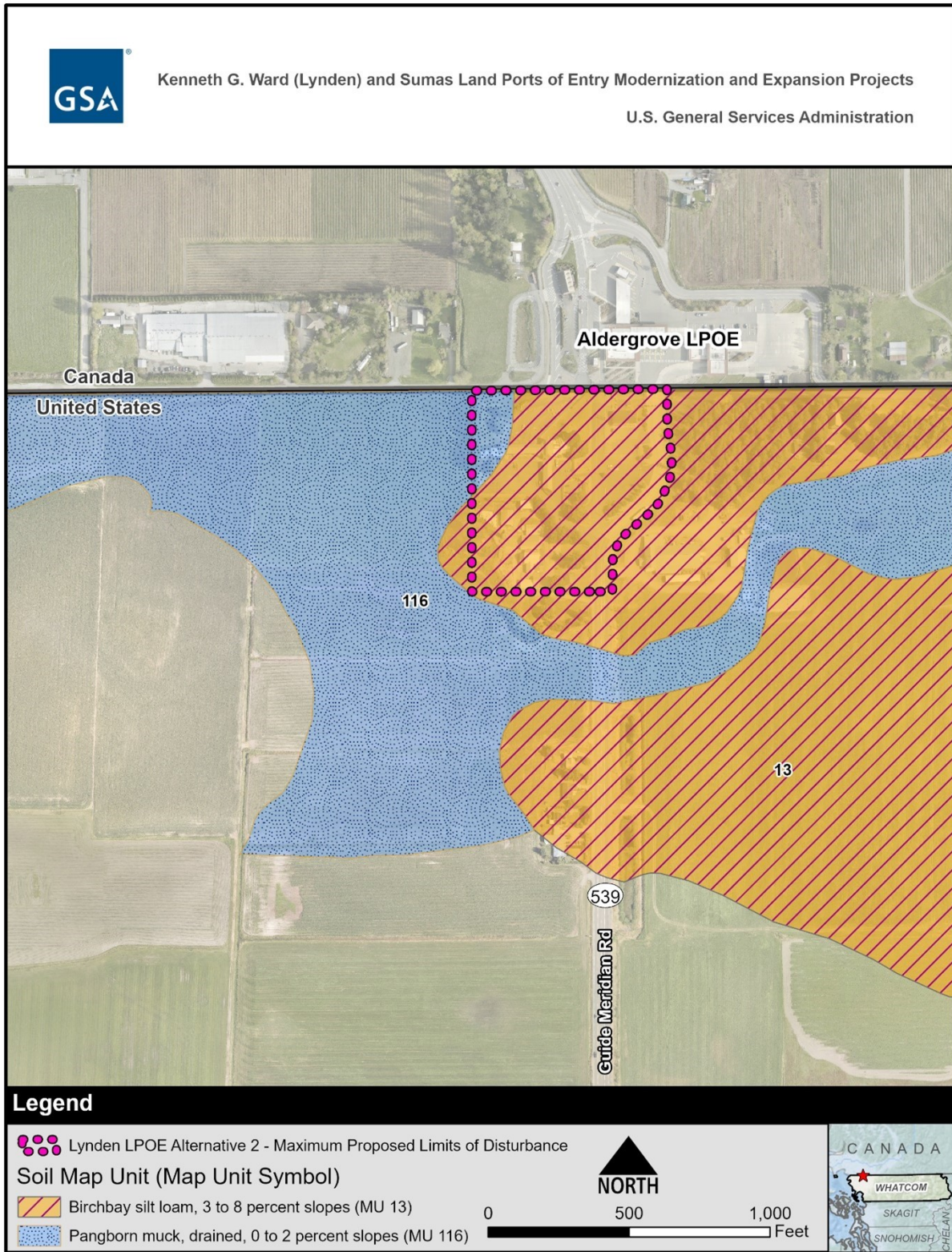


Figure 3.5-2. Soil Types within the Lynden LPOE Alternative 3 Project Area

The existing footprint of the Lynden LPOE consists primarily of impervious surfaces, while the maximum proposed limits of disturbance to the west consists entirely of pervious agricultural land. Unlike impervious surfaces, pervious surfaces are porous and more likely to absorb water. The maximum proposed limits of disturbance to the east (Alternatives 2 and 3) and to the south (Alternative 3) consist of impervious surfaces such as roadways and existing farm structures, as well as pervious surfaces (areas of mowed grass and gravel). Figures 3.5-3 and 3.5-4 and Table 3.5-2 present impervious surfaces within the existing Lynden LPOE and maximum proposed limits of disturbance for Lynden LPOE Alternatives 2 and 3, respectively.

Table 3.5-2. Pervious and Impervious Surface Cover within the Existing Lynden LPOE and Lynden LPOE Alternatives 2 and 3 Project Areas

Surface Type	Existing LPOE (acre)	Lynden LPOE Alternative 2 (acre)	Lynden LPOE Alternative 3 (acre)
Pervious	1.90	9.46	3.51
Impervious	2.83	5.03	6.79
Total	4.73	14.49	10.3

3.5.1.3.2 Sumas LPOE

Geology

The ROI is located in the Cascade-Sierra Mountains physiographic province (NPS 2017). The surface geology beneath the project area consists of Quaternary alluvium, as described in Section 3.5.1.3.1. Potential seismic hazard at the Sumas LPOE project area is the same as that described for the Lynden LPOE project area, due to their proximity. The four nearest active faults described above, the Drayton Harbor fault scarp, the Birch Bay fault, the Sandy Point fault, and the Boulder Creek-Canyon Creek fault, are located approximately 17, 20, 25, and 7 miles from the ROI, respectively, with the Boulder Creek-Canyon Creek fault occurring southeast of the ROI and the other three faults occurring to the west (DNR 2024a; USGS 2024d; USGS 2018). Liquefaction susceptibility at the Sumas LPOE and the proposed expansion area is moderate to high (DNR 2024a).

Topography

The project area is at an elevation of approximately 48 feet above msl (GSA 2023d). According to the 2014 USGS 7.5-minute topographic quadrangle for Sumas, the project area has little topographic relief, and is relatively level (USGS 2014). The existing LPOE and proposed expansion areas consist of development (level roads, buildings, and associated parking) and slope minimally easterly.

Soils

Two soil map units are present within the project area (see Figure 3.5-5). The soil map unit Urban land (soil map unit #171) underlies the majority of the project area, including the entirety of the existing Sumas LPOE. Urban land soil types are those that are considered to have been impacted sufficiently by development such that many of the natural soil properties have been substantially altered, at least at the surface. This is typically due to the placement of fill and excessive compaction over time. According to the WSS, this soil is not classified as prime farmland and is not classified as a hydric soil. A small portion of the maximum proposed limits of disturbance (1.0 acres) overlies soil map unit Briscot silt loam, drained, 0 to 2 percent slopes (soil map unit #22). According to the WSS, this soil is poorly drained, has a slight erosion hazard, and is classified as a hydric soil. Map soil unit #22 is classified as prime farmland if drained (USDA 2023).

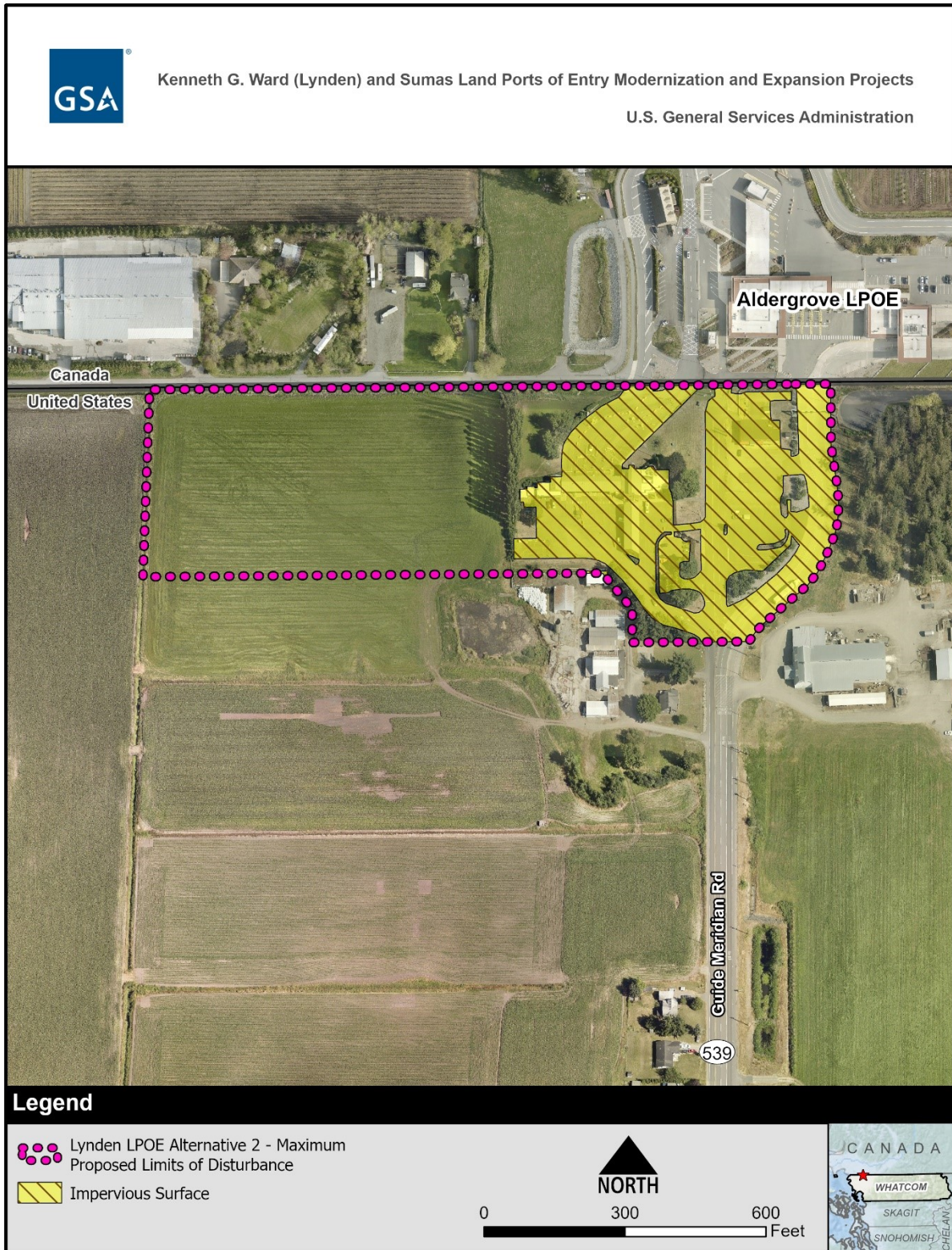


Figure 3.5-3. Existing Impervious Surfaces within the Lynden LPOE Alternatives 2 Project Area

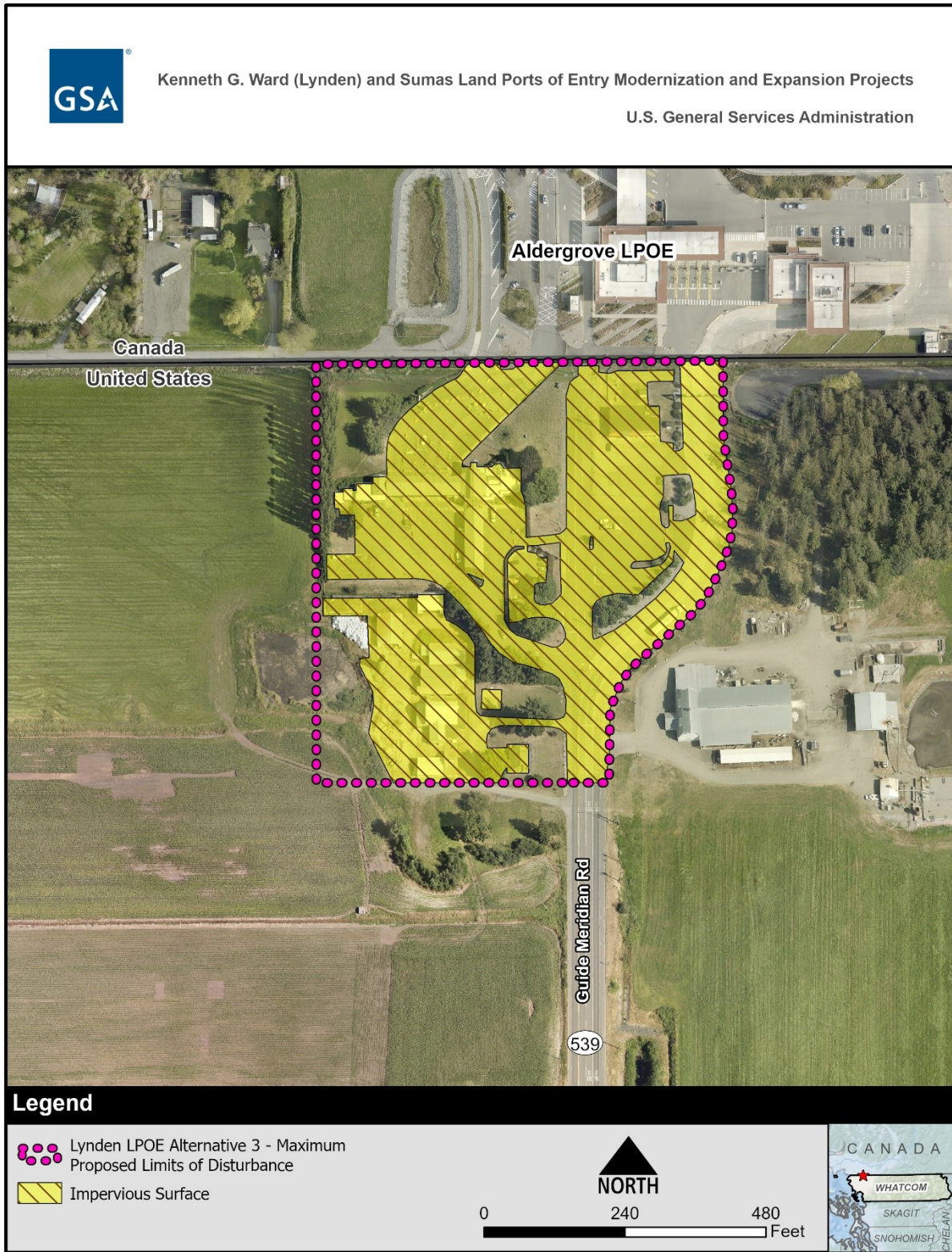


Figure 3.5-4. Existing Impervious Surfaces within the Lynden LPOE Alternative 3 Project Area

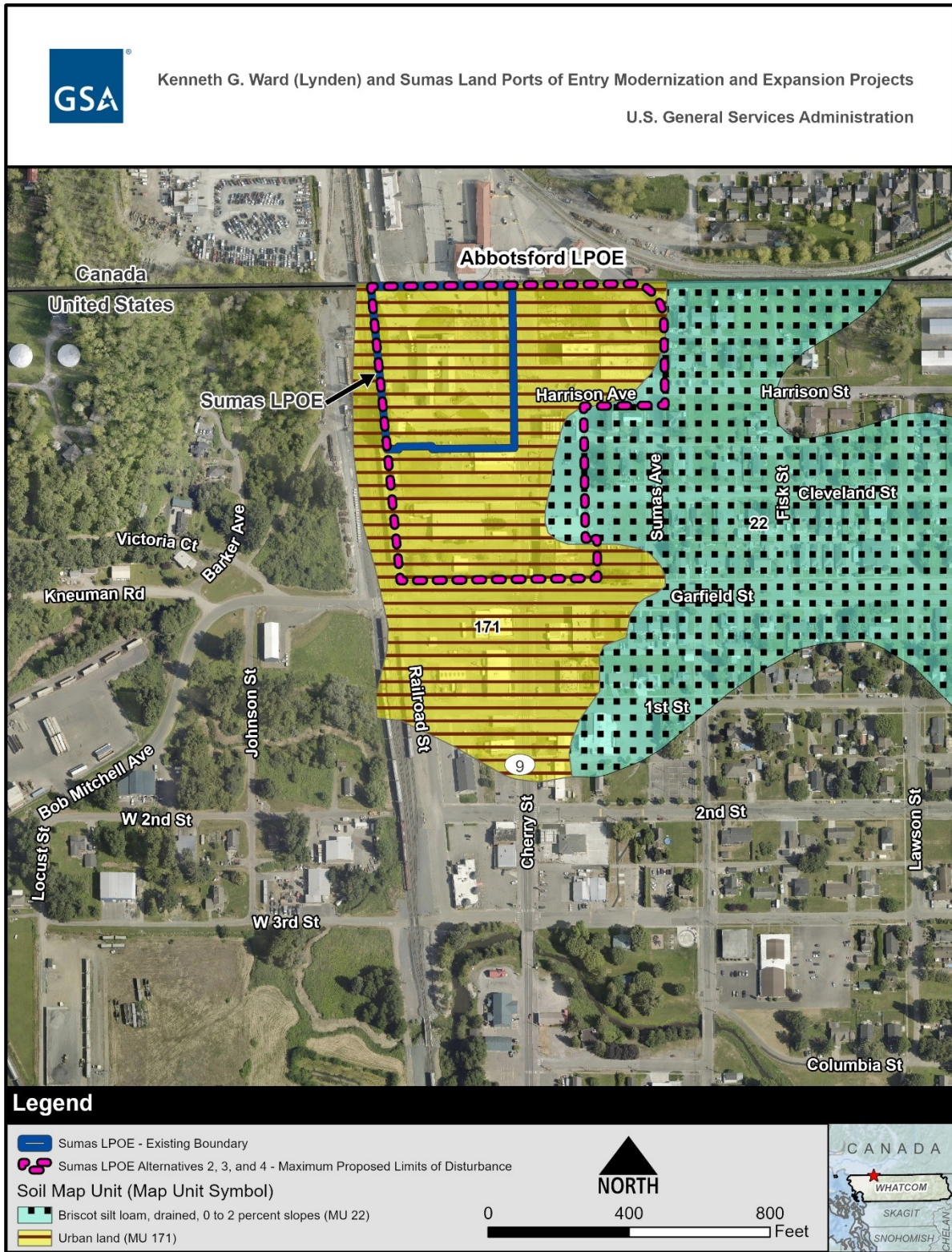


Figure 3.5-5. Soil Types within the Sumas LPOE Project Area

A Phase I ESA conducted in 2023 identified historic soil contamination above MTCA cleanup levels at the 208 Cherry Street site and the Cherry Street Market site, both introduced in Section 3.3.1.3.2. At 208 Cherry Street, past remediation efforts included the removal of approximately 27 tons of impacted soil. The current status of the site is “No Further Action.” The Cherry Street Market site is awaiting cleanup (GSA 2023d). Section 3.7, Human Health and Safety, discusses soil contamination in more detail.

The existing footprint of the Sumas LPOE and the proposed expansion areas under Sumas LPOE Alternatives 2, 3, and 4 consists primarily of impervious surfaces. Figure 3.5-6 and Table 3.5-3 presents impervious surfaces under existing conditions within the project area for Sumas LPOE Alternatives 2, 3 and 4.

Table 3.5-3. Pervious and Impervious Surface Cover within Sumas LPOE Project Area

Surface Type	Existing LPOE (acre)	Sumas LPOE Alternatives 2, 3, and 4 (acre)
Pervious	0.83	1.81
Impervious	3.19	10.83
Total	4.02	12.64

3.5.2 Environmental Consequences

3.5.2.1 Methodology

To evaluate potential impacts on geological, topography, and soil resources, GSA reviewed the project alternatives to determine whether any activities have the potential to cause the following within the ROI:

- Modify or otherwise affect geologic features;
- Alter the topography or grade of terrain;
- Disturb or displace soils; or
- Loss of potential prime farmland and soils of statewide importance.

A major adverse impact to geological resources would occur if the project alternatives would result in:

- Altered geological structures that control groundwater quality;
- Exposure of people or structures to potential substantial adverse effects from a geologic hazard (i.e., on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse);
- Soil erosion that produces substantial gully, extensive damage to vegetation, or a sustained increase in sedimentation in streams;
- Substantial loss of soil, and/or a substantial decrease in soil stability and permeability;
- Exceed thresholds set by NRCS for loss of prime farmland; or
- Substantial disruption, displacement, compaction, or covering of soils.

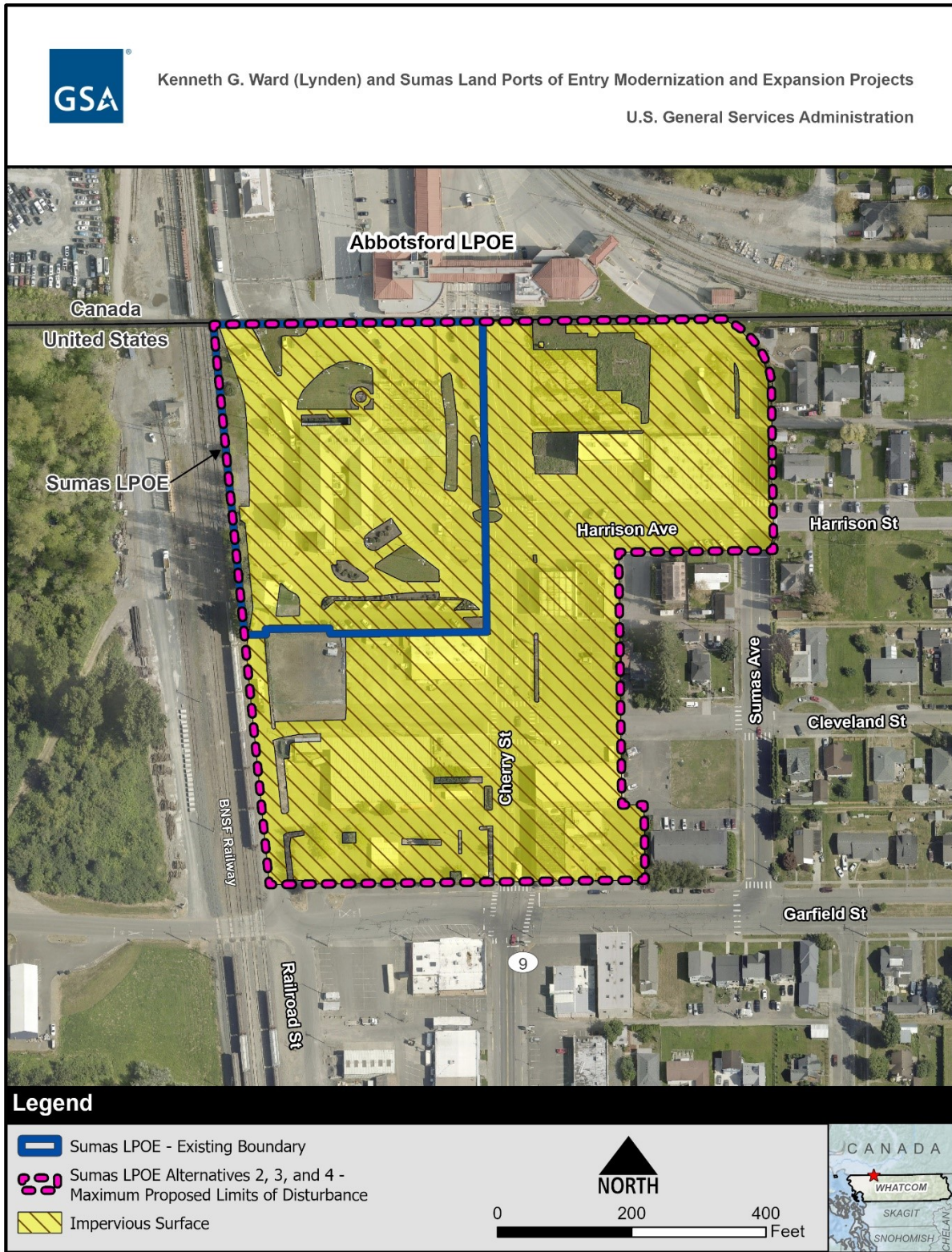


Figure 3.5-6. Impervious Surfaces within the Sumas LPOE Alternatives 2, 3, and 4 Project Area

3.5.2.2 Lynden LPOE Alternatives

3.5.2.2.1 Lynden LPOE Alternative 1 – No Action Alternative

Lynden LPOE Alternative 1 would have no direct or indirect, short- or long-term, site-specific, local or regional, adverse or beneficial impact on geology, topography, and soils. Under Lynden LPOE Alternative 1, GSA would not expand or modernize the Lynden LPOE; current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance or demolition and construction of facilities and infrastructure would occur.

3.5.2.2.2 Lynden LPOE Alternative 2 – East-West Oriented LPOE Expansion

Construction

Geology

Lynden LPOE Alternative 2 would have direct, long-term, minor, site-specific, adverse impacts on geology during demolition and construction activities within the project area. Construction of the new facilities and infrastructure would require excavation; however, the depth of excavation is currently unknown and would depend on the results of the geotechnical investigation and engineering report and geological hazard report to be prepared for the development in accordance with P100 Standards. Construction of the new facilities and infrastructure could involve some disturbance or modification of the surficial geology, but impacts would be anticipated to occur within a depth comparable to past construction of the existing LPOE facilities. Additionally, it is possible that existing groundwater monitoring wells would be replaced (final design would determine whether removal/replacement of existing wells would be required, and coordination with relevant agencies would determine whether installation of new groundwater wells would be necessary in other locations). Construction of facilities to applicable design standards, and as informed by the geological hazard report, would limit or avoid potential long-term exposure of any new structures from geological hazards or seismic risk.

GSA is also considering geothermal energy as a renewable energy source for the expanded and modernized Lynden LPOE. While this consideration is preliminary and would be determined during final design, installation of a geothermal heat pump system would involve excavating the ground at depths greater than the frost line or drilling boreholes into the subsurface to install wells. The drilling of boreholes and excavating of trenches would remove bedrock and some surficial material. Generally, direct, long-term, minor, site-specific, adverse impacts to geology would be expected as any excavation work for a geothermal system would not remove any unique or economically valuable resources. The type of geothermal system that could be constructed for this project is subject to final design and geotechnical evaluations. GSA would have to evaluate factors such as spatial requirements, site geology, and system requirements to further determine the feasibility of implementing geothermal technology. If such technology were to be used, GSA would follow all state requirements for the construction of wells.

Construction of solar technologies would not impact geologic resources as they would not remove or change the bedrock or unique geologic resources.

Topography

Lynden LPOE Alternative 2 would have direct, long-term, minor, site-specific, adverse impacts on topography. Within the project area, existing vegetation would be removed, and the site would be graded as necessary. The topography of the project site ranges from 135 feet msl on the western side to 145 feet msl on the eastern side. The western side of the project area, including the farmland, would need to be raised by using large amounts of fill to bring it to the grade level of the eastern side of the project area.

Soils

Lynden LPOE Alternative 2 would be anticipated to result in direct, short- and long-term, minor, site-specific, adverse impacts to soils due to the loss of topsoil and potential increase of erosion in the project

area. Construction of Lynden LPOE Alternative 2 would disturb a maximum of approximately 14.5 acres within the project area. This area includes the 4.7-acre operational area of the existing LPOE; the remainder consists of currently developed land to the south and east, and agricultural fields to the west. This EIS assumes disturbance of the entire project area; however, it is likely that land preparation activities would require a lesser amount of disturbance.

The use of heavy equipment for site preparation and construction of buildings, roads/walkways, parking areas, and other infrastructure would require removal of vegetation, grading, excavation, and filling. If any natural soil horizons exist, they would likely be lost during construction. Heavy equipment may compact or loosen and destroy the structure and function of organic and mineral soils over the long term, reducing soil moisture and most likely resulting in increased runoff and erosion. In addition, some soils may need to be remediated, relocated, or hauled offsite due to historical contamination concerns (see Section 3.7, Human Health and Safety).

Soil erosion from the use of heavy equipment could also occur because of ground disturbance, leading to detachment of soils and transport of disturbed surfaces in wind and stormwater runoff. Soil productivity (i.e., the capacity of the soil to produce vegetation) would be permanently impacted as the surface soils would be replaced with mostly paved development.

The project would be required to obtain a CGP or Individual Permit under the NPDES program from the USEPA and have it certified by the Department of Ecology. The CGP would specify measures for stabilizing soils and minimizing soil loss during construction, which would limit impacts from soil erosion during construction. Likewise, an Individual Permit, if required, would include project-specific requirements to minimize impacts from soil erosion (see Section 3.5.2.6 for specific measures that could be taken to minimize impacts to soils or from soil erosion).

Soils underlying the existing Lynden LPOE and proposed expansion areas are classified as either farmland of statewide importance or prime farmland. Land that is already in urban development, such as the portion of the project area that includes the existing LPOE facilities, is not subject to FPPA requirements. The proposed expansion within areas of FPPA-protected soils, however, would require consideration under the FPPA and coordination with the USDA NRCS. The NRCS establishes farmland conversion impact ratings based on a land evaluation and site assessment system, which includes completion of a FPPA Farmland Conversion Impact Rating form. The rating form assigns points regarding the relative value of potentially impacted farmland (Appendix A). GSA is coordinating with NRCS to determine if mitigation to reduce potential impacts to farmland from the proposed expansion of the Lynden LPOE is required.

Operations

Lynden LPOE Alternative 2 operations would be anticipated to have direct, long-term, minor, site-specific, adverse impacts to soils. There would be an increase in impervious surfaces that could contribute to increased potential for water runoff and soil erosion adjacent to the ROI. At present, impervious surfaces cover approximately 5.0 acres of the 14.49-acre project area under Lynden LPOE Alternative 2. As discussed in Section 3.3.2.2.2, Lynden LPOE Alternative 2 could add up to 9.5 acres of new impervious area within the project area. This acreage conservatively assumes that the entire operational footprint of the modernized and expanded LPOE would be converted to hard surfaces and does not account for proposed stormwater and other sustainable site features that GSA would incorporate into the final design.

Selection of stormwater management facilities is subject to final design but, based on other similar LPOE projects, may include street drainage connected to storm drains that lead to a bioretention basin system where stormwater would percolate into the ground. GSA would be required to meet or exceed Section 438 of the EISA requirements for stormwater runoff (see Section 3.3, Water Resources). In addition, GSA requires a minimum SITES Silver rating to ensure a sustainable landscape. These measures would reduce potential long-term impacts from soil erosion associated with the increase in impervious surface.

No further impacts to geology or topography would be anticipated during operation of Lynden LPOE Alternative 2 beyond those described for *Construction*.

3.5.2.2.3 Lynden LPOE Alternative 3 – North-South Oriented LPOE Expansion

Construction

Geology

Lynden LPOE Alternative 3 would have direct, long-term, minor, site-specific, adverse impacts on geology during demolition and construction activities within the project area similar to Lynden LPOE Alternative 2 as described above in Section 3.5.2.2.2 under *Construction – Geology*.

Topography

Lynden LPOE Alternative 3 would have direct, long-term, minor, site-specific, adverse impacts on topography similar to Lynden LPOE Alternative 2 as described above in Section 3.5.2.2.2 under *Construction – Topography*. However, Lynden LPOE Alternative 3 would use a substantially lesser amount of fill material than Lynden LPOE Alternative 2 because the change in elevation would only be approximately 5 feet or less versus up to 10 feet for Lynden LPOE Alternative 2 and the project area is smaller.

Soils

Lynden LPOE Alternative 3 would be anticipated to result in direct, short- and long-term, minor, site-specific, adverse impacts to soils due to the loss of topsoil and potential increase of erosion in the project area similar to Lynden LPOE Alternative 2 as described above in Section 3.5.2.2.2 under *Construction – Soils*. Construction of Lynden LPOE Alternative 3 would disturb a maximum of approximately 10.3 acres within the maximum proposed limits of disturbance. This area includes the 4.73-acre operational area of the existing LPOE; the remainder consists primarily of previously disturbed, developed land to the south and east. Impacts to soils under Lynden LPOE Alternative 3 would be similar to those identified for Lynden LPOE Alternative 2, although less, due to a smaller footprint and the avoidance of the agricultural fields to the west. Under Lynden LPOE Alternative 3, all ground disturbance would occur in areas that are currently developed. Permitting requirements and impact minimization measures would be the same as those described under Lynden LPOE Alternative 2.

As the Lynden LPOE Alternative 3 project area avoids the adjacent agricultural field to the west of the existing LPOE and is located in a developed area, impacts to FPPA-protected soils would be less than under Lynden LPOE Alternative 2. However, as the expansion area to the south is currently associated with an active farm and includes supporting farm structures, soils classified as farmland of statewide importance occurring in this area would require coordination with USDA NRCS. As discussed under Lynden LPOE Alternative 2, GSA is coordinating with NRCS to determine if mitigation to reduce potential impacts to farmland from the proposed expansion of the Lynden LPOE is required. Correspondence related to this NRCS coordination can be found in Appendix A.

Operations

Lynden LPOE Alternative 3 operations would be anticipated to have direct, long-term, minor, site-specific, adverse impacts to soils, similar to Lynden LPOE Alternative 2 as described above in Section 3.5.2.2.2 under *Operations*. There would be an increase in impervious surfaces that could contribute to increased potential for water runoff and soil erosion adjacent to the ROI. At present, impervious surfaces cover approximately 6.8 acres of the 10.30-acre project area under Lynden LPOE Alternative 3. As discussed in Section 3.3.2.2.2 (under *Operations*), Lynden LPOE Alternative 3 could add up to 3.5 acres of new impervious area within the project area. This acreage conservatively assumes that the entire operational footprint of the modernized and expanded LPOE would be converted to hard surfaces and does not account for proposed stormwater and other sustainable site features that GSA would incorporate into the final design. Stormwater management requirements and impact minimization measures would be the same as those discussed for Lynden LPOE Alternative 2, which would reduce potential long-term impacts from soil erosion associated with the increase in impervious surface. No further impacts to geology or topography would be anticipated during operation of Lynden LPOE Alternative 3 beyond those described for *Construction*.

3.5.2.3 Sumas LPOE Alternatives

3.5.2.3.1 Sumas LPOE Alternative 1 – No Action Alternative

Sumas LPOE Alternative 1 would have no direct or indirect, short- or long-term, adverse, local or regional impact on geology, topography, and soils. Under Sumas LPOE Alternative 1, GSA would not expand or modernize the Sumas LPOE; current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance or demolition and construction of facilities and infrastructure would occur. Therefore, no impacts on existing geology, topography, and soils would be anticipated.

3.5.2.3.2 Sumas LPOE Alternative 2 – Feasibility Study Preferred Alternative

Construction

Geology

Sumas LPOE Alternative 2 would have direct, long-term, minor, site-specific, adverse impacts on geology during demolition and construction activities within the project area, similar to as described for Lynden LPOE Alternative 2 in Section 3.5.2.2.2 under *Construction – Geology*. Additionally, if GSA decides to implement a geothermal energy system, impacts associated with drilling boreholes and excavating trenches would be direct, long-term, minor, site-specific, and adverse, as described for Lynden LPOE Alternative 2 in Section 3.5.2.2.2 under *Construction – Geology*.

Topography

Sumas LPOE Alternative 2 would have direct, long-term, negligible, site-specific, adverse impacts on topography resulting from minor vegetation removal and site grading; however, as the majority of the project area is relatively flat and previously disturbed, topography would not change substantially from current conditions.

Soils

Sumas LPOE Alternative 2 would be anticipated to result in direct, short- and long-term, minor, site-specific, adverse impacts to soils due to the loss of topsoil and potential increase of erosion in the project area. Construction of Sumas LPOE Alternative 2 would disturb a maximum of 12.6 acres within the project area, with the potential to disturb up to 2.9 acres for utility connection and repair associated with roadway and shoulder pavements. The 12.6-acre project area includes the 4.0-acre operational footprint of the existing LPOE; the remainder consists of previously disturbed, developed land within an urban environment. As the project area for the modernized and expanded Sumas LPOE occurs within an area that is currently developed, it is unlikely that natural soil horizons exist. Permitting requirements and impact minimization measures would be the same as those described in Section 3.5.2.2.2 under *Construction – Soils*.

Soils underlying a small portion of the proposed expansion area are classified as prime farmland if drained. The entirety of the project area is developed and Sumas LPOE Alternative 2 would not convert any active farmland to nonagricultural uses. GSA is coordinating with NRCS to determine if mitigation to reduce potential impacts to farmland soils from the proposed expansion of the Sumas LPOE is required. The Final EIS will include all correspondence related to this NRCS coordination in Appendix A.

Operations

Sumas LPOE Alternative 2 operations would be anticipated to have direct, long-term, negligible, site-specific, adverse impacts to soils. There would be an increase in impervious surfaces that could contribute to increased potential for water runoff and soil erosion adjacent to the ROI. At present, impervious surfaces cover approximately 10.8 acres of the 12.6-acre project area. As discussed in Section 3.3.2.3.2, Sumas LPOE Alternative 2 could add up to 1.8 acres of new impervious area within the project area. This acreage

conservatively assumes that the entire operational footprint of the modernized and expanded LPOE would be converted to hard surfaces and does not account for proposed stormwater and other sustainable site features that GSA would incorporate into the final design. GSA would further reduce potential impacts associated with water runoff and soil erosion through project design and BMPs.

Selection of stormwater management facilities would be similar to as described for Lynden LPOE Alternative 2 in Section 3.5.2.2.2, and would be subject to final design.

No further impacts to geology or topography would be anticipated during operation of Sumas LPOE Alternative 2 beyond those described for *Construction*.

3.5.2.3.3 Sumas LPOE Alternative 3 – Commercial Inspection West

Construction

Geology

Sumas LPOE Alternative 3 would have direct, long-term, minor, site-specific, adverse impacts on geology during demolition and construction activities within the project area similar to Sumas LPOE Alternative 2 as described above in Section 3.5.2.3.2 under *Construction – Geology*.

Topography

Sumas LPOE Alternative 3 would have direct, long-term, negligible, site-specific, adverse impacts on topography similar to Sumas LPOE Alternative 2 as described above in Section 3.5.2.3.2 under *Construction – Topography*.

Soils

Sumas LPOE Alternative 3 would be anticipated to result in direct, long-term, minor, site-specific, adverse impacts to soils due to the loss of topsoil and potential increase of erosion in the project area similar to Sumas LPOE Alternative 2 as described above in Section 3.5.2.3.2 under *Construction – Soils*.

Operations

Sumas LPOE Alternative 3 operations would be anticipated to have direct, long-term, negligible, site-specific, adverse impacts to soils similar to Sumas LPOE Alternative 2 as described above in Section 3.5.2.3.2 under *Operations*.

3.5.2.3.4 Sumas LPOE Alternative 4 – Multi-Story Construction LPOE Expansion

Construction

Geology

Sumas LPOE Alternative 4 would have direct, long-term, minor, site-specific, adverse impacts on geology during demolition and construction activities within the project area similar to Sumas LPOE Alternative 2 as described above in Section 3.5.2.3.2 under *Construction – Geology*.

Topography

Sumas LPOE Alternative 4 would have direct, long-term, negligible, site-specific, adverse impacts on topography similar to Sumas LPOE Alternative 2 as described above in Section 3.5.2.3.2 under *Construction – Topography*.

Soils

Sumas LPOE Alternative 4 would be anticipated to result in direct, long-term, minor, site-specific, adverse impacts to soils due to the loss of topsoil and potential increase of erosion in the project area similar to Sumas LPOE Alternative 2 as described above in Section 3.5.2.3.2 under *Construction – Soils*.

Operations

Sumas LPOE Alternative 4 operations would be anticipated to have direct, long-term, negligible, site-specific, adverse impacts to soils similar to Sumas LPOE Alternative 2 as described above in Section 3.5.2.3.2 under *Operations*.

3.5.2.4 Construction Sequencing Options

Impacts to geology and topography under the Concurrent Construction Option and the Sequential Construction Option would not be expected to differ. Impacts to soils would be similar under both options, with the primary difference resulting from the length of time that temporary, construction related impacts could occur (increased erosion, sedimentation, and impaction, etc.). While the quantity of soil to be disturbed during construction would be the same across both sequencing options, the Concurrent Construction Option would result in regionally disturbed soils over a longer period of time. Under the Sequential Construction Option, ground disturbance would occur within only one project area at a time.

Given the distance between the Lynden and Sumas LPOEs, it is unlikely that this sequential order would have a beneficial effect overall, when compared with the Concurrent Construction Option. As a result, impacts to soils would not be substantially different under the implementation of either construction sequencing option, and impacts would be similar to those discussed under the alternatives sections above.

3.5.2.5 Lynden and Sumas LPOE Combined Alternative Implementation

Potential geology, topography, and soils impacts from construction and operational activities for all Lynden and Sumas LPOE action alternatives would be primarily local as described in Sections 3.5.2.2 through 3.5.2.4. Therefore, considering the distance between the two LPOEs, the combined impacts from construction and operation of any combination of Lynden and Sumas LPOE action alternatives would not result in any greater level of impacts to geology, topography, and soils beyond those discussed in Sections 3.5.2.2 through 3.5.2.4. Combined impacts from the net combined increase of temporary land disturbance during construction and net increase in impervious surface acreage are discussed in Section 3.3.2.5. If Lynden LPOE Alternative 1 and Sumas LPOE Alternative 1 (No Action Alternatives) are both selected there would be no direct or indirect, short- or long-term, local or regional, adverse impact on geology, topography, and soils.

3.5.2.6 Impacts Reduction Measures

Measures to reduce construction impacts on geology and soil-related concerns, such as soil erosion, loss, and stability, would be addressed in the project design plans, as well as through erosion and sediment controls and site stabilization measures as specified through applicable NPDES permit requirements. Such measures would include setting up barriers and utilizing standard BMPs (e.g., earth walls, soil nails, riprap, turbidity barriers, etc.) to reduce impacts to soils or from soil erosion. Refer to Section 3.3, Water Resources, for a discussion of additional measures that would limit impacts from soil loss as a result of erosion during construction and operations.

3.6 AIR QUALITY, CLIMATE CHANGE, AND GREENHOUSE GASES

This section describes the baseline conditions for air quality and climate change within the region and assesses the potential for air quality or climate change to affect, or be affected by, implementation of the Proposed Action and No Action Alternative as discussed in Chapter 2.

Air quality is the measure of the atmospheric concentration of defined pollutants in a specific area. An air pollutant is any substance in the air that can cause harm to humans or the environment. Pollutants may be natural or human made and may take the form of solid particles, liquid droplets, or gases. Natural sources of air pollution include smoke from wildfires, dust, and wind erosion. Human made sources of air pollution include emissions from vehicles, dust from unpaved roads, agriculture, or construction sites; industrial processes; and smoke from human caused wildfires. Air quality is affected by pollutant emissions sources, as well as the movement of pollutants in the air via wind and other weather patterns.

GHG emissions released into the atmosphere from fossil fuel combustion and other sources contribute to changes in global climate. GHGs trap radiant heat reflected from the Earth in the atmosphere, causing the Earth's average surface temperature to rise. Although GHG levels have varied for millennia (along with corresponding variations in climate conditions), increases driven by human activity have contributed substantially to recent climatic changes (IPCC 2018).

3.6.1 Affected Environment

3.6.1.1 *Region of Influence*

Air Quality. Air quality is measured and regulated on a regional level. For the purposes of this analysis, the ROI for air quality is defined as Whatcom County.

Greenhouse Gases. The ROI for GHGs differs from other resource areas considered in this EIS as concerns about GHG emissions are primarily related to climate change, which is global and cumulative in nature. Therefore, the affected environment is discussed broadly using a global, national, and regional framework to provide context for the analysis of potential GHG impacts from the Proposed Action.

3.6.1.2 *Regulatory Setting*

Air Quality

The Clean Air Act (CAA) requires USEPA to set National Ambient Air Quality Standards (NAAQS) (40 CFR 50) for six principal pollutants ("criteria" air pollutants) that can be harmful to public health and the environment (USEPA 2024a). The CAA identifies two types of NAAQS. Primary standards provide public health protection and secondary standards provide public welfare protection. The primary NAAQS are used as the basis for determining whether a region is complying with CAA requirements and are therefore the main focus of this analysis. The criteria air pollutants are particulate matter (fine particulate matter [10 micrometers or smaller, PM₁₀] and very fine particulate matter [2.5 micrometers or smaller, PM_{2.5}]), sulfur dioxide (SO₂), carbon monoxide (CO), nitrogen oxides (NO_x), ozone (O₃), and lead (Pb). O₃ is a strong photochemical oxidant that is formed when nitric oxide reacts with volatile organic compounds (VOCs) and oxygen in the presence of sunlight. O₃ is considered a secondary pollutant because it is not directly emitted from pollution sources but is formed in the ambient air.

Short-term standards (1-, 8-, and 24-hour periods) have been established by the USEPA for criteria pollutants that contribute to acute health effects, while long-term standards (annual averages) have been established for pollutants that contribute to chronic health effects. Areas that exceed the NAAQS are designated as nonattainment areas, and those in accordance with the standards are designated as attainment areas. Air quality control regions that have been redesignated from nonattainment to attainment are called maintenance areas. Table 3.6-1 presents the six criteria pollutants and their NAAQS.

Table 3.6-1. National Ambient Air Quality Standards

Pollutant	Primary/ Secondary	Averaging Time	Standard	Form
CO	Primary	1 hour	35 ppm	Not to be exceeded more than once per year
		8 hours	9 ppm	
NO ₂	Primary	1 hour	100 ppb	98 th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Primary and secondary	1 year	53 ppb	Annual mean
O ₃	Primary and secondary	8 hours	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
SO ₂	Primary	1 hour	75 ppb	99 th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year
PM _{2.5}	Primary	1 year	12 µg/m ³	Annual mean, averaged over 3 years
	Secondary	1 year	15 µg/m ³	Annual mean, averaged over 3 years
	Primary and secondary	24 hours	35 µg/m ³	98 th percentile, averaged over 3 years
PM ₁₀	Primary and secondary	24 hours	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years
Pb	Primary and secondary	Rolling 3-month average	0.15 µg/m ³	Not to be exceeded

Source: USEPA 2024a.

µg = micrograms
 CO = carbon monoxide
 m³ = cubic meter
 NO₂ = nitrogen dioxide

O₃ = ozone
 Pb = lead
 PM_{2.5} = particulate matter of diameter 2.5 microns or less
 PM₁₀ = particulate matter of diameter 10 microns or less

ppb = parts per billion
 ppm = parts per million
 SO₂ = sulfur dioxide

The CAA mandates that states develop and implement a State Implementation Plan (SIP) to comply with the CAA and achieve and maintain attainment with the NAAQS. The Washington SIP has been approved by the USEPA and is revised as needed to comply with new federal or state requirements when new data improves modeling techniques, when a specific area’s attainment status changes, or when an area fails to reach attainment (Department of Ecology 2017b). The Washington SIP applies to some stationary and mobile sources; stationary sources include fossil fuel burning facilities and equipment and various types of industrial sources.

In 1977, the CAA was amended to include a national visibility goal of restoring pristine conditions in national parks and wilderness areas, which were designated as Class I areas (Department of Ecology 2024g). To achieve these goals, in 1999 the USEPA established the Regional Haze Rule to improve visibility in Class I areas, which requires states to develop a Regional Haze SIP. Washington has eight Class I areas within its borders: Alpine Lakes Wilderness, Glacier Peak Wilderness, Goat Rocks Wilderness, Mt. Adams Wilderness, Mt. Rainier National Park, North Cascades National Park, Olympic National Park, and Pasatyen Wilderness. Four of these areas are within 150 miles of the LPOEs. North Cascades is closest, approximately 45 miles from the Sumas LPOE and 55 miles from the Lynden LPOE.

The USEPA Region 10 and the Department of Ecology regulate air quality in Washington. The Northwest Clean Air Agency (NWCAA) has the authority to issue permits for the construction and operation of new or modified stationary source air emissions in Whatcom County (Department of Ecology 2024h). NWCAA permits are required for any facility that could emit or that currently emits regulated pollutants and must comply with the following regulations of the CAA: New Source Review (NSR), Prevention of Significant Deterioration (PSD), Title V Permitting, National Emission Standards for Hazardous Air Pollutants (NESHAP), and New Source Performance Standards (NSPS). These regulations typically apply to emissions sources that have the potential to emit more than 100 tons per year of criteria pollutants, 10 tons per year or more of any hazardous air pollutant (HAP), or 25 tons or more of all HAPs combined. In

addition, state permits may be required for sources that emit more than 25 tons per year of PM₁₀ or 50 tons per year of SO₂.

Table 3.6-2 provides an overview of the applicability of the federal CAA regulations to the Proposed Action.

Table 3.6-2. CAA Regulatory Applicability for Lynden and Sumas Alternatives

CAA Regulation	Description of the Regulation	Applicability to Proposed Action
NSR	NSR permitting protects air quality when major air emissions sources are built or modified.	NSR review would likely not be required as new emergency generators installed would not be a major source.
PSD	PSD applies to new major sources or modifications at existing sources of air pollutants where the area the source is located is in attainment or unclassifiable.	PSD review would likely not be required as new emergency generators installed would not be a major source.
Title V Permitting Requirements	A Title V Permit requires sources of air pollutants to obtain and operate in compliance with an operating permit. A permit is required if a source has actual or potential emissions greater than or equal to 100 tons per year.	A Title V Permit would likely not be required because any new emergency generators installed under the Alternatives would be under the 100 tons per year threshold.
NESHAP	NESHAP area stationary source standards for HAPs. HAPs are those pollutants that are known or suspected to cause cancer or other serious health effects.	The use of Maximum Available Control Technology would not be required because the potential HAP emissions would likely not exceed NESHAP thresholds.
NSPS	NSPS are technology-based emission standards which apply to new, modified, and reconstructed facilities in specific source categories such as manufacturers of glass, cement, rubber tires, and wool fiberglass.	The Proposed Action would be exempt from NSPS permitting requirements because it does not involve any of these types of facilities.

Source: USEPA 2024b

CAA = Clean Air Act

HAP = Hazardous Air Pollutants

NESHAP = National Emissions Standards for Hazardous Air Pollutants

NSPS = New Source Performance Standards

NSR = New Source Review

PSD = Prevention of Significant Deterioration

WA SIP = Washington State Implementation Plan

Washington State regulations that could potentially apply to the Proposed Action include the following, as codified under the NWCAA regulations:

- Section 455 – Emission of Particulate Matter
- Section 550 – Preventing Particulate Matter from Becoming Airborne

Greenhouse Gases

GHGs are regulated under the CAA via the regulations discussed above for air quality. New sources or modifications to existing sources that have the potential to increase GHG emissions by more than 100,000 tons carbon dioxide (CO₂) equivalent per year may be subject to NSR or PSD requirements, as well as Title V requirements for operational permits, provided they are also otherwise subject to these requirements. Additionally, the USEPA’s Mandatory Greenhouse Gas Reporting Rule (40 CFR 98) requires sources in specific industrial sectors to report their GHG emissions if they emit more than 25,000 metric tons CO₂ equivalent per year. Neither LPOE would likely be subject to these permitting and reporting requirements.

Several EOs also require federal agencies to estimate and report their GHG emissions and set goals to reduce these emissions. These EOs include:

- EO 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*
- EO 14008, *Tackling the Climate Crisis at Home and Abroad*
- EO 14030, *Climate-Related Financial Risk*

The White House has established national GHG reduction goals, including a goal to lower emissions by 50 percent to 52 percent below 2005 levels by 2030, and achieve net zero GHG emissions by 2050 (DOS et al. 2021). Potential strategies to achieve these goals include transitioning the energy sector to renewable and other carbon-free energy sources, promoting electric and other zero-emission vehicles, and improving building efficiency.

In 2023, the CEQ issued the interim *National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions and Climate Change*. The guidance includes recommendations for agencies on how to analyze and present information related to GHGs and climate change within NEPA documents. At the time the interim guidance was issued, CEQ also announced a public comment period and may revise the guidance in response to comments received.

In 2021, Washington passed the Climate Commitment Act aimed at reducing GHG emissions from Washington’s largest emitting sources and industries. The program works alongside other critical climate policies to help Washington achieve its commitment to reducing GHG emissions by 95 percent by 2050 (Department of Ecology 2024i).

3.6.1.3 Existing Conditions

Air Quality

Whatcom County is located within the Olympic-Northwest Washington Intrastate Air Quality Control Region (AQCR), as defined by 40 CFR 81.187. Whatcom County is almost entirely in attainment, including the project areas for both LPOEs.

The USEPA, NWCAA and the Department of Ecology monitor levels of criteria pollutants at representative sites throughout Washington. There are four air quality monitoring locations logged by the USEPA within Whatcom County (USEPA 2024c). The pollutants monitored at those locations include:

- Custer-Loomis (O₃): approximately 5 miles from the Lynden LPOE and 14 miles from the Sumas LPOE
- Bellingham-Pacific Street (PM_{2.5}): approximately 17 miles from the Lynden LPOE and 19 miles from the Sumas LPOE
- Ferndale-Mountain View Road (SO₂): approximately 14 miles from the Lynden LPOE and 22 miles from the Sumas LPOE
- Ferndale-Kickerville Road (SO₂): approximately 14 miles from the Lynden LPOE and 22 miles from the Sumas LPOE

Populations that are more susceptible to the adverse effects of air pollution include children, elderly, and asthmatics. The locations where these sensitive receptors congregate are considered sensitive receptor locations for air pollutants. As such, sensitive receptor locations for air impacts analyses typically include schools, daycares, hospitals, nursing home facilities, places of worship, and public recreational areas. No sensitive receptors were identified within 0.5 mile of the Lynden LPOE. At the Sumas LPOE, the closest sensitive receptors are the Valley Community Church, located adjacent to the maximum proposed limits of disturbance; and the Sumas Elementary School, located 0.43-mile from the maximum proposed limits of disturbance.

Greenhouse Gases and Climate Change

GHGs are gases that trap heat in the atmosphere by absorbing outgoing infrared radiation (USEPA 2024d). GHG emissions occur from both natural processes as well as human activities. Water vapor is the most important and abundant GHG in the atmosphere; however, human activities produce only a small amount of the total atmospheric water vapor. The most common GHGs emitted from natural processes and human activities include CO₂, methane (CH₄), and nitrous oxide (N₂O). The main source of GHGs from human activities is the combustion of fossil fuels such as oil, coal, and natural gas. Other examples of GHGs created and emitted primarily through human activities include fluorinated gases (e.g., perfluorocarbons) and sulfur hexafluoride. The main sources of these man-made GHGs are refrigerants and electrical transformers.

Numerous studies document the recent trend of rising atmospheric concentrations of CO₂. One of the longest continuous records of atmospheric carbon dioxide monitoring extends back to 1958 (NOAA 2023). These studies show that atmospheric CO₂ levels have risen an average of 1.5 parts per million (ppm) per year over the last 60 years, with the growth rate accelerating from around 1 ppm per year in the 1960s to 2 ppm per year in the 2000s (NOAA 2023). The global atmospheric CO₂ concentration has now passed 412 ppm, around a level that last occurred about 3 million years ago when both global average temperature and sea level were significantly higher than today (USGCRP 2023; NOAA 2013).

Each GHG has been assigned a global warming potential (GWP) by the USEPA (USEPA 2024d). The GWP is the ability of a gas or aerosol to trap heat in the atmosphere. The GWP rating system is standardized to CO₂, which is given a value of one. For example, CH₄ has a GWP of 25, which means that it has a global warming effect 25 times greater than CO₂ on an equal-mass basis. To simplify GHG analyses, total GHG emissions from a source are often expressed as a CO₂ equivalent, which is calculated by multiplying the emissions of each GHG by its GWP and adding the results together to produce a single, combined emission rate representing all GHGs. While CH₄ and N₂O have much higher GWPs than CO₂, CO₂ is emitted in such large quantities that it is the predominant contributor to global CO₂ equivalent emissions from both natural processes and human activities.

Increasing GHG concentrations in the atmosphere have been linked to a range of ongoing and potential changes to global climate including rising surface temperatures, changes in precipitation, rising sea levels seasonal shifts, an increase in extreme weather events, and changes in the biosphere. International and national organizations independently confirm these findings and predict that these trends are likely to continue into the foreseeable future unless action is taken to reduce global GHG emissions (IPCC 2018; USGCRP 2023). However, these changes are not geographically uniform across the planet, and some regions are likely to experience greater change than others (IPCC 2018). Further, projections of future climate change are strongly related to predicted trends in GHG emissions, which in turn depend on policy and other actions to reduce GHG emissions.

Climate data collected from 1991 to 2020 indicates that the region typically experiences mild temperatures, with lows ranging from 37 to 57 degrees Fahrenheit and highs ranging from 47 to 78 degrees Fahrenheit annually (NOAA 2024a). Mean monthly rainfall in Lynden (approximately 2.8 miles southeast of the existing LPOE) between 1991 and 2020 was approximately 3.7 inches, with the driest months occurring during the summer (NOAA 2024b). Precipitation in this region is evenly distributed through fall, winter, and spring, with most rainfall occurring during low-intensity storms (USDA 2022). The Northwest region of the U.S. has already experienced a number of climate change-related impacts and these trends are likely to continue in the foreseeable future, as described below (USGCRP 2023):

- The Northwest's climate has historically been relatively mild, but shifting weather patterns associated with climate change are adversely affecting physical, mental, and community health. The incidence of illnesses and death during extreme heat events and wildfire smoke days is increasing, and climate change is stressing health systems. Systemic oppression disproportionately exposes communities to climate hazards. These communities include low-income communities of color; rural and natural resource-dependent communities; and Tribes and Indigenous communities.

- Recent extreme events have stressed water systems and housing, transportation, and energy infrastructure across the Northwest. However, some water providers were forced to access alternative sources, institute mandatory or voluntary conservation measures, or otherwise modify their operations. Small rural water providers are vulnerable because they usually depend on a single water source or sources with limited capacity and because operators generally have limited resources for planning, upgrades, and emergency response.
- Extreme precipitation, droughts, and heatwaves could intensify due to climate change and continue to threaten these interrelated systems. The frequency and intensity of extreme precipitation events are projected to increase across the region. This increase in extreme precipitation events can increase the incidence of flooding events.
- Warming temperatures and decreased summer precipitation contribute to increases in the size and maximum elevation of wildfires. Concurrent heat and drought are also increasing the volume of stressed or dead vegetation which in turn increases fuel load and wildfires risk.
- Annual average air temperatures in the region have risen by almost 2°F since 1900. The annual number of extremely hot days and warm nights in the Northwest has been above the long-term average over the past decade, and the annual number of extremely cold nights over the same period has been below the long-term average.

3.6.2 Environmental Consequences

3.6.2.1 Methodology

To evaluate potential impacts on air quality, GSA reviewed the project alternatives to determine whether any activities have the potential to cause the following within the ROI:

- Increase in direct or indirect emissions from fixed and mobile sources such as stationary fuel combustion, construction equipment, and employee vehicles; or
- Increase in indirect offsite GHG emissions associated with electricity generation.

A major adverse impact to air quality or GHG emissions would occur if the project alternatives would:

- Result in emissions of criteria pollutants or HAPs that would exceed relevant air quality or health standards including the NAAQS; or
- Violate any federal or state permits.

When assessing significance, GSA also considered the potential for BMPs to reduce the severity or extent of these impacts, which is discussed in Section 3.6.2.6. Note that General Conformity Rule requirements do not apply to the Proposed Action as the project areas are in attainment with the NAAQS. However, GSA compared estimated criteria pollutant emissions from the Proposed Action to the PSD threshold of 250 tons per year, as a point of reference against which to assess the severity of potential air quality impacts.

To provide a conservative estimate of potential air emissions, the following assumptions were made:

- Fugitive dust emissions were primarily assumed to occur during demolition, grading, and site preparation activities;
- PM₁₀ and PM_{2.5} estimates presented assume uncontrolled emissions of fugitive dust. Emissions would likely be lower as GSA would take steps to minimize fugitive dust as discussed in Section 3.6.2.6;
- On-road vehicles would travel various distances. Worker vehicles were assumed to travel 20 miles per day, while vendor and waste trucks were assumed to travel 50 miles per day;

- Construction at each LPOE was assumed to be largely completed in 1 year (i.e., 1 year for Lynden LPOE, and 1 year for Sumas LPOE); and
- Square footage of buildings to be demolished was estimated based on publicly available information.

Construction and operations emissions were estimated for on-road vehicles and non-road construction equipment. Since a detailed construction plan has not yet been developed for the project, the number and types of construction equipment were estimated based on available data from other, similar projects, and in coordination with appropriate GSA staff. Emissions rates from on-road vehicles such as construction worker and LPOE employee POVs were estimated using industry standard emissions rates (USEPA 2020). Emissions rates for non-road vehicles such as excavators, cranes, graders, backhoes, and bulldozers were estimated using USEPA’s Motor Vehicles Emissions Simulator model. Fugitive dust emissions factors for PM₁₀ and PM_{2.5} were derived from USEPA’s AP-42, Compilation of Emissions Factors. Construction and operations GHG emissions were also estimated using USEPA emissions factors (USEPA 2020). SC-GHG for construction and operations was estimated using EPA GWPs (USEPA 2023). Detailed emissions calculations are presented in Appendix C.

3.6.2.2 Lynden LPOE Alternatives

3.6.2.2.1 Lynden LPOE Alternative 1 – No Action Alternative

Lynden LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impact on air quality, climate change, and greenhouse gases. Under Lynden LPOE Alternative 1, GSA would not modernize or expand the Lynden LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure, or changes to onsite operations would occur.

Table 3.6-3 presents the estimated current operational air emissions that would occur from employee commuting. As shown in Table 3.6-3, emissions of criteria pollutants from employee commuting are well below the PSD threshold of 250 tons per year and would not impact the air quality attainment status within the Olympic-Northwest Intrastate AQCR. Table 3.6-4 presents the current operational GHG emissions from personnel commuting, assuming the current number of employees is 36 and their average commute distance is 20-miles roundtrip.

Table 3.6-3. Annual Air Emissions from Current Employee Commuting

Source	Criteria Pollutant Emissions (tons)					
	CO	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	VOC
Employee POVs (current)	2.30	0.13	0.03	0.01	0.00	0.13

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020

CO = carbon monoxide

PM_{2.5} = particulate matter of diameter 2.5 microns or less

SO₂ = sulfur dioxide

NO₂ = nitrogen dioxide

PM₁₀ = particulate matter of diameter 10 microns or less

VOC = volatile organic compounds

Table 3.6-4. Annual GHG Emissions from Current POV Use

Source	GHG Emissions (metric tons per year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ -eq
Employee POVs (current)	288.75	0.02	0.00	229.91

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020

CH₄ = methane

CO₂ = carbon dioxide

CO₂-eq = carbon dioxide equivalent

N₂O = nitrous oxide

3.6.2.2.2 Lynden LPOE Alternative 2 – East-West Oriented LPOE Expansion

Construction

Air Quality

Under Lynden LPOE Alternative 2, construction and demolition would generate air emissions and would cause direct, short-term, minor, regional, adverse impacts to air quality. Individuals living or working in proximity to the LPOE would be most affected. These impacts would occur during the estimated construction period and would end once construction is completed.

Estimated criteria air pollutant emissions are presented below in Table 3.6-5. As shown in Table 3.6-5, emissions of criteria pollutants from construction activities are well below the PSD threshold of 250 tons per year and would not impact the air quality attainment status within the Olympic-Northwest Intrastate AQCR.

Table 3.6-5. Construction Air Emissions for Lynden LPOE Alternative 2

Source	Criteria Pollutant Emissions (tons)					
	CO	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	VOC
Construction Equipment	0.38	0.71	0.05	0.05	0.00	0.07
Worker Vehicles	4.48	0.25	0.05	0.03	0.01	0.26
Delivery and Waste Trucks	1.97	1.93	0.20	0.10	0.01	0.15
Fugitive Dust	–	–	10.05	5.40	–	–
Total	6.83	2.89	10.36	5.59	0.02	0.48

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020

CO = carbon monoxide

PM₁₀ = particulate matter of diameter 10 microns or less

NO₂ = nitrogen dioxide

SO₂ = sulfur dioxide

PM_{2.5} = particulate matter of diameter 2.5 microns or less

VOC = volatile organic compounds

Greenhouse Gas Emissions

Lynden LPOE Alternative 2 would generate GHG emissions during construction activities, and would represent a direct, short-term, negligible, regional, adverse impact to GHG emissions and climate change. Short-term GHG emissions associated with Lynden LPOE Alternative 2 would primarily result from the use of fuel in construction equipment, worker vehicles, and delivery and refuse trucks. GHG emissions are presented in Table 3.6-6.

Table 3.6-6. Construction GHG Emissions under Lynden LPOE Alternative 2

Source	Criteria Pollutant Emissions (tons)			
	CO ₂	CH ₄	N ₂ O	CO ₂ -eq
Construction Equipment	330.31	0.02	0.01	333.28
Worker Vehicles	444.88	0.04	0.00	447.14
Delivery and Waste Trucks	2,356.77	1.62	0.07	2,419.28
Total	3,132.32	1.68	0.09	3,200.06

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020

CH₄ = methane

CO₂ = carbon dioxide

CO₂-eq = carbon dioxide equivalent

N₂O = nitrous oxide

The CEQ’s interim guidance on NEPA and climate change also directs agencies to provide estimates of the social cost of greenhouse gases (SC-GHG) associated with agency actions. Estimates of SC-GHG provide an aggregated monetary measure (in U.S. dollars) of the net harm to society associated with an incremental metric ton of emissions in a given year. These estimates include, but are not limited to, climate change

impacts associated with net agricultural productivity, human health effects, property damage from increased risk of natural disasters, disruption of energy systems, risk of conflict, environmental migration, and the value of ecosystem services. In this way, SC-GHG estimates can help the public and federal agencies understand or contextualize the potential impacts of GHG emissions and, along with information on other potential environmental impacts, can inform the comparison of alternatives. GSA used data from the 2023 EPA Report on the Social Cost of Greenhouse Gases (USEPA 2023) to estimate SC-GHG for this EIS.

Table 3.6-7 provides estimates of annual SC-GHG values for a range of discount rates, as recommended by the USEPA (USEPA 2023). Discount rates provide a range of options for valuing future climate damages; higher discount rates lead to a lower SC-GHG value for damages occurring further in the future.

Table 3.6-7. Social Cost of Construction GHG Emissions under Lynden LPOE Alternative 2

Discount Rate		
2.5%	2%	1.5%
\$416,550	\$673,371	\$1,143,164

Source: USEPA 2023

Note: SC-GHG values (in \$) were calculated by multiplying annual emissions by the SC-GHG cost (\$/metric ton) provided in USEPA 2023. Costs calculations use multipliers based on assumption of construction in the year 2026 for purposes of analysis; costs may vary slightly if the year of construction changes.

Operations

Air Quality

Under Lynden LPOE Alternative 2 operations would be anticipated to have direct and indirect, long-term, negligible to minor, regional, adverse impacts to air quality. Energy demand at the modernized and expanded LPOE would likely be higher than the existing facility; however, as discussed in Chapter 2, GSA would use sustainable building design features and potentially renewable technologies to offset this increase. The actual change in air emissions depends on the extent to which these technologies are implemented in the final design.

Direct sources of air emissions could include:

- Onsite emergency generators, likely fired by diesel or natural gas. There could be a minor, long-term increase in air emissions from periodic testing and maintenance and potentially during emergency situations.
- Boilers for building heat and domestic hot water, either oil or gas fired.

Indirect sources of air emissions associated with LPOE operations would include:

- Offsite generation of electricity used at the modernized and expanded LPOE could be higher than the existing LPOE due to increased facility size. Some or all of those increases would likely be offset by improved building efficiency and onsite renewable energy generation.
- Employee commuting would result in tailpipe emissions from employee POVs. GSA anticipates an increase of 20 employees would be needed to operate the expanded and modernized LPOE.

Table 3.6-8 presents the estimated increase in air emissions that would occur from employee commuting. As shown in Table 3.6-8, emissions of criteria pollutants from current plus proposed increases in employee commuting are well below the PSD threshold of 250 tons per year and would not impact the air quality attainment status within the Olympic-Northwest Intrastate AQCR.

Table 3.6-8. Annual Air Emissions from Employee Commuting

Source	Criteria Pollutant Emissions (tons)					
	CO	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	VOC
Employee POVs (increase)	3.58	0.20	0.04	0.02	0.01	0.21

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020

CO = carbon monoxide PM_{2.5} = particulate matter of diameter 2.5 microns or less SO₂ = sulfur dioxide
NO₂ = nitrogen dioxide PM₁₀ = particulate matter of diameter 10 microns or less VOC = volatile organic compounds

During operations under Lynden LPOE Alternative 2 there would also likely be a reduction in wait times for POVs to be processed by a CBP officer. The reduction in wait times could lower vehicle idling emissions, which could partially offset potential increases in emissions from employee commuting and building energy usage.

Greenhouse Gas

Lynden LPOE Alternative 2 would generate GHG emissions during operational activities, and would represent a direct, long-term, negligible, regional, adverse impact to GHG emissions and climate change. The modernized and expanded LPOE would likely have higher energy demand compared to existing conditions due to the increased building size as well as increased fuel use for boilers and emergency generators, but this increase would be minimized using sustainable building design features and potentially renewable energy technologies, along with new, more efficient heating and cooling equipment.

GHG emissions would likely increase from employee commuting due to a potential increase in the number of onsite personnel. However, a decrease in POV idling from shorter wait times, particularly during peak travel periods, would offset some of the increase in GHG emissions. Table 3.6-9 presents the current plus the potential increase in POV emissions from personnel commuting, assuming an increase of 20 additional staff and an average 20-mile roundtrip commute distance.

Table 3.6-9. Annual Change in GHG Emissions from POV Use

Source	GHG Emissions (metric tons per year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ -eq
Employee POVs (increase)	356	0.03	0.00	358

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020

CH₄ = methane CO₂ = carbon dioxide CO₂-eq = carbon dioxide equivalent N₂O = nitrous oxide

Table 3.6-10 summarizes the associated annual SC-GHG values from 2030 to 2050, for the net increase in operational GHG emissions. For simplicity, the table shows SC-GHG values at 5-year intervals.

Table 3.6-10. Social Cost of Annual GHG Emissions from Operations

Year	Discount Rate		
	2.5%	2%	1.5%
2030	\$51,239.84	\$81,841.41	\$136,639.57
2035	\$56,221.49	\$88,246.39	\$145,179.54
2040	\$61,558.97	\$95,007.20	\$153,363.68
2045	\$67,252.29	\$102,123.84	\$162,259.49
2050	\$72,945.60	\$109,596.32	\$171,511.12

Source: USEPA 2023

Note: Individual numbers may not sum to totals due rounding. SC-GHG values (in \$) were calculated by multiplying annual emissions by the SC-GHG cost (\$/metric ton) provided in USEPA 2023.

3.6.2.2.3 Lynden LPOE Alternative 3 – North-South Oriented LPOE Expansion

Construction

Air Quality

Construction activities under Lynden LPOE Alternative 3 would be expected to result in similar impacts as under Lynden LPOE Alternative 2, and would cause direct, short-term, minor, regional, adverse impacts to air quality. Individuals living or working in proximity to the LPOE would be most affected. These impacts would occur during the estimated construction period and would end once construction is completed. Emissions estimates were estimated in the same manner as Lynden LPOE Alternative 2 and are presented in Table 3.6-11 below. As shown in Table 3.6-11, emissions of criteria pollutants from construction activities are well below the PSD threshold of 250 tons per year and would not impact the air quality attainment status within the Olympic-Northwest Intrastate AQCR.

Table 3.6-11. Construction Air Emissions for Lynden LPOE Alternative 3

Source	Criteria Pollutant Emissions (tons)					
	CO	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	VOC
Construction Equipment	0.27	0.50	0.04	0.04	0.00	0.05
Worker Vehicles	4.48	0.25	0.05	0.03	0.01	0.26
Delivery and Waste Trucks	1.99	1.96	0.21	0.10	0.01	0.15
Fugitive Dust	–	–	6.79	3.65	–	–
Total	6.75	2.71	7.08	3.82	0.02	0.46

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020

CO = carbon monoxide

PM_{2.5} = particulate matter of diameter 2.5 microns or less

SO₂ = sulfur dioxide

NO₂ = nitrogen dioxide

PM₁₀ = particulate matter of diameter 10 microns or less

VOC = volatile organic compounds

Greenhouse Gas Emissions

Under Lynden LPOE Alternative 3 construction would generate similar GHG emissions as discussed under Lynden LPOE Alternative 2, and would represent a direct, short-term, negligible, regional, adverse impact to GHG emissions and climate change. Short-term GHG emissions associated with Lynden LPOE Alternative 3 would result from similar sources as discussed in Lynden LPOE Alternative 2. GHG Emissions for Lynden LPOE Alternative 3 are presented in Table 3.6-12.

Table 3.6-12. Construction GHG Emissions under Lynden LPOE Alternative 3

Source	Criteria Pollutant Emissions (tons)			
	CO ₂	CH ₄	N ₂ O	CO ₂ -eq
Construction Equipment	248.66	0.01	0.01	250.89
Worker Vehicles	444.88	0.04	0.00	447.14
Delivery and Waste Trucks	2,391.19	1.62	0.07	2,453.70
Total	3,084.73	1.68	0.08	3,151.73

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020

CH₄ = methane

CO₂ = carbon dioxide

CO₂-eq = carbon dioxide equivalent

N₂O = nitrous oxide

Table 3.6-13 provides estimates of annual SC-GHG values for a range of discount rates, as recommended by the *EPA Report on the Social Cost of Greenhouse Gases* and previously discussed under Lynden LPOE Alternative 2 in Section 3.6.2.2.2 (USEPA 2023).

Table 3.6-13. Social Cost of Construction GHG Emissions under Lynden LPOE Alternative 3

Discount Rate		
2.5%	2%	1.5%
\$410,269	\$663,217	\$1,125,926

Source: USEPA 2023

Note: Individual numbers may not sum to totals due rounding. SC-GHG values (in \$) were calculated by multiplying annual emissions by the SC-GHG cost (\$/metric ton) provided in USEPA 2023. Costs calculations use multipliers based on assumption of construction in the year 2026 for purposes of analysis; costs may vary slightly if the year of construction changes.

Operations

Air Quality

Under Lynden LPOE Alternative 3, air emissions impacts from operation of the expanded and modernized LPOE would be the same as those discussed under Lynden LPOE Alternative 2.

Greenhouse Gas Emissions

Under Lynden LPOE Alternative 3, GHG emissions from operation of the expanded and modernized LPOE would be the same as those discussed under Lynden LPOE Alternative 2.

3.6.2.3 Sumas LPOE Alternatives

3.6.2.3.1 Sumas LPOE Alternative 1 – No Action Alternative

Sumas LPOE Alternative 1 would have no direct or indirect, short- or long-term, adverse, local or regional impact on air quality, climate change, and greenhouse gases. Under Sumas LPOE Alternative 1, GSA would not modernize or expand the Sumas LPOE and current facilities and infrastructure at the existing LPOE would remain. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure, or changes to onsite operations would occur.

Table 3.6-14 presents the estimated current operational air emissions that would occur from employee commuting. As shown in Table 3.6-14, emissions of criteria pollutants from employee commuting are well below the PSD threshold of 250 tons per year and would not impact the air quality attainment status within the Olympic-Northwest Intrastate AQCR. Table 3.6-15 presents the current operational GHG emissions from personnel commuting, assuming the current number of employees is 73 and their average commute distance is 20-miles roundtrip.

Table 3.6-14. Annual Air Emissions from Current Employee Commuting

Source	Criteria Pollutant Emissions (tons)					
	CO	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	VOC
Employee POVs (current)	4.67	0.26	0.05	0.03	0.01	0.27

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020

CO = carbon monoxide PM_{2.5} = particulate matter of diameter 2.5 microns or less SO₂ = sulfur dioxide
NO₂ = nitrogen dioxide PM₁₀ = particulate matter of diameter 10 microns or less VOC = volatile organic compounds

Table 3.6-15. Annual GHG Emissions from Current POV Use

Source	GHG Emissions (metric tons per year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ -eq
Employee POVs (current)	463.85	0.04	0.00	466.21

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020

CH₄ = methane CO₂ = carbon dioxide CO₂-eq = carbon dioxide equivalent N₂O = nitrous oxide

3.6.2.3.2 Sumas LPOE Alternative 2 – Feasibility Study Preferred Alternative

Construction

Under Sumas LPOE Alternative 2, construction and demolition would generate air emissions and would cause a direct, short-term, minor, regional, adverse impact to air quality. Individuals living or working in proximity to the LPOE would be most affected. These impacts would occur during the estimated construction period and would end once construction is completed.

Estimated criteria air pollutant emissions are presented below in Table 3.6-16. As shown in Table 3.6-16, emissions of criteria pollutants from construction activities are well below the PSD threshold of 250 tons per year and would not impact the air quality attainment status within the Olympic-Northwest Intrastate AQCR.

Table 3.6-16. Construction Air Emissions for the Sumas LPOE Alternative 2

Source	Criteria Pollutant Emissions (tons)					
	CO	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	VOC
Construction Equipment	0.38	0.71	0.05	0.05	0.00	0.07
Worker Vehicles	4.48	0.25	0.05	0.03	0.01	0.26
Delivery and Waste Trucks	2.06	2.03	0.21	0.11	0.02	0.16
Fugitive Dust	–	–	8.53	4.59	–	–
Total	6.92	2.98	8.53	4.78	0.02	0.49
PSD Significance Threshold	250	250	250	250	250	250
Exceeds PSD Significance Threshold? (Yes/No)	No	No	No	No	No	No

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020

Greenhouse Gas Emissions

Implementation of Sumas LPOE Alternative 2 would generate GHG emissions during construction activities, and would represent a direct, short-term, negligible, regional, adverse impact to GHG emissions and climate change. Short-term GHG emissions associated with Sumas LPOE Alternative 2 would primarily result from use of fuel in construction equipment, worker vehicles, and delivery and refuse trucks. GHG emissions are presented in Table 3.6-17.

Table 3.6-17. Construction GHG Emissions for the Sumas LPOE Alternative 2

Source	Criteria Pollutant Emissions (tons)			
	CO ₂	CH ₄	N ₂ O	CO ₂ -eq
Construction Equipment	330.31	0.02	0.01	333.28
Worker Vehicles	444.88	0.04	0.00	447.14
Delivery and Waste Trucks	2,467.72	1.70	0.08	2,533.17
Total	3,242.90	1.76	0.09	3,313.58

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020

CH₄ = methane

CO₂ = carbon dioxide

CO₂-eq = carbon dioxide equivalent

N₂O = nitrous oxide

Table 3.6-18 provides estimates of annual SC-GHG values for a range of discount rates, as recommended by the EPA Report on the Social Cost of Greenhouse Gases and previously discussed under Lynden LPOE Alternative 2 in Section 3.6.2.2.2 (USEPA 2023).

Table 3.6-18. Social Cost of Construction GHG Emissions for the Sumas LPOE Alternative 2

Discount Rate		
2.5%	2%	1.5%
\$431,306	\$697,224	\$1,183,659

Source: USEPA 2023

Note: Individual numbers may not sum to totals due rounding. SC-GHG values (in \$) were calculated by multiplying annual emissions by the SC-GHG cost (\$/metric ton) provided in USEPA 2023. Costs calculations use multipliers based on assumption of construction in the year 2026 for purposes of analysis; costs may vary slightly if the year of construction changes.

Operations

Air Quality

Under Sumas LPOE Alternative 2, operations would have a direct and indirect, long-term, negligible to minor, adverse impact on air quality, similar to as described for Lynden LPOE Alternative 2 in Section 3.6.2.2.2 under *Operations – Air Quality*. However, POV emissions would be greater than those under Lynden LPOE Alternative 2. As shown in Table 3.6-19, emissions of criteria pollutants from current plus proposed increases in employee commuting are well below the PSD threshold of 250 tons per year and would not impact the air quality attainment status within the Olympic-Northwest Intrastate AQCR.

Table 3.6-19 presents the estimated increase in air emissions that would occur from employee commuting. As shown in Table 3.6-19, emissions of criteria pollutants from current plus proposed increases in employee commuting are well below the PSD threshold of 250 tons per year and would not impact the air quality attainment status within the Olympic-Northwest Intrastate AQCR.

Table 3.6-19. Annual Air Emissions from Employee Commuting

Source	Criteria Pollutant Emissions (tons)					
	CO	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	VOC
POVs	6.33	0.35	0.07	0.04	0.01	0.36

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020

During operations under Sumas LPOE Alternative 2 there would also likely be a reduction in wait times for POVs to be processed by a CBP officer, similar to as described for Lynden LPOE Alternative 2 in Section 3.6.2.2.2 under *Operations – Air Quality*.

Greenhouse Gas Emissions

Sumas LPOE Alternative 2 would generate GHG emissions during operational activities, and would represent a direct, long-term, negligible, adverse impact to global GHG emissions and climate change, similar to as described for Lynden LPOE Alternative 2 in Section 3.6.2.2.2 under *Operations – Greenhouse Gas Emissions*. However, POV GHG emissions would be greater than those under Lynden LPOE Alternative 2. Table 3.6-20 presents the current plus the potential increase in POV emissions from personnel commuting, assuming an increase of 26 additional staff and an average 20-mile roundtrip commute distance.

Table 3.6-20. Annual Change in GHG Emissions from POV Use

Source	(metric tons)			
	CO ₂	CH ₄	N ₂ O	CO ₂ -eq
Employee POVs (increase)	629.06	0.06	0.01	632.26

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020

CH₄ = methane

CO₂ = carbon dioxide

CO₂-eq = carbon dioxide equivalent

N₂O = nitrous oxide

Table 3.6-21 summarizes the associated annual SC-GHG values from 2030 to 2050, for the net increase in operational GHG emissions. For simplicity, the table shows SC-GHG values at 5-year intervals.

Table 3.6-21. Social Cost of Annual GHG Emissions from Operations

Year	Discount Rate		
	2.5%	2%	1.5%
2030	\$90,584.71	\$144,683.92	\$241,559.24
2035	\$99,391.56	\$156,007.01	\$256,656.69
2040	\$108,827.47	\$167,959.16	\$271,125.08
2045	\$118,892.44	\$180,540.37	\$286,851.59
2050	\$128,957.40	\$193,750.64	\$303,207.17

Source: USEPA 2023

Note: Individual numbers may not sum to totals due rounding. SC-GHG values (in \$) were calculated by multiplying annual emissions by the SC-GHG cost (\$/metric ton) provided in USEPA 2023.

3.6.2.3.3 Sumas LPOE Alternative 3 – Commercial Inspection West

Air quality and GHG impacts that could result from construction and operation of Sumas LPOE Alternative 3 would be the same as those identified for Sumas LPOE Alternative 2.

3.6.2.3.4 Sumas LPOE Alternative 4 – Multi-Story Construction LPOE Expansion

Air quality and GHG impacts that could result from construction and operation of Sumas LPOE Alternative 4 would be the same as those identified for Sumas LPOE Alternative 2.

3.6.2.4 Construction Sequencing Options

Under the Concurrent Construction Option, both ports would remain open during construction. Under existing conditions, the Lynden LPOE would be accessible for 16 hours per day, and the Sumas LPOE for 24 hours per day, 7 days per week. Construction could result in temporary traffic and wait time delays at both LPOEs, which could result in increased vehicle emissions, mostly during peak travel periods such as holidays and summer season. Under this sequencing option, the construction period is assumed to be longer as both LPOEs would remain open, which could result in a comparatively higher emissions impact. Wait time delays at both LPOEs could also create comparatively higher emissions. Calculations provided in Section 3.6.2.2.2 and 3.6.2.3.2 are based on a duration of one year, which represents the longer construction duration for each LPOE under the Concurrent Construction Option.

Under the Sequential Construction Option, GSA and CBP anticipate a full closure of the Lynden LPOE. This would permit faster construction within that project area. Construction could result in temporary traffic and wait time delays at the Sumas LPOE, which could result in increased vehicle emissions, mostly during peak travel periods such as holidays and summer season. Under this sequencing option, Lynden would have lower emissions as there would be no idling POVs due to the port's temporary full closure.

3.6.2.5 Impacts of Climate Change on the Proposed Action

The CEQ requires federal agencies to consider potential impacts of climate change on proposed projects as a part of NEPA analysis (CEQ 2023). This section discusses potential impacts of climate change effects on the operation of the expanded and modernized LPOEs across several decades. Section 3.6.1.3 discusses the potential impacts of climate change in the Northwest. Of those impacts, ones that have a reasonably foreseeable potential to affect operations at the LPOEs are discussed below in Table 3.6-22. Climate change would have direct and indirect, long-term, minor, regional, adverse impacts on LPOE operations. Proposed mitigation measures to reduce these impacts are discussed in Section 3.6.2.6. It should be noted that these climate change impacts would affect LPOE operations regardless of whether the expansion and modernization is implemented.

Table 3.6-22. Potential Impacts of Climate Change on LPOE Operations

Resource	Description of Impact
Human Health and Safety	Climate change has the potential to adversely affect human health, through increased risk of exposure to extreme heat and by contributing to an increase in ground-level O ₃ , particulate pollution, and airborne allergens. Personnel working at the LPOE, as well as with individuals crossing the border, would be exposed to these conditions. Individuals crossing through the LPOE on foot may be more exposed to extreme weather and other adverse conditions, when compared to individuals inside vehicles and LPOE personnel working primarily within buildings.
Water Resources	Climate change is likely to lead to decreasing water availability and makes droughts more likely in the future. Drought conditions could affect the availability of water for personnel (i.e., domestic uses) and for building operations. Increased precipitation and storm events may also more quickly degrade LPOE and surrounding infrastructure and increase flood potential.
Infrastructure	Increasing temperatures and heatwaves are shifting seasonal timing and spatial footprint of electricity demand. Many fossil fuel power plants rely on water for cooling; and cooler water results in greater operating efficiency. Therefore, rising temperatures, which result in warmer water, are decreasing the efficiency of fossil fuel energy generation. Storms and precipitation events intensified by climate change also have the potential to damage energy infrastructure and operations, which may affect the LPOE's access to energy.

Source: USGCRP 2023

3.6.2.6 Lynden and Sumas LPOE Combined Alternative Implementation

When considering the potential air quality, climate change, and GHG emissions from the combination of Lynden and Sumas LPOE action alternatives, the highest emissions were used to show a worst-case scenario. The highest air quality, climate change, and GHG emissions are from Lynden LPOE Alternative 2 combined with any of the Sumas LPOE action alternatives. Table 3.6-23 shows combined air emissions from construction and operational employee commuting, Table 3.6-24 shows combined GHG emissions from construction activities, and Table 3.6-25 shows combined social cost of construction GHG emissions. However, the overall magnitude of impacts from the combined implementation of any combination of Lynden and Sumas alternatives would not exceed the levels described in Sections 3.6.2.2 through 3.6.2.4, and would generally range from negligible to minor. If Lynden LPOE Alternative 1 and Sumas LPOE Alternative 1 (No Action Alternatives) are both selected there would be no direct or indirect, short- or long-term, local or regional, adverse impact on air quality, climate change, and GHGs.

Table 3.6-23. Combined Alternative Construction and Employee Commuting Air Emissions

Source	Criteria Pollutant Emissions (tons)					
	CO	NO ₂	PM ₁₀	PM _{2.5}	SO ₂	VOC
Construction and Employee Commuting Emissions from Lynden LPOE Alternative 2	10.41	2.29	10.40	5.61	0.03	0.69
Construction and Employee Commuting Emissions from any Sumas LPOE Action Alternative	13.25	3.33	8.91	4.75	0.03	0.85
Total	23.66	5.62	19.31	10.36	0.06	1.54
PSD Significance Threshold	250	250	250	250	250	250
Exceeds PSD Significance Threshold (Yes/No)	No	No	No	No	No	No

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020
CO = carbon monoxide

Table 3.6-24. Combined Alternatives Construction and Employee POV Use GHG Emissions

Source	Criteria Pollutant Emissions (tons)			
	CO ₂	CH ₄	N ₂ O	CO ₂ -eq
Construction Equipment and Employee POVs (increase) from Lynden LPOE Alternative 2	3,487.79	1.71	0.09	3,557.33
Construction Equipment and Employee POVs (increase) from any Sumas LPOE Action Alternative	3,871.96	1.82	0.10	3,945.84
Total	7,359.75	3.53	0.19	7,503.17

Source: Argonne 2013; CalEEMod 2022; USEPA 2015; USEPA 2020

CH₄ = methane CO₂ = carbon dioxide CO₂-eq = carbon dioxide equivalent N₂O = nitrous oxide

Table 3.6-25. Combined Alternatives Social Cost of Construction and Operations GHG Emissions

Source	Discount Rate		
	2.5%	2%	1.5%
Construction Equipment and Operations GHG Emissions from Lynden LPOE Alternative 2	\$467,789.84	\$755,212.41	\$1,279,803.57
Construction Equipment and Operations (2030) GHG Emissions from any Sumas LPOE Action Alternative	\$521,890.71	\$841,907.92	\$1,425,218
Total	\$495,731.71	\$790,621.92	\$1,353,430.24

Source: USEPA 2023

Note: SC-GHG values (in \$) were calculated by multiplying annual emissions by the SC-GHG cost (\$/metric ton) provided in USEPA 2023. Costs calculations use multipliers based on assumption of construction in the year 2026 for purposes of analysis; costs may vary slightly if the year of construction changes.

3.6.2.7 Impacts Reduction Measures

Construction activities within the project area would generate fugitive dust (non-toxic PM) emissions. Precautions to prevent PM from becoming airborne could include:

- Using water for dust control when grading roads or clearing land.
- Stabilizing open storage piles and disturbed areas by covering and/or applying water or organic dust palliative where appropriate. This is applicable to both active and inactive sites during workdays, weekends, holidays, and windy conditions.
- Paving roadways and maintaining them in a clean condition.
- Covering open equipment when conveying or transporting material likely to create objectionable air pollution when airborne.
- Promptly removing spilled or tracked dirt or other materials from other streets.
- Installing wind fencing and phasing grading operations where appropriate and operating water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, preventing spillage, limiting speeds to 15 miles per hour (mph) and limiting speeds of earth-moving equipment of 10 mph.

The following source-specific controls could be considered to minimize emissions during construction activities:

- Reduce unnecessary idling from heavy equipment.
- Prohibit engine tampering to increase horsepower, except when meeting manufacturer's recommendations.
- Lease or buy newer, cleaner equipment using the best available emissions control technologies.
- Use lower-emitting engines and fuels, including electric, liquified gas, hydrogen fuel cells, and/or alternative diesel formulations, if feasible.
- Have on-highway vehicles meet, or exceed, the USEPA exhaust emissions standards for model year 2010 and newer heavy-duty nonroad compression-ignition engines (e.g., nonroad trucks, construction equipment, cargo handlers, etc.).
- Have nonroad vehicles and equipment meet, or exceed, the USEPA Tier 4 exhaust emissions standards for heavy-duty nonroad compression-ignition engines (e.g., nonroad trucks, construction equipment, cargo handlers, etc.).

Finally, the following administrative controls could be considered during construction:

- Locate diesel engines, motors, and equipment staging areas as far as possible from residential areas and other sensitive receptors (e.g., schools, daycare centers, hospitals, senior centers, etc.).
- Avoid routing truck traffic near sensitive land uses to the fullest extent feasible.
- Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emissions controls for each piece of equipment before groundbreaking.
- Reduce construction-related trips of workers and equipment, including trucks.
- Develop a construction traffic and parking management plan, if required, that minimizes traffic interference and maintains traffic flow and safety.
- Implement measures to minimize idling emissions from cars waiting to cross the border, such as anti-idling policies.

Many of the mitigation measures for air quality identified above would also serve to reduce GHG emissions. GSA would take the following additional steps to minimize GHGs:

- Use low embodied carbon concrete and environmentally preferable asphalt cement that reduce GHG emissions.
- Recycle construction debris to the maximum extent feasible.

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3.7 HUMAN HEALTH AND SAFETY

This section describes the baseline conditions for human health and safety resources in the project area and potential human health and safety impacts that could result from implementing the Proposed Action and No Action Alternative as discussed in Chapter 2. Human health and safety include direct and indirect factors that have the potential to affect the human population or workers associated with the alternatives. Direct factors include exposure to chemicals, extreme temperatures, and weather, while indirect factors include physical safety and security of the surrounding environment. Factors in the project area that could affect human health and safety include automobile or pedestrian accidents, workplace accidents, criminal activities, extreme weather, and exposure to hazardous waste and materials.

3.7.1 Affected Environment

3.7.1.1 *Region of Influence*

The ROI for human health and safety focuses on the project areas, which include the Lynden and Sumas LPOEs and their respective proposed expansion areas. This ROI also includes areas directly adjacent to the project areas.

3.7.1.2 *Regulatory Setting*

Hazardous Waste and Materials. The purpose of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), often referred to as Superfund, is to clean up contaminated sites so that public health and welfare are not compromised. The Federal Resources Conservation and Recovery Act of 1976 (RCRA) provides for “cradle to grave” regulations of hazardous wastes. Other federal laws applicable to hazardous waste and materials include the Community Environmental Response Facilitation Act of 1992; CWA; CAA; Safe Drinking Water Act; Occupational Safety and Health Act; Atomic Energy Act; Toxic Substances Control Act; and Federal Insecticide, Fungicide, and Rodenticide Act.

In addition to the acts and laws mentioned above, EO 12088, *Federal Compliance and Pollution Control*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

Hazardous waste in Washington is regulated by the Department of Ecology’s Hazardous Waste and Toxics Reduction program and the RCRA. Worker health and safety and public safety are key issues when dealing with hazardous materials that may affect human health and the environment.

For this analysis, the terms hazardous waste, hazardous materials, and toxic substances include those substances defined as hazardous by CERCLA, RCRA, and the SPCC Rule. Other Washington laws regarding hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. In general, they include substances that, because of their quantity; concentration; or physical, chemical, or toxic characteristics, may present moderate danger to public health or welfare or the environment when released into the environment.

Worker Safety. As a division of the Washington Department of Labor and Industries, the Division of Occupational Safety and Health (DOSH) operates under an approved plan with the U.S. Department of Labor to regulate occupational safety and health issues within Washington. DOSH does not cover federal government workers.

The occupational health and safety concerns of federal employers and employees are the responsibility of the Occupational Health and Safety Administration (OSHA). OSHA regulations applicable to the Proposed Action include 29 CFR 1910 and 29 CFR 1926, which cover general industry and construction regulations, respectively. Hazards faced by personnel at construction sites or in commercial workplaces could include injuries sustained from collisions with moving vehicles, lifting and moving equipment, and contact with hazardous substances.

3.7.1.3 Existing Conditions

3.7.1.3.1 Lynden LPOE

A Phase I ESA was completed in September 2023 to verify existing conditions within the Lynden LPOE and proposed expansion areas (GSA 2023c). This Phase I ESA was used to identify potential recognized environmental conditions (RECs), as defined by the guidelines (E1527-21) of the American Society for Testing and Materials (ASTM), associated with current and past uses of the property.

There are occupational health and safety concerns associated with the property as there is a short stretch where port personnel must drive on the wrong side of the road to be able to access the port. Surrounding the subject property is mainly agricultural land and structures for dairy and corn production, privately-owned residences, and a small, forested area.

The 2023 Phase I ESA included an assessment of existing hazardous materials and wastes currently within the LPOE footprint. There are no petroleum pipelines, or RCRA hazardous materials storage, other than materials typically used for office building maintenance, cleaning, and fuel. Two aboveground storage tanks (ASTs) were observed at the LPOE, as well as a UST. The nearby Grace Fields LLC property was also found to have an AST, but that was reported as empty.

The 2023 Phase I ESA identified three RECs within the existing LPOE (GSA 2023c), that were also identified by the Department of Ecology in a September 12, 2023 scoping comment on the EIS:

1. Soil and groundwater contamination in concentrations greater than Washington's MTCA cleanup levels were documented by prior investigations. These contaminants were presented as originating from a LUST on the Duty Free Americas (DFA) property. Contaminants present on the subject property include gasoline and benzene, toluene, ethylbenzene, and xylenes (BTEX). Remediation plans are discussed in these investigations. Remediation has been performed on the property, but there is no available evidence that indicates that all recommended remediation was completed across the entire property.
2. Migrating soil and groundwater contamination on the property. Reports indicate that contamination in concentrations that exceeded MTCA cleanup levels have migrated throughout the property from the DFA onto the Lynden LPOE and the adjacent agricultural fields. Testing maps indicate that, in some instances, contamination migrated up to several hundred feet from the suspected origin point.
3. Additional sources of soil and groundwater contamination on the subject property. A 2004 report noted a high concentration of benzene on the western side of the property which could be separate from the aforementioned contamination originating from the DFA (GSA 2023c). A 2007 report concluded that there appeared to be remaining soil contamination in the vicinity of a former service station located on the Lynden LPOE property (GSA 2023c).

There are 27 monitoring wells and 32 injection wells located in the project area that were installed in order to further investigate and remediate the contamination associated with the DFA property. The monitoring wells are used to periodically sample groundwater, while the injection wells are used for the injection of hydrocarbon-degrading bacteria, nutrients, and oxygen-releasing chemicals in order to support and enhance natural attenuation and remediation of the groundwater. In addition, in their September 12, 2023 letter, the Department of Ecology indicated that non-halogenated solvents have also been identified as contaminants of concern at the site. As of May 2023, elevated concentrations of total petroleum hydrocarbons as well as BTEX were detected in groundwater. There are three additional wells on the property that are inactive potable water wells; these are discussed further in Section 3.8, Infrastructure and Utilities.

No RECs were identified on adjoining properties. In addition to the RECs identified in the Phase I ESA as described above, given the extended agricultural history of the site, it is possible that pesticides and herbicides are present in the shallow soil from historical application. This is particularly a potential concern on the west side of the site which remains undeveloped and where native soils from the prior agricultural

use might still be present. Pesticides and herbicides adhere strongly to soil particles and can remain present in soil for many years after application.

Site Security. Results of the 2019 feasibility study confirmed that existing buildings, although well maintained, do not meet GSA's minimum requirements for LPOEs. In addition, the facility lacks dedicated outbound inspection infrastructure.

Security and Law Enforcement. The Lynden Police Department is located approximately 4.5 miles south of the LPOE and is the primary provider of law enforcement and police protection services in the area. In addition, the Everson Police Department is located approximately 12 miles to the southeast of the LPOE in Everson, Washington.

Fire and Medical Emergency Services. The PeaceHealth St. Joseph Medical Center Emergency Department is located approximately 16 miles south of the existing LPOE. The newly constructed PeaceHealth Lynden Clinic is located 4 miles south of the LPOE.

Fire protection and emergency services are provided by the Lynden Fire Department located on 4th Street approximately 4.5 miles south of the LPOE.

3.7.1.3.2 Sumas LPOE

A Phase I ESA was completed in September 2023 to verify existing conditions within the Sumas LPOE and proposed expansion areas (GSA 2023d). This Phase I ESA was used to identify potential RECs associated with current and past uses of the property.

There are occupational health and safety concerns associated with the property as there is a stretch where port personnel must drive into oncoming traffic to access a designated parking lot. In the current configuration, pedestrians crossing the border need to cross all POV lanes for traffic coming into the U.S. Pedestrians often do not have enough visibility to determine whether there are cars coming and there is no pedestrian infrastructure outside of a painted crosswalk.

The 2023 Phase I ESA included an assessment of existing hazardous materials and wastes currently within the LPOE footprint. No RECs were identified on the property. In addition, due to the age of some of the buildings/structures on the site, there is potential for lead-based paint (LBP) and/or asbestos-containing materials (ACM) to be present. Two historical RECs were identified: one at the DFA – Sumas (108 Harrison Street) and the other at the Speedway Express (208 Cherry Street). Both were LUST incidents and according to an Environmental Data Resources Report, both are listed as LUST-No Further Action. Due to the LUST status, this finding does not have potential or has a very low potential to impact the project area for the Proposed Action.

Conditions at nearby properties were assessed per ASTM Standard E1527-21. Three nearby properties, Cherry Street Market (725 Cherry Street; 1,000 feet south of the project area), 915 Cherry Street (1,500 feet south of the project area), and Super Duper Boomtown (1015 Cherry Street; 2,100 feet south of the project area), have histories as filling stations or have ongoing or planned remediation. Although none of these nearby properties or features were identified as RECs in the Phase I ESA, it is not possible to rule out entirely that some level of contamination remains on the adjoining properties, which could potentially migrate onto the subject property, either via groundwater flow, vapor intrusion, or both.

Multiple monitoring wells were identified in the project area including at the 915 Cherry Street, DFA, and the Speedway Express properties and were previously installed in order to monitor prior or planned remediation activities. It is assumed the monitoring wells are used to periodically sample groundwater.

Site Security. Results of the 2018 feasibility study confirmed that existing buildings, although well maintained, do not meet GSA's minimum requirements for LPOEs. In addition, the facility lacks dedicated outbound inspection infrastructure.

Security and Law Enforcement. The Sumas Police Department is located approximately 0.2 miles south of the Sumas LPOE at Sumas City Hall and is the primary provider of law enforcement and police protection services in the area.

Fire and Medical Emergency Services. The PeaceHealth St. Joseph Medical Center Emergency Department is located approximately 20 miles southwest of the existing LPOE. The newly constructed PeaceHealth Lynden Clinic is located approximately 12 miles southwest of the LPOE.

Fire protection and emergency services are provided by Whatcom Fire District 14, Station 91 located at 143 Columbia Street approximately 0.5 miles south of the LPOE.

3.7.2 Environmental Consequences

3.7.2.1 Methodology

To evaluate potential impacts on human health and safety, GSA reviewed the project alternatives to determine whether any activities have the potential to cause the following within the ROI:

- Adverse impacts on public or occupation health and safety, including for LPOE staff or visitors;
- Create the need for a hazardous waste treatment, storage, or disposal permit for the project;
- Create reasonably foreseeable conditions that would increase the risk of a hazardous materials or hazardous waste release; or
- Affect the capacity of fire protection or emergency medical services to respond to the needs of the public.

A major adverse impact to human health and safety would occur if the project alternatives would result in:

- Conflicts with federal, state, or local laws, regulations or ordinances related to public health and safety, including occupational safety and health;
- An unacceptable increased risk of adverse impacts to human health;
- Violations of applicable federal, state, or local standards related to the management of hazardous materials or wastes;
- Increase in the use of hazardous materials or generation of hazardous wastes to such an extent that would lead to an elevated risk of human health or environmental effects; or
- Additional demand or hazards that would exceed the capacities of fire protection or emergency response services.

Potential impacts of the action alternatives on occupational health and safety relate directly to the size of the workforce needed for construction, operations, and maintenance activities. Workers at any facilities are subject to risks of injuries and fatalities from physical hazards. Such risks include exposure to extreme weather conditions, hazardous equipment, and large moving vehicles. This EIS estimates the potential occupational health and safety impacts of construction of the action alternatives using data collected by the Bureau of Labor Statistics based on the North American Industry Classification System (NAICS). NAICS Code 2362 (construction of nonresidential building) and 2373 (highway, street, and bridge construction) were used to predict the probability of the workforce to experience recordable injuries, illnesses, lost workdays, or fatalities during the construction phase of the Proposed Action.

3.7.2.2 Lynden LPOE Alternatives

3.7.2.2.1 Lynden LPOE Alternative 1 – No Action Alternative

Lynden LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impact on human health and safety. Under Lynden LPOE Alternative 1, GSA would not modernize or expand the Lynden LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure, or changes to onsite operations would occur. Ongoing maintenance to the LPOE would continue, which would require negligible amounts of hazardous materials usage and generate negligible amounts of hazardous waste and potential risks to human health and safety associated with existing conditions and operations would remain unchanged.

3.7.2.2.2 Lynden LPOE Alternative 2 – East-West Oriented LPOE Expansion

Construction

Lynden LPOE Alternative 2 would be anticipated to have direct, short-term, minor, site-specific, adverse impacts to human health and safety. The existing onsite buildings would be demolished prior to construction. A comprehensive survey for ACM and LBP would be performed prior to demolition. Any necessary abatement or remedial activities would be performed prior to demolition. If required under NESHAP, any required permits or approvals would be obtained, and any required monitoring would be performed. Risks during construction would be minimized by adhering to occupational safety and health regulations, the use of protective gear and equipment, and implementation of BMPs. Access to the construction site would be restricted to construction workers; however, parts of the LPOE could remain open and operational 16 hours per day, 7 days per week through construction. Risk to human health and safety during construction would vary slightly depending on how the project is sequenced (see Section 3.7.2.4).

Lynden LPOE Alternative 2 would result in direct and indirect, short-term, negligible to minor, local, adverse impacts from hazardous materials use and waste handling during construction of the proposed LPOE expansion. During demolition, there would be an increase of hazardous or otherwise regulated wastes such as fluorescent, halides, or sodium vapor lamps containing mercury; smoke detectors and emergency exit signs containing low-level radioactive sources; mercury switches; electronic ballasts containing polychlorinated biphenyls (PCBs) and/or other fluids; and various equipment containing batteries. Hazardous materials associated with construction would be used in accordance with federal, state, and local regulations, and all waste, including hazardous waste, construction and demolition debris, and other waste, would be removed from all project areas and recycled or disposed of in accordance with applicable regulations at approved landfills. The increased amounts of hazardous materials such as diesel fuel, gasoline, paint, adhesives, and solvents used onsite during construction could increase the potential for spills. Any spills resulting from construction activities would be immediately contained and disposed of properly in accordance with all applicable plans and regulations. In addition, any project specific hazards affecting workers would be reduced based on strict adherence to OSHA standards and other relevant safety laws, rules, and regulations. Therefore, there would be a low likelihood of hazardous material spills or associated human health impacts from hazardous materials or waste handling during construction activities.

Potentially contaminated soil could be encountered during excavation activities as a result of current and historical land uses and associated spills that have occurred within the project area. GSA would handle and dispose of all soils and/or groundwater generated in accordance with local, state, and federal regulations, as applicable. This would include applicable coordination with the Department of Ecology, to include reporting any suspected contamination from adjoining parcels. The excavated soil would be replaced with clean fill materials, where needed. Removal of any potentially contaminated soil would represent a direct, long-term, moderate, beneficial impact to human health and safety.

Portions of the existing network of monitoring and injection wells may be impacted by construction activities. These wells are actively used to support site investigation and remediation. GSA would need to coordinate closely with the Department of Ecology, DFA, and DFA's environmental contractor(s) prior to initiating construction activities, in order to develop alternatives and remedies for any essential wells that would be impacted. This could include well replacement, well relocation, amended site design, or other options. Any wells that would be eliminated during construction would need to be properly decommissioned (closed and abandoned) beforehand in accordance with Department of Ecology guidelines. Any wells inadvertently damaged during construction would either be repaired if feasible or would be properly decommissioned and subsequently replaced. A Notice of Intent to decommission would be submitted at least 72 hours prior to decommissioning, and any fees would be paid to the Department of Ecology. Likewise, the three inactive potable water wells would also be properly decommissioned prior to construction activities.

Construction would not cause demand or create hazardous conditions that would exceed the capacities of existing fire protection and emergency services. Construction is not expected to affect the capacities of these services to meet the demands of the community.

Operations

Under Lynden LPOE Alternative 2, there would be direct, long-term, moderate, local, beneficial effects on human health and safety within the Lynden ROI during operations of the proposed LPOE. Operations would be conducted in accordance with applicable building and safety codes, including fire and safety standards set forth in the National Fire Protection Standard 101, Life Safety Code, and the Washington State Building Code. Updated configurations of the expanded and modernized LPOE would have indirect, long-term, minor, beneficial impacts on public safety locally by improving traffic patterns and minimizing the risk of vehicular and pedestrian accidents within the LPOE. GSA would install a water tank for a potable water source which would improve drinking water access and result in direct, long-term, moderate, local beneficial impacts.

There would also be direct, long-term, negligible to minor, adverse impacts to human health and safety during operation of the proposed LPOE. The new facilities would be located atop a known groundwater plume contaminated with BTEX, and non-halogenated VOCs. These VOCs create vapors which migrate up through the soil and potentially into buildings. Therefore, there is a potential vapor intrusion risk to occupants within the buildings. GSA would mitigate these risks by installing a vapor barrier beneath the building foundation. Groundwater monitoring and remediation (injection) would be expected to continue during operations with Department of Ecology oversight until cleanup standards are met. Radiation emissions from inspection equipment would also result in negligible to minor adverse impacts on human health and safety. Overall operations of the expanded and modernized LPOE are not expected to increase demands on emergency services.

Under Lynden LPOE Alternative 2, there would be direct and indirect, long-term, negligible to minor, local, adverse impacts related to hazardous material and waste handling from operations of the proposed LPOE expansion. The new facilities would not include any ACM or LBP that would result in occupant exposure, contain any PCB-containing equipment, and prior soil contamination within the limits of disturbance would be remediated. There may be petroleum storage tanks associated with the new facility. These tanks would be installed and operated in accordance with applicable regulations and current industry standards including leak-detection systems and secondary containment. Hazardous materials such as paints and cleaners would be used in facility maintenance activities, but these likely would be used in small amounts. All hazardous materials would be managed in accordance with applicable federal, state, and local regulations.

The operation of renewable energy technologies at the expanded and modernized LPOE as described in Section 2.3.5 would not substantially change conditions or introduce activities that would create additional hazards or increase demands on emergency services. Use of closed loop geothermal systems, if implemented, would employ use of antifreeze, propylene glycol, or ethanol solutions as a heat exchange

fluid; however, regular maintenance of these systems would minimize any potential for leaks from these systems. Any adverse impacts would be long-term but negligible locally.

3.7.2.2.3 Lynden LPOE Alternative 3 – North-South Oriented LPOE Expansion

Construction

Lynden LPOE Alternative 3 would have direct, long-term, moderate, local, beneficial impacts to human health and safety due to removal of contaminated soils; direct and indirect, short-term, negligible to minor, site-specific, adverse impacts locally from hazardous materials use and waste handling similar to Lynden LPOE Alternative 2 as described in Section 3.7.2.2.2 (under *Construction*); and short-term, minor adverse impacts to human health and safety depending on how the project is sequenced (see Section 3.7.2.4).

Operations

Lynden LPOE Alternative 3 would result in similar impacts as described for the Lynden LPOE Alternative 2 in Section 3.7.2.2.2 (under *Operations*). This includes direct, long-term, minor to moderate, local, beneficial impacts on human health and safety for staff and visitors to the LPOE due to improved infrastructure; direct, long-term, negligible to minor, local, adverse impacts to human health and safety from past contamination in the area; direct long-term, negligible to minor, local adverse impacts related to radiation from inspection equipment and operation of a closed loop geothermal system; and direct and indirect, long-term, negligible to minor, local, adverse impacts related to hazardous material and waste handling.

3.7.2.3 Sumas LPOE Alternatives

3.7.2.3.1 Sumas LPOE Alternative 1 – No Action Alternative

Sumas LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, local impact on human health and safety. Under Sumas LPOE Alternative 1, GSA would not modernize or expand the Sumas LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure, or changes to onsite operations would occur. Ongoing maintenance to the LPOE would continue, which would require negligible amounts of hazardous materials usage and generate negligible amounts of hazardous waste and potential risks to human health and safety associated with existing conditions and operations would remain unchanged.

3.7.2.3.2 Sumas LPOE Alternative 2 – Feasibility Study Preferred Alternative

Construction

Sumas LPOE Alternative 2 would be anticipated to have direct, short-term, minor, site-specific, adverse impacts to human health and safety, similar to as described for Lynden LPOE Alternative 2 in Section 3.7.2.2.2 under *Construction*.

Risks to health and safety of personnel and patrons would increase slightly during the construction phase. Risks would be minimized by adhering to occupational safety and health regulations, the use of protective gear and equipment, and implementation of BMPs. Access to the construction site would be restricted to construction workers; however, parts of the LPOE could remain open and operational 24 hours per day, 7 days per week through construction. Risk to human health and safety during construction would vary slightly depending on how the project is sequenced (see Section 3.7.2.4).

Similar measures would be undertaken at the Sumas LPOE as described for Lynden Alternative 2 in Section 3.7.2.2.2 (under *Construction*) with regards to hazardous materials and waste, contaminated soils, and in relation to human health and safety as the hazards and wastes generated would be comparable between the two sites.

Portions of the existing network of monitoring wells may be impacted by construction activities. GSA may need to coordinate with the Department of Ecology, DFA, Speedway Express, the 915 Cherry Street property owner, and relevant environmental contractor(s) prior to initiating construction activities, and undertake measures similar to as described for Lynden LPOE Alternative 2 in Section 3.7.2.2.2 under *Construction*).

Operations

Sumas LPOE Alternative 2 would result in similar impacts as described for the Lynden LPOE Alternative 2 in Section 3.7.2.2.2 under *Operations*. This would include direct, long-term, minor to moderate, local, beneficial impacts on human health and safety for staff and visitors to the LPOE due to improved infrastructure; direct, long-term, negligible to minor, local, adverse impacts to human health and safety from past contamination in the area; direct long-term, negligible to minor, local adverse impacts related to radiation from inspection equipment and operation of a closed loop geothermal system; and direct and indirect, long-term, negligible to minor, local, adverse impacts related to hazardous material and waste handling.

3.7.2.3.3 Sumas LPOE Alternative 3 – Commercial Inspection West

Construction

Sumas LPOE Alternative 3 would be anticipated to have direct, short-term, minor, site-specific, adverse impacts to human health and safety depending on how the project is sequenced (see Section 3.7.2.4); direct and indirect, short-term, negligible to minor, local, adverse impacts from hazardous materials use and waste handling during construction of the proposed LPOE expansion. These impacts would be similar to the construction impacts from Sumas LPOE Alternative 2.

Operations

Under Sumas LPOE Alternative 3, there would be direct, long-term, moderate, local, beneficial effects on human health and safety locally during operation of the proposed LPOE; and direct and indirect, long-term, negligible to minor, adverse impacts related to radiation exposure from inspection equipment and hazardous material and waste handling from operations of the proposed LPOE expansion locally. These impacts would be similar to the operations impacts from Sumas LPOE Alternative 2.

3.7.2.3.4 Sumas LPOE Alternative 4 – Multi-Story Construction LPOE Expansion

Construction

Sumas LPOE Alternative 4 would be anticipated to have direct, short-term, minor, site-specific, adverse impacts to human health and safety depending on how the project is sequenced (see Section 3.7.2.4). These impacts would be similar to the construction impacts from Sumas LPOE Alternative 2.

Operations

Under Sumas LPOE Alternative 4, there would be direct, long-term, moderate, local, beneficial effects on human health and safety locally during operation of the proposed LPOE; direct and indirect, short-term, negligible to minor, local, adverse impacts from radiation exposure from inspection equipment hazardous materials use and waste handling during construction of the proposed LPOE expansion; and direct and indirect, long-term, negligible to minor, adverse impacts related to hazardous material and waste handling from operations of the proposed LPOE expansion locally. These impacts would be similar to the operations impacts from Sumas LPOE Alternative 2.

3.7.2.4 Construction Sequencing Options

The average probability of fatal injury during the period from 2014 to 2022 was approximately 0.0003 per worker per year (less than 1 in 1,000) (BLS 2024).

Under the Concurrent Construction Option, both ports would remain open during construction. During concurrent construction under this option, it is assumed that up to 10 to 15 workers per day for much of construction with a peak of 50 to 70 workers could be onsite at each LPOE simultaneously (or up to 85 workers total). A conservative estimate would expect no fatalities to occur during construction. At both LPOEs, construction could result in increased safety hazards for those passing through LPOE, especially those crossing through as pedestrians. Where appropriate, proper signage would be placed, and construction flaggers may be used to direct traffic and to alert drivers to reduce adverse impacts to the public and construction workers. Risks to human health and safety during the Concurrent Construction option would therefore be direct, short-term, negligible to minor, and adverse locally.

Under the Sequential Construction Option, GSA and CBP anticipate a full closure of the Lynden LPOE; therefore, there would be no adverse impacts to visitors and fewer safety risks to construction workers at the Lynden LPOE. During peak construction under this option, it is assumed that up to 10 to 15 workers per day for much of construction with a peak of 50 to 70 workers could be onsite simultaneously (or up to 70 workers total). At the Sumas LPOE, construction could result in increased safety hazards for those passing through the LPOE, especially those crossing through as pedestrians. Where appropriate, proper signage would be placed, and construction flaggers may be used to direct traffic and to alert drivers to reduce adverse impacts to the public and construction workers. Risks to human health and safety during the Sequential Construction option would therefore be direct, short-term, negligible to minor, and adverse locally.

Impacts to hazardous material and waste handling would be the same under both the Concurrent Construction Option and the Sequential Construction Option.

3.7.2.5 Lynden and Sumas LPOE Combined Alternative Implementation

Potential human health and safety impacts from construction and operational activities for all Lynden and Sumas LPOE action alternatives would be primarily local as described in Sections 3.7.2.2 through 3.7.2.4. Therefore, considering the distance between the two LPOEs, the combined impacts from construction and operation of any combination of Lynden and Sumas LPOE action alternatives would not result in any greater level of impacts to human health and safety beyond those discussed in Sections 3.7.2.2 through 3.7.2.4. If Lynden LPOE Alternative 1 and Sumas LPOE Alternative 1 (No Action Alternatives) are both selected there would be no direct or indirect, short- or long-term, local or regional, adverse impact on human health and safety.

3.7.2.6 Impacts Reduction Measures

Measures that would limit impacts related to human health and safety during construction and operation of the Proposed Action are discussed below:

- Prior to demolition, an inspection of the buildings to be demolished would be performed by a licensed asbestos inspector and a demolition application would need to be completed and filed with the NWCAA.
- Water would be applied to the ground surface during construction and other soil disturbing activities as a means of dust suppression.
- GSA would require diversion of at least 50 percent of nonhazardous construction and demolition waste from landfills per Section 207 of EO 14057, *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*.
- All spills or releases of petroleum, oils, lubricants, hazardous materials, pollutants, or contaminants would be handled in accordance with measures outlined in a Spill Prevention and Response Plan prepared for construction.

- GSA would develop a SPCC plan during final design for operations of each facility, assuming the facility meets the requirements to prepare a plan per 40 CFR 112.
- As a BMP, a Soil Management Plan may be prepared to address the potential for encountering areas of environmental concern (e.g., contaminated soil) during grading, excavation, or other subsurface disturbance. The Soil Management Plan would identify specific measures to address hazardous waste and materials cleanup efforts, including monitoring, handling, stockpiling, characterization, onsite reuse, export, and disposal protocols for excavated soil.
- All personnel would follow federal regulations and standard handling procedures as specified in product Safety Data Sheets for hazardous materials.
- All potentially hazardous wastes generated would be properly characterized, segregated, and managed onsite prior to offsite disposal.
- If PCB-containing materials are identified onsite, appropriate abatement actions for their disposal would be implemented in accordance with regulatory requirements, and soils beneath transformers would be evaluated for evidence of releases. If present in underlying soils, appropriate actions for removal and disposal would be implemented in accordance with applicable regulatory requirements.
- Any existing municipal (household) trash, construction debris, and other waste materials would be removed from all project areas and disposed of in accordance with applicable regulations.
- Potentially hazardous wastes generated during project-related construction activities would be disposed of or recycled at appropriate facilities in accordance with applicable regulatory requirements.
- Construction workers would adhere to safety standards promulgated in 29 CFR 17 to protect against workplace hazards. To minimize potential exposure or safety concerns to workers, appropriate personal protection equipment would be worn.
- Signs, barriers, and traffic cones would be installed to direct vehicles and non-construction personnel away from the construction area.

3.8 INFRASTRUCTURE AND UTILITIES

This section describes the baseline conditions for infrastructure and utility resources and assesses the potential impacts of or to infrastructure and utilities that could result from implementing the Proposed Action and No Action Alternative as discussed in Chapter 2. Infrastructure refers to the roadway network and facilities at the Lynden LPOE and the Sumas LPOE project area; utilities refer to the water and sewer, natural gas, electricity, stormwater systems, and communication systems that serve the project area. Transportation facilities are discussed in Section 3.9, Traffic and Transportation.

3.8.1 Affected Environment

3.8.1.1 *Region of Influence*

The ROI includes infrastructure and utilities utilized by the existing Lynden and Sumas LPOEs and any other infrastructure and utilities located within or adjacent to the project area, to include the proposed expansion areas.

3.8.1.2 *Regulatory Setting*

GSA Facilities Standards. GSA's P100 Standards outline criteria for the following: general requirements; urban development and landscape design; architecture and interior design; structural and civil engineering; mechanical engineering; electrical engineering; fire protection; and design standards for specialty spaces. GSA has adopted the technical requirements of the International Codes published by the International Code Council. Facilities built on federal property are exempt from state and local building codes. GSA recognizes that the national building codes are typically the foundation of state and local building codes, and that state and local codes represent important regional interests and conditions. In keeping with federal law (including the Public Buildings Amendments of 1988 and the Federal Urban Land Use Act of 1949), it is GSA's policy to comply with state and local building codes to the maximum extent practicable; however, GSA has the final authority to accept or reject any recommendation from state and/or local government officials.

Section 438 of the EISA. Section 438 of the EISA specifies that federal agencies are required to reduce stormwater runoff from federal development and redevelopment projects to protect water resources. Federal agencies can comply using a variety of stormwater management practices often referred to as "green infrastructure" or "low impact development" practices, including reducing impervious surfaces and using vegetative practices, porous pavements, cisterns, and green roofs.

LEED® Certification. LEED® certification is a third-party green building certification program and the globally recognized standard for the design, construction and operation of high-performance green buildings and neighborhoods. To achieve LEED® certification, a project must earn points by adhering to any combination of credits that address carbon, energy, water, waste, transportation, materials, health, and indoor environmental quality. The number of points a project earns determines what level of certification it would receive. LEED® Gold certification requires at least 60 points in the *LEED® Green Building Rating System for New Construction & Major Renovations, Version 4* (U.S. Green Building Council 2023).

CEQ Standards. CEQ's Guiding Principles for Sustainable Federal Buildings provides guidance for federal building construction to ensure federal buildings (CEQ 2020):

- Employ integrated design principles;
- Optimize energy performance;
- Protect and conserve water;
- Enhance the indoor environment;
- Reduce the environmental impact of materials; and
- Assess and consider building resilience.

3.8.1.3 Existing Conditions

3.8.1.3.1 Lynden LPOE and Project Area

Facilities

The existing facilities located within the Lynden LPOE and maximum proposed limits of disturbance are described in Section 1.2.1.1 and 3.2.1.3 and shown on Figures 1.2-2 and 3.2-1.

Water and Sewer

Domestic and irrigation water utilized by the Lynden LPOE is provided by a private well; however, due to hydrocarbon contamination issues associated with a LUST from the nearby duty-free shop and total coliform levels, bottled water is used at the Lynden LPOE for drinking use (GSA 2023c). The duty-free shop, east of the LPOE, is currently connected to the Delta Water Association's water distribution system but also uses bottled water for drinking due to high nitrate levels present in the well water in the project area. The private farm property to the west and south of the LPOE utilizes a well located outside of the project area for water (GSA 2023c). A total of 62 wells are present in the project area, with 27 of these wells serving as monitoring wells and 32 serving as injection wells used for onsite treatment of contamination. All three drinking water wells at the Lynden LPOE and the project area are inactive (GSA 2023c).

At the existing LPOE, wastewater service is provided by an onsite septic sewage facility consisting of a gravity sanitary sewer connected to a septic tank and leaching field (GSA 2024). The duty-free shop and the private farm property in the project area utilize private septic systems to treat wastewater (GSA 2023c).

Electrical and Natural Gas

Electricity for the Lynden LPOE and surrounding area is provided by Puget Sound Energy (PSE). At the Lynden LPOE, existing electric utility service lines run overhead along the east side of SR 539, where they feed three, pole-mounted, single-phase, transformers serving the facility. An underground service connection extends from the pole transformers to the existing Main Building. Emergency power is provided by a generator and adjacent aboveground diesel tank situated on the west side of the LPOE next to the loading dock.

Natural gas service is available at the Lynden LPOE and in the surrounding area. The LPOE is heated and cooled using natural gas-fired dual heating and cooling air handler units. The gas meter capacity is unknown. Within the project area, a private residence located on the private farm property utilizes natural gas for heating (GSA 2023c).

Stormwater Drainage

At the Lynden LPOE, an oil water separator is used to treat onsite stormwater prior to discharge to a stormwater management retention pond located to the northwest of the Main Building. Stormwater inlets at the LPOE drain to the stormwater management pond. Within the surrounding project area, multiple stormwater inlets observed on the duty-free store property discharge to the municipal stormwater sewer. One inactive animal waste lagoon west of the storage barns on privately owned farm property currently serves as a stormwater retention pond. No signs of spills, staining, or stressed vegetation were present at the retention ponds or outlet drains (GSA 2023c).

Communications Systems

Telephone service to the Lynden LPOE and properties within the project area is provided by public utilities (GSA 2023c). Starlink is currently utilized by the Lynden LPOE for internet services (GSA 2024).

Miscellaneous Utilities

The Lynden LPOE contains one 1,000-gallon AST and one 10-gallon AST day tank. At properties within the project area, an empty 500-gallon AST that is no longer in use is located on the privately owned farm property.

3.8.1.3.2 Sumas LPOE and Project Area

Facilities

The existing facilities located within the Sumas LPOE and maximum proposed limits of disturbance are described in Sections 1.2.1.2 and 3.2.1.3 and shown on Figures 1.2-3 and 3.2-2.

Water and Sewer

Potable water at the Sumas LPOE and properties within the project area is provided by municipal water from the city of Sumas (GSA 2023d). At the existing LPOE, municipal water supplies fire protection and domestic water from the west of the site through an underground utility vault situated north of a decommissioned incinerator (GSA 2024). Monitoring wells are in place at various properties throughout the project area (GSA 2023d).

The Sumas LPOE and properties within the project area are connected to the city's municipal sewer systems (GSA 2023d). At the existing LPOE, a gravity 6-inch polyvinyl chloride pipe connects to the public street wastewater collection main and services the Main Building. A manure control valve is located at the Animal and Plant Health Inspection Service (APHIS) agriculture quarantine inspection canopy (GSA 2024).

Electrical and Natural Gas

Electricity for the Sumas LPOE and surrounding area is provided by the city of Sumas, which purchases it from the Bonneville Power Administration (City of Sumas 2016; GSA 2023d). At the Sumas LPOE, existing electric utility service lines run overhead along the railroad tracks southwest of the facility, parallel to the existing storage and housing units, and underground service connections extend to the existing Main Building, storage, and housing units. Emergency power is supplied by a generator housed in the commercial warehouse near the south end of the Main Building and has an underground diesel tank (GSA 2024).

Natural gas is provided to the city of Sumas by the Cascade Natural Gas Corporation (City of Sumas 2016). The Sumas LPOE and properties within the project area utilize natural gas for heating (GSA 2023d). At the existing LPOE, the natural gas main underground pipe splits off to a natural gas meter at the north wall of the incinerator building, and another branch continues to the Main Building (GSA 2024).

Stormwater Drainage

The Sumas LPOE and properties within the project area are connected to the city of Sumas storm sewer system. Stormwater inlets are located at the Sumas LPOE and on all properties within the project area (GSA 2023d).

Communications Systems

Telecommunication service, which includes telephone and internet service, at the Sumas LPOE and properties within the project area is provided by Frontier Communications (City of Sumas 2016).

Miscellaneous Utilities

A 50-gallon AST and a 1,200-gallon UST used for petroleum fuel storage is present at the Sumas LPOE, while at properties within the project area, a 30,000-gallon UST used for petroleum fuel storage is present at the filling station (GSA 2023d).

3.8.2 Environmental Consequences

3.8.2.1 Methodology

To evaluate potential impacts on infrastructure and utilities, GSA reviewed the project alternatives to determine whether any activities have the potential to cause the following within the ROI:

- Alteration of intended use and/or placement of facilities;
- Disruption to utility operations during construction activities; or
- An increase or decrease in demand for utility services during construction or operations.

A major adverse impact to infrastructure and utilities would occur if the project alternative would result in:

- Substantial damage to facilities outside the project area;
- Long-term disruption of utility operations;
- Negative effect on local and regional utility supplier's ability to meet customer demands; or
- A need for substantial public utility system updates.

3.8.2.2 Lynden LPOE Alternatives

3.8.2.2.1 Lynden LPOE Alternative 1 – No Action Alternative

Lynden LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impact on infrastructure and utilities. Under Lynden LPOE Alternative 1, GSA would not modernize or expand the Lynden LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure or changes to onsite operations would occur. Therefore, the LPOE would not benefit from updated facilities and infrastructure with LEED® certification and other sustainable standards or from installation of renewable energy sources.

3.8.2.2.2 Lynden LPOE Alternative 2 – East-West Oriented LPOE Expansion

Construction

Under Lynden LPOE Alternative 2, modernization and expansion of the Lynden LPOE would result in direct, short-term, minor, site-specific, adverse impacts on infrastructure during construction to meet the LPOE's design and operational needs. Existing infrastructure would be demolished, as necessary, and new infrastructure would be constructed to meet GSA and CBP requirements.

Construction at the Lynden LPOE would have direct, short-term, negligible, local, adverse impacts on public utilities from increasing demand on services. Water usage would be required for construction-related activities such as dust suppression, soil compaction, concrete work, equipment washing, and potable uses for construction workers, resulting in an increased demand on water utilities. It is assumed all water for construction would be trucked in from local sources with sufficient capacity. There would also be a slight increase in demand for wastewater services from the hauling of portable toilets.

Construction at the Lynden LPOE (including activities such as excavation, drilling, and other above- and below-groundwork) would have the potential to cause direct, short-term, minor, site-specific, adverse impacts to utility services. The potential relocation and reconnection of utilities could require temporary or short-term shut offs. Existing utility maps would be reviewed and, where needed, utility companies would be contacted to identify any locations where construction activities have the potential to affect utility lines. Potential impacts would be avoided by coordinating with responsible utility providers in advance of such activities and by either implementing measures to protect existing utility lines or by arranging for their temporary or permanent relocation. Construction of new utilities would be conducted in accordance with

applicable local and state regulations. New electrical services would be established in conjunction with the local utility company PSE. Fiberoptic upgrades may be required depending on the ability of the current telecommunications provider to service the modernized and expanded LPOE. All communication upgrades would be contained within the project boundary, as fiberoptics are currently located on the DFA property.

Operations

Lynden LPOE Alternative 2 would result in direct, long-term, major, site-specific, beneficial impacts on infrastructure at the Lynden LPOE. Newly constructed facilities would provide new infrastructure built and maintained to GSA standards that would support updated operational needs for CBP. The new facilities and updated layout, improved inspection lanes, and parking lot designs would improve the efficiency of the processing of pedestrians, COVs, and POVs, and would relieve traffic congestion during periods of high traffic volumes.

New buildings would be designed to comply with current building codes and P100 Standards and would have LEED® Gold certification at a minimum. Energy and water efficiency measures would be incorporated into the design as part of LEED® Gold certification, which would minimize impacts from increased utility demands as a result of the expanded facility size. The extent of impacts on utilities would depend on overall usage and extent of efficiency improvements, but operations of the Lynden LPOE are not anticipated to noticeably affect the ability of utility providers or onsite systems to provide service.

Onsite utilities would be upgraded or replaced with newer, more modernized systems, resulting in direct, long-term, major, site-specific, beneficial impacts on private utilities. There would be direct, long-term, negligible, local, adverse impacts to public electricity and telecommunication utilities from the operation of the modernized and expanded LPOE resulting from the increase in square footage of the buildings. The increased demand for most of these utility services from larger facilities would be offset by a more efficient, sustainable facility design. A new service transformer and new propane generators would be potentially installed to meet the estimated electricity demand and provide backup power for the entire site. GSA would provide a new source of potable and non-potable water for the LPOE. It has not been determined if domestic water would be utilized from a site well and storage or if a new utility service would be extended from the south. Current potable water supply sources being considered for the Lynden LPOE expansion include connecting to the Delta Water Association via the existing tie-in location at the DFA property and local wells on private farm properties located south and west of the LPOE. Potable water supply sources may include potential onsite treatment to address existing nitrate contamination of underlying aquifers. The feasibility of connections to these water supply sources is dependent upon sufficient excess capacity being available to meet expected future water demands at the expanded LPOE. Upgrades to water service would be contained within the project boundary. The water supply for fire protection would most likely be supplied by a water storage tank (GSA 2024). GSA is evaluating the use of renewable energy technologies, which would be determined during design.

3.8.2.2.3 Lynden LPOE Alternative 3 – North-South Oriented LPOE Expansion

Construction

Lynden LPOE Alternative 3 construction and demolition activities would have direct, short-term, negligible to minor, site-specific and local, adverse impacts to infrastructure and utilities similar to Lynden LPOE Alternative 2 as described above in Section 3.8.2.2.2 under *Construction*. However, impacts to infrastructure would be slightly greater under Lynden LPOE Alternative 3 as there would be additional infrastructure in the expansion area that would be demolished during construction.

Operations

Lynden LPOE Alternative 3 operations would have direct, long-term, major, site-specific, beneficial impacts to the LPOE's infrastructure and utilities and direct, long-term, negligible, local, adverse, local impacts to public utilities similar to Lynden LPOE Alternative 2 as described above in Section 3.8.2.2.2 under *Operations*.

3.8.2.3 Sumas LPOE Alternatives

3.8.2.3.1 Sumas LPOE Alternative 1 – No Action Alternative

Sumas LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impact on infrastructure and utilities. Under Sumas LPOE Alternative 1, GSA would not modernize or expand the Sumas LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure or changes to onsite operations would occur. Therefore, the LPOE would not benefit from updated facilities and infrastructure with LEED® certification and other sustainable standards or from installation of renewable energy sources.

3.8.2.3.2 Sumas LPOE Alternative 2 – Feasibility Study Preferred Alternative

Construction

Under Sumas LPOE Alternative 2, modernization and expansion of the Sumas LPOE would result in direct, short-term, minor, site-specific, adverse impacts on infrastructure during construction, similar to as described for Lynden LPOE Alternative 2 in Section 3.8.2.2.2 under *Construction*. Electrical and fiberoptic upgrades that would occur at the Lynden LPOE are not expected to be required at the Sumas LPOE.

Operations

Sumas LPOE Alternative 2 would result in direct, long-term, major, site-specific, beneficial impacts on infrastructure at the Sumas LPOE, similar to as described for the Lynden LPOE Alternative 2 in Section 3.8.2.2.2 under *Operations*.

Onsite utilities would be upgraded or replaced with newer, more modernized systems, resulting in direct, long-term, major, site-specific, beneficial impacts on utilities. There would be direct, long-term, negligible, adverse impacts locally to utility providers from the operation of the modernized and expanded LPOE resulting from the increase in square footage of the buildings. The increased demand for most of these utility services from larger facilities would be offset by a more-efficient, sustainable facility design. Additional stormwater detention areas located throughout the site would capture water as close to the source as possible, decreasing the demand on the city of Sumas' storm sewer system. A new service transformer and new propane generators would be potentially installed to meet the estimated electricity demand and provide backup power for the entire site. Water and wastewater services would continue to be provided by municipal water and sewer systems from the city of Sumas. Water quality has been identified as a concern and treatment is recommended if non-utility water service is utilized. GSA is evaluating the use of renewable energy technologies, which would be determined during design.

3.8.2.3.3 Sumas LPOE Alternative 3 – Commercial Inspection West

Construction

Sumas LPOE Alternative 3 construction and demolition activities would have direct, short-term, negligible to minor, site-specific and local, adverse impacts to infrastructure and utilities similar to Sumas LPOE Alternative 2 as described above in Section 3.8.2.3.2 under *Construction*.

Operations

Sumas LPOE Alternative 3 operations would have direct, long-term, major, site-specific, beneficial impacts to the LPOE's infrastructure and utilities and direct, long-term, negligible, adverse impacts locally to public utilities similar to Sumas LPOE Alternative 2 as described above in Section 3.8.2.3.2 under *Operations*.

3.8.2.3.4 Sumas LPOE Alternative 4 – Multi-Story Construction LPOE Expansion

Construction

Sumas LPOE Alternative 4 construction and demolition activities would have direct, short-term, negligible to minor, site-specific and local, adverse impacts to infrastructure and utilities similar to Sumas LPOE Alternative 2 as described above in Section 3.8.2.3.2 under *Construction*.

Operations

Sumas LPOE Alternative 4 operations would have direct, long-term, major, site-specific, beneficial impacts to the LPOE's infrastructure and utilities and direct, long-term, negligible, adverse impacts locally to public utilities similar to Sumas LPOE Alternative 2 as described above in Section 3.8.2.3.2 under *Operations*.

3.8.2.4 Construction Sequencing Options

Impacts to infrastructure and utilities would not change under the implementation of either construction sequencing option.

3.8.2.5 Lynden and Sumas LPOE Combined Alternative Implementation

Potential infrastructure and utilities impacts from construction activities for all Lynden and Sumas LPOE action alternatives would be primarily local as described in Sections 3.7.2.2 through 3.7.2.4. Therefore, considering the distance between the two LPOEs, the combined impacts during construction of any combination of Lynden and Sumas LPOE action alternatives would not result in any greater level of impacts to infrastructure and utilities beyond those discussed in Sections 3.7.2.2. Operations of any combination of Lynden and Sumas LPOE action alternatives would not be anticipated to noticeably affect the ability of utility providers or onsite systems to provide service and would be similar to as described in Section 3.7.2.3. If Lynden LPOE Alternative 1 and Sumas LPOE Alternative 1 (No Action Alternatives) are both selected there would be no direct or indirect, short- or long-term, local or regional, adverse impact on infrastructure and utilities.

3.8.2.6 Impacts Reduction Measures

Impacts on infrastructure and utilities would be reduced through the following:

- Coordinating with utility providers in advance of such activities to determine the best course of action to avoid or minimize impacts, either by implementing measures to protect utility lines or by arranging for their temporary or permanent relocation.

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3.9 TRAFFIC AND TRANSPORTATION

This section describes the baseline conditions and potential impacts for traffic and transportation resources in the ROI that could result from implementing the Proposed Action and No Action Alternative as discussed in Chapter 2. Traffic refers to vehicular traffic volumes on key roadways serving the ROI as well as use by bicyclists and pedestrians on established pedestrian pathways.

3.9.1 Affected Environment

3.9.1.1 Region of Influence

SR 539 (Guide Meridian Road) is the singular route into the Lynden LPOE from the south (U.S. side). This highway becomes Canada Route 13 (264 Street Diversion) north of the border. The ROI includes analysis of commercial and non-commercial traffic impacts within the limit of disturbance shown on Figures 2.3-1 and 2.3-2 in Section 2.3, Proposed Alternatives.

SR 9 (Cherry Street) is the singular route into the Sumas LPOE from the south. This highway becomes Canada Route 11 (Sumas Way) north of the border. The ROI includes analysis of commercial and non-commercial traffic impacts within the limit of disturbance shown on Figure 2.3-3 in Chapter 2.

3.9.1.2 Regulatory Setting

WSDOT is responsible for planning, designing, constructing, operating, and maintaining all state-owned roadways, which include interstate highways, U.S. highways, and state highways. Any construction work done on U.S., state, and county highways would require coordination with WSDOT and Whatcom County. GSA has no jurisdiction over any roadways outside of the LPOEs' boundaries. All roadways north of the border are exclusively under the control of Canadian authorities and are not discussed in this EIS.

WSDOT sets standard levels of service for state highways of statewide significance (HSS) based on RCW 47.06.140(2) (RCW 2024b; WSDOT 2016). Levels of service can be thought of like a grading system in school where 'A' is the highest possible standard and indicates completely free flow of traffic where there is no influence from other vehicles. Level of service 'C' indicates a stable flow state where other vehicles are noticeable, and traffic is still moving. Level of service 'F' indicates a breakdown of traffic flow and warrants mitigation.

3.9.1.3 Existing Conditions

3.9.1.3.1 Lynden LPOE

SR 539 travels northward through the Lynden LPOE then continues into Canada. It is primarily a two-lane highway, functionally classified as a Rural – Other Principal Arterial according to WSDOT's Functional Classification Map (WSDOT 2024a). The route connects the LPOE with the city of Lynden approximately five miles to the south and Aldergrove, BC eight miles to the north. WSDOT's Traffic Mapping Application shows the 2022 average annual daily traffic (AADT) on SR 539, in both directions, just south of the LPOE is 1,659 vehicles per day (vpd) and the hourly volume is 199 vehicles per hour (vph) based on a K value of 12 percent (WSDOT 2024b). K value is the portion of the AADT that occurs in one hour. The AADT was reduced to under 1,000 vpd during the COVID-19 pandemic and has not recovered to pre-pandemic (2018 and 2019) numbers of around 5,400 vpd (WSDOT 2024b). SR 539 is considered a HSS and has been assigned a standard level of service of C by WSDOT (WSDOT 2024c). The posted speed limit on SR 539 into the Lynden LPOE is 50 mph (WSDOT 2024c). There are no pedestrian facilities on existing SR 539 and pedestrian infrastructure within the existing LPOE is limited.

U.S. Department of Transportation (U.S. DOT) Bureau of Transportation Statistics (BTS) Border Crossing Data shows that in 2023, the Lynden LPOE processed 775 pedestrians, over 433,000 POVs, and nearly 46,000 COVs, over the entire year (U.S. DOT BTS 2024). POV crossings increased substantially from around 255,000 in 2022 while the other categories showed a slight decrease with 996 pedestrians and nearly

48,000 COVs in 2022. Crossings were substantially higher prior to the COVID-19 pandemic with 1,200 pedestrians and over 580,000 POVs passing through the Lynden LPOE in 2018. COV crossings have held steady with around 45,000 COVs in 2018.

No designated U.S. bicycle routes pass through the Lynden LPOE (WSDOT 2024d). U.S. Bike Route 95 passes through the city of Lynden but does not extend northward from the city or into the port.

3.9.1.3.2 Sumas LPOE

SR 9 travels northward through the city of Sumas and the Sumas LPOE before continuing into Canada. It is primarily a two-lane highway, functionally classified as a Rural – Other Principal Arterial (WSDOT 2024a). The route connects the city of Sumas and the LPOE with Huntingdon, BC, just north of the border, and with Abbotsford, BC, three miles to the north. WSDOT’s Traffic Mapping Application shows the 2022 average AADT on SR 9 just south of the LPOE is 2,435 vpd with an hourly volume of 219 vph based on a K value of 9 percent (WSDOT 2024b). The AADT was reduced to 1,200 vpd during the COVID-19 pandemic and has not recovered to pre-pandemic (2018 and 2019) numbers of around 6,800 vpd (WSDOT 2024b). SR 9 is considered a HSS and has been assigned a standard level of service of C by WSDOT (WSDOT 2024c). The posted speed limit on SR 9 into the Sumas LPOE is 25 mph (WSDOT 2024e). There are sidewalks along SR 9 into the LPOE as well as sidewalks and designated pedestrian crosswalks within the LPOE. Northbound commercial traffic currently uses SR 9 to Garfield Street to Sumas Avenue into the Canadian port of entry.

U.S. DOT BTS Border Crossing Data shows that in 2023, the Sumas LPOE processed over 22,000 pedestrians, which is the third highest pedestrian crossing on the northern border, behind only Pacific Highway and Niagara LPOEs. The 2022 data shows Sumas LPOE with the second highest pedestrian crossing, behind only Niagara LPOE; however, no data is provided for pedestrians at Pacific Highway from 2018 to 2022. Over 550,000 POV and nearly 143,000 COV crossings were recorded at the Sumas LPOE in 2023. As with the Lynden LPOE, the pedestrian and POV counts show a sharp decrease from pre-COVID-19, with nearly 50,000 pedestrians and over 920,000 POVs in 2018 at the Sumas LPOE. Similar to the Lynden LPOE, COV crossings have held generally steady with approximately 150,000 COV crossings in 2018 at the Sumas LPOE.

The Sumas LPOE is also a border crossing for trains with the BNSF Railway passing alongside the western side of the port. BNSF Railway crosses the border at two points in Washington State (Pacific Highway and Sumas LPOEs). In 2023, 235 trains crossed the border at the Sumas LPOE, which is similar to previous years including before the COVID-19 pandemic (U.S. DOT BTS 2024).

U.S. Bicycle Route 87 follows SR 9 into the city of Sumas and the Sumas LPOE (WSDOT 2024d). No bicycle count data is available from U.S. DOT BTS. It is assumed that bicycles through the port are counted as pedestrians.

3.9.2 Environmental Consequences

3.9.2.1 Methodology

To evaluate potential impacts on traffic and transportation, GSA reviewed the project alternatives to determine whether any activities have the potential to cause the following within the ROI:

- Change in vehicular traffic congestion, delays, or safety risks on roadways;
- Change in the line of sight on roadways;
- Change in the operating capacity of the LPOE; and
- Change in pedestrian and bicycle activity.

A major adverse impact to transportation resources would occur if the Proposed Action would result in:

- A temporary (during construction) or permanent (post-construction) increase in traffic volumes that would exceed the capacity of key roadways or intersections within the study area (i.e., significant degradation of level of service);
- A post-construction traffic volume increase resulting in deficient operations and reduced capacity at either LPOE;
- A post-construction traffic volume increase resulting in traffic hazards to workers and users at either LPOE;
- A disruption or interference with train schedules or capacity at the Sumas LPOE; or
- A permanent disruption of pedestrian and bicycle routes.

The U.S. DOT, Federal Highway Administration (FHWA), Simplified Highway Capacity Calculation Method for Highway Performance Monitoring System, October 2017, was used to estimate capacity and level of service on SR 539 (Lynden LPOE) and SR 9 (Sumas LPOE) under potential construction sequencing scenarios and in 2036, approximately 10 years after construction (FHWA 2017). Capacity on a two-lane highway is approximately 1,490 vph with no traffic control (i.e., stop signs) and between 1,200 and 1,500 vph with stop control (FHWA 2017 pp. 6 and 7). For this analysis, 1,200 vph was used as the maximum capacity on both SRs 539 and 9 for comparison purposes as it is the most conservative value.

Capacity in vph was compared to actual and projected (during construction and 10-years after construction) vph to determine whether roadway capacity would be expected to be approached or exceeded as a result of the Proposed Action and normal growth. A normal growth rate of two percent per year was applied to project traffic hourly volume in future years (NACTO 2024). Projected AADTs during construction on SR 539 (Lynden LPOE) and SR 9 (Sumas LPOE) were adjusted according to the construction sequencing options described in Section 2.3.4.

The existing and projected AADTs on both roadways were then compared to maximum service volumes by level of service for principal arterials as documented in Tables 16 and 17 of Appendix A of FHWA's Simplified Highway Capacity Calculation Method for Highway Performance Monitoring System, October 2017, document (FHWA 2017). This analysis was completed to determine whether the existing or projected levels of service on SRs 539 and 9 would exceed the WSDOT Standard level of service for these routes, which is level of service C as documented in Section 3.9.1.2 (WSDOT 2016).

The following analyses are based on normal conditions and actual traffic data provided by WSDOT. The analysis does not consider the impacts of unusual or occasional conditions that may result from holiday travel, unusual LPOE processing delays, or other non-typical situations. Highways are designed and analyzed for normal conditions as designing and analyzing for non-typical situations would result in facilities that were over-designed and constructed to extreme standards that would not be fiscally responsible.

3.9.2.2 Lynden LPOE Alternatives

3.9.2.2.1 Lynden LPOE Alternative 1 – No Action Alternative

Lynden LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impact on traffic and transportation. Under Lynden LPOE Alternative 1, GSA would not modernize or expand the Lynden LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure or changes to onsite operations would occur. As noted, the AADT on SR 539 under the existing (2022) condition is 1,659 vpd and the hourly volume is 199 vph. Capacity on a two-lane highway, such as SR 539, is 1,200 vph. Therefore, the existing condition is well under the anticipated capacity and no existing capacity issues exist. Note that this does not consider the impact of LPOE processing delays; rather, the analysis evaluates the capacity of SR 539, which is adequate for the existing traffic volumes.

FHWA provides level of service maximum volumes based on facility function or based on speed limits, truck percentage, and terrain. The maximum volume is the roadway AADT. For SR 539 near the Lynden LPOE the speed limit is 50 mph, truck percentage is 11 percent, and the terrain is rolling. Table 3.9-1 presents the level of service maximum volumes based on the FHWA criteria that best match the existing conditions.

Table 3.9-1. FHWA Level of Service Maximum Volume

	Level of Service (vpd) ^a		
	B	C	D
Facility Function (Principal Arterial)	7,600	11,100	12,400
50 mph Speed Limit, 10% Trucks, and rolling terrain ^b	8,100	13,900	19,000

^a Source: FHWA 2017, Tables 16 and 17 in Appendix A (the tables do not provide maximum volumes for level of service A).

^b 10% is the highest for truck percentage provided in the referenced source document.

Based on the values in Table 3.9-1, SR 539, with a 1,659 vph AADT operates well under level of service B and is likely at a level of service A, best possible conditions, during most periods of the day and week. WSDOT’s standard level of service for SR 539 is C; therefore, the roadway is currently operating very efficiently with no capacity concerns.

The existing LPOE experiences traffic back-ups at the inbound inspection areas during periods of heavier traffic or when multiple commercial vehicles are entering the port. There is currently limited southbound queuing area at the port and limited area for trucks to park when additional inspections are required. Lynden LPOE Alternative 1 would do nothing to address this issue and related safety, security and congestions issues would remain.

3.9.2.2.2 Lynden LPOE Alternative 2 – East-West Oriented LPOE Expansion

Construction

Construction impacts related to Lynden LPOE Alternative 2 are discussed in Section 3.9.2.4.

Operations

Lynden LPOE Alternative 2 would have a direct, long-term, local, beneficial impact on safety, security and congestion at the LPOE. Issues related to queuing, safety and security would be addressed to the extent possible with the modernization and expansion. No long-term traffic volume impacts on SR 539 would occur. Under Lynden LPOE Alternative 2, traffic volumes on SR 539 would be anticipated to increase due to normal growth and would not be related to the LPOE modernization and expansion project. The proposed improvements to the LPOE are not anticipated to result in any diversions or shifting of traffic from other LPOEs to Lynden LPOE after construction. The Lynden LPOE would continue to operate as a 16-hour per day facility. It would be anticipated that 20 additional people may be employed at the LPOE after construction. Normal (2 percent) traffic growth from 2022 to 2036 combined with 20 additional cars for the increase in employees would result in a 2036 AADT of approximately 2,215 vpd. Compared to the level of service maximum volumes in Table 3.9-1, it would be anticipated that SR 539 would continue to operate at level of service A or B after construction. Even with a more conservative 5 percent growth rate, the future AADT would be 3,324 vpd, which is still well below the maximum service volume for level of service B. The anticipated level of service would be better than the standard level of service C set by WSDOT. No traffic volume capacity or level of service impacts would be anticipated from Lynden LPOE Alternative 2. The design of the alternative would ensure that pedestrian and bicycle access is maintained through the modernized and expanded LPOE and no impacts to pedestrian or bicycle routes would occur after construction.

3.9.2.2.3 Lynden LPOE Alternative 3 – North-South Oriented LPOE Expansion

Construction

Construction impacts related to Lynden LPOE Alternative 3 are discussed in Section 3.9.2.4.

Operations

Lynden LPOE Alternative 3 would have a long-term beneficial impact on safety, security and congestion at the LPOE and no long-term traffic volume impacts on SR 539 similar to Lynden LPOE Alternative 2 as described above in Section 3.9.2.2.2 under *Operations*.

3.9.2.3 Sumas LPOE Alternatives

3.9.2.3.1 Sumas LPOE Alternative 1 – No Action Alternative

Sumas LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impact on infrastructure and utilities. Under Sumas LPOE Alternative 1, GSA would not modernize or expand the Sumas LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure or changes to onsite operations would occur. As noted, the AADT on SR 9 under the existing (2022) condition is 2,435 vpd and the hourly volume is 219 vph. The capacity on a two-lane highway, such as SR 9, is 1,200 vph. Therefore, the existing condition is well under the anticipated capacity and no existing capacity issues exist. Note that this does not consider the impact of LPOE processing delays. The analysis is simply evaluating the capacity of SR 9, which is adequate for the existing traffic volumes.

FHWA provides level of service maximum volumes based on facility function or based on speed limits, truck percentage, and terrain. The maximum volume is the roadway AADT. For the SR 9 near the Sumas LPOE the speed limit is 25 mph, truck percentage is 11 percent, and the terrain is rolling. Table 3.9-2 presents the level of service maximum volumes based on the FHWA criteria that best match the existing conditions.

Table 3.9-2. FHWA Level of Service Maximum Volume

	Level of Service (vpd) ^a		
	B	C	D
Facility Function (Principal Arterial)	7,600	11,100	12,400
45 mph ^b Speed Limit, 10% Trucks, and rolling terrain	3,200	8,100	13,900

^a Source: FHWA 2017, Tables 16 and 17 in Appendix A (the tables do not provide maximum volumes for level of service A).

^b 45 mph is the lowest speed limit and 10% is the highest for truck percentage provided in the referenced source document.

Based on the values in Table 3.9-2, SR 9, with a 2,435 vpd AADT operates well under level of service B and is likely at a level of service A, best possible conditions, during most periods of the day and week. WSDOT’s standard level of service for SR 9 is C; therefore, the roadway is currently operating very efficiently with no capacity concerns.

The existing LPOE experiences traffic back-ups at the inbound inspection areas during periods of heavier traffic or when multiple commercial vehicles are entering the port. There is currently limited southbound queuing area at the port and limited area for trucks to park when additional inspections are required. At times southbound trucks are temporarily held on Railroad Avenue south of the inspection area and outside of the port property creating a security issue. The existing port has no dedicated northbound inspection area for scheduled inspections of commercial vehicles headed into Canada. Currently these inspections occur in a parking lot in an area that is obstructed by other buildings of view from the Main Port Building. This creates a safety issue for inspection officers who cannot be monitored from the Main Port Building. In addition, a high volume of pedestrians passes through the Sumas LPOE. The existing pedestrian routing directs pedestrians into and through inbound inspection lanes and there is limited room inside the Main Port

Building for processing of pedestrians. Sumas LPOE Alternative 1 would do nothing to address this issue and related safety, security and congestions issues would remain.

3.9.2.3.2 Sumas LPOE Alternative 2 – Feasibility Study Preferred Alternative

Construction

Construction impacts related to Sumas LPOE Alternative 2 are discussed in Section 3.9.2.4.

Operations

Sumas LPOE Alternative 2 would have a long-term beneficial impact on safety, security and congestion at the LPOE. Issues related to queuing, safety and security would be addressed, to the extent possible, with the modernization and expansion. In addition, the updated pedestrian routing would provide more space for processing within the Main Port Building and would provide an improved pedestrian route through the LPOE. No long-term traffic volume impacts on SR 9 would result. Under Sumas LPOE Alternative 2 traffic volumes on SR 9 would be anticipated to increase due to normal growth and not due to the LPOE modernization and expansion project. The proposed improvements to the LPOE are not anticipated to result in any diversions or shifting of traffic from other LPOEs to Sumas LPOE after construction. It would be anticipated that 26 additional people may be employed at the LPOE after construction. Normal (2 percent) traffic growth from 2022 to 2036 combined with 26 additional cars for the increase in employees would result in a 2036 AADT of approximately 3,247 vpd. Compared to the level of service maximum volumes in Table 3.9-2, it would be anticipated that SR 9 would continue to operate at level of service B or better after construction. Even with a more conservative 5 percent growth rate, the future AADT would be 4,873 vpd, which is still well below the maximum service volume for level of service C. The roadway would still meet the WSDOT standard level of service C even with a conservative 5 percent growth rate. Under normal traffic growth conditions, the anticipated level of service would be better than the standard set by WSDOT. No traffic volume capacity or level of service impacts would be anticipated from Sumas LPOE Alternative 2. The design of the alternative would ensure that pedestrian and bicycle access is maintained through the modernized and expanded LPOE and no impacts to pedestrian or bicycle routes would occur after construction.

3.9.2.3.3 Sumas LPOE Alternative 3 – Commercial Inspection West

Construction

Construction impacts related to Sumas LPOE Alternative 3 are discussed in Section 3.9.2.4.

Operations

Sumas LPOE Alternative 3 would have a long-term beneficial impact on safety, security, and congestion at the LPOE and no long-term traffic volume impacts on SR 9, similar to Sumas LPOE Alternative 2 as described above in Section 3.9.2.3.2 in *Operations*.

3.9.2.3.4 Sumas LPOE Alternative 4 – Multi-Story Construction LPOE Expansion

Construction

Construction impacts related to Sumas LPOE Alternative 4 are discussed in Section 3.9.2.4.

Operations

Sumas LPOE Alternative 4 would have a long-term beneficial impact on safety, security, and congestion at the LPOE and no long-term traffic volume impacts on SR 9, similar to Sumas LPOE Alternative 2 as described above in Section 3.9.2.3.2 under *Operations*.

3.9.2.4 Construction Sequencing Options

Short-term, negligible to minor, adverse traffic impacts would result from construction. Construction-related traffic would be generated by 10 to 15 workers per day for much of construction with a peak of 50 to 70 workers. When compared to existing traffic volumes, a small number of vehicles, 10 to maybe as many as 60 vehicles during peak construction, would be generated by construction activities. Short term increases in construction traffic would be noticeable on SR 539 and SR 9; however, these increases would be minor and would not cause any congestion or other traffic related issues, regardless of sequencing option selected.

Under the Concurrent Construction Option both ports would remain open during construction and traffic would continue to move through the ports. It is likely that some traffic would choose to divert temporarily to other nearby ports (Pacific Highway or Peace Arch). After construction, traffic would be anticipated to return to the normal conditions. It would also be anticipated that, if both ports were constructed concurrently, some additional traffic delays would occur due to reduced operations at the ports resulting from constrictions imposed by construction activities. This construction-related traffic impact would be minimized during construction using mitigation measures as discussed in Section 3.9.2.6.

For the Sequential Option, the Lynden LPOE would be closed during construction requiring all traffic from the port to use an alternate location. If all Lynden LPOE traffic diverted to the Sumas LPOE that would result in a temporary AADT at Sumas LPOE of around 4,094 vpd (see Table 3.9-3) or an hourly volume of approximately 368 vph (the AADT multiplied by the 9 percent K value mentioned earlier). This hourly volume would be well below the expected 1,200 vph capacity of SR 9. Based on Table 3.9-2, the level of service would still be C or better and would meet WSDOT level of service standard. Once the Lynden LPOE is constructed and reopened, COVs from the Sumas LPOE would be diverted while the Sumas LPOE was constructed. It would be anticipated that most COVs would utilize the Lynden LPOE. POVs, pedestrian, and bicycle traffic would be maintained through the Sumas LPOE during construction. Some temporary detours may be required within and adjacent to the project area but would be appropriately signed and implemented during construction to minimize or eliminate any local access issues during construction activities. This would result in anticipated AADTs on SR 539 (Lynden LPOE) of 1,975 vpd and on SR 9 (Sumas LPOE) of 2,119 vpd (see Table 3.9-3).

Table 3.9-3. Sequential Construction Anticipated Change in Traffic Volume

State Route	Existing (2022) AADT (vpd)	AADT during construction while Lynden LPOE closed (vpd)	COVs (13 percent trucks on SR 9 – vpd)	AADT during construction after Lynden LPOE reopened (vpd)
SR 539 (Lynden LPOE)	1,659	0	N/A	1,975
SR 9 (Sumas LPOE)	2,435	4,094	316 ¹	2,119

¹ Number of COVs diverted from Sumas LPOE during construction.

As shown in Table 3.9-3, the AADT during construction of Sumas LPOE would still be well below the FHWA level of service maximum volumes for level of service C shown in Table 3.9-2 and would still meet the WSDOT level of service standard. The hourly volumes on SR 539 would be 237 vph based on the previously provided 12 percent K value and on SR 9 it would be 191 vph using the 9 percent K value. Both hourly volumes are well below the capacity of 1,200 vph. No construction impacts would be anticipated on either SRs 539 or 9 during construction based on traffic volumes. It is noted that SR 546 connects SR 539 and SR 9 between the two LPOEs. SR 546 could see an increase in traffic under the Sequential Option when the Lynden LPOE is closed to traffic and while commercial traffic at Sumas LPOE is diverted. The current AADT on SR 546 is around 6,000 vpd. With all traffic diverted from Lynden, and assuming worst case where all traffic from Lynden LPOE chooses to use Sumas LPOE while Lynden LPOE is closed, this could result in a worst-case traffic on SR 546 of around 7,600 vpd. Based on Table 3.9-1, this would still

be a level of service of B. Once Lynden LPOE reopened, with Sumas LPOE COV traffic diverted, SR 546 could see an AADT of around 6,300 vpd. As shown in Table 3-9.1, this is still level of service B or better. No traffic impacts on SR 546 would be anticipated. Delays resulting from construction activities and reduced capacity at the ports could still occur and would be mitigated and reduced to the extent possible as discussed in Section 3.9.2.6.

3.9.2.5 Lynden and Sumas LPOE Combined Alternative Implementation

Construction activities and operations would not have a major impact on traffic and transportation regardless of which combination of Lynden and Sumas LPOE action alternatives are selected. Potential traffic and transportation impacts from construction activities for all Lynden and Sumas LPOE action alternatives would be short-term and primarily local. Therefore, considering the distance between the two LPOEs, impacts to traffic and transportation from the selection of any combination of Lynden LPOE and Sumas LPOE action alternatives would not differ from those described under Construction for each alternative (see Sections 3.9.2.2 and 3.9.2.3). Operations of all Lynden and Sumas LPOE action alternatives would not differ from those described under Operations for each alternative (see Sections 3.9.2.2 and 3.9.2.3). If Lynden LPOE Alternative 1 and Sumas LPOE Alternative 1 (No Action Alternatives) are both selected there would be no direct or indirect, short- or long-term, local or regional, adverse impact on traffic and transportation.

3.9.2.6 Impacts Reduction Measures

Measures that would mitigate the impacts associated with traffic during construction include:

- Minimize construction truck movement during peak traffic hours;
- Place construction staging areas where they would least interfere with local traffic and parking;
- Minimize impacts to pedestrians during construction activities by providing appropriate information and signage to pedestrians and motorists who are traveling through the area; and
- Develop a construction traffic and parking management plan, if required, that minimizes traffic interference and maintains traffic flow and safety.

3.10 NOISE AND VIBRATION

This section describes the baseline conditions for noise levels and vibrations within the project area to affect, or be affected by, implementing the Proposed Action and No Action Alternative as discussed in Chapter 2. The human ear can hear a wide range of sound levels, and as a result, noise levels are described on a logarithmic scale and are quantified in terms of decibels (dB), a unit that is typically adjusted to dBA. dBA is the dB on an A-weighted scale to account for the sensitivity of the human ear. Sounds at or below 70 dBA are generally considered safe (CDC 2022). The USEPA and the World Health Organization (WHO) recommend maintaining environmental noises below 70 dBA over 24 hours and below 75 dBA over 8 hours to prevent noise-induced hearing loss. Table 3.10-1 presents common sounds and how they rank in human perception.

Standard buildings typically provide 10 dB of noise reduction between exterior and interior noise levels with windows open, and 20 dB with windows closed (FHWA 2018). Regarding traffic noise, the change in noise level generally depends on the traffic volume, traffic speed, and number of trucks. Generally, traffic volumes would need to triple to result in a readily noticeable increase in noise (CDOT 2005).

Table 3.10-1. Sound Levels and Human Response

Sound Level (dBA)	Common Sounds	Effect
30	Library, soft whisper (at 15 feet)	Very quiet
40	Living room, bedroom, quiet office	Quiet
50	Light auto traffic (at 100 feet)	Moderately quiet
60	Air conditioning unit, conversational speech	Intrusive
70 ^a	Freeway traffic, noisy restaurant, office	Phone use difficult
80 ^b	Alarm clock (at 2 feet), hair dryer	Annoying
90	Heavy truck (at 50 feet), city traffic	Very annoying
100	Garbage truck, firecrackers	Very loud
110	Pile driver, rock concert	Extremely loud
120	Jet takeoff (at 200 feet), auto horn (at 3 feet)	Maximum vocal effort
130	Thunderclap	(not provided)
140	Carrier deck jet operation, air raid siren	Painfully loud
180	Rocket launching pad (no ear protection)	Irreversible hearing loss

Source: NPC 1997

dBA = A-weighted decibel

^a Sounds at or below 70 dBA are generally safe but are considered intrusive (CDC 2022).

^b Over 2 hours of continuous noise levels between 80 to 85 dBA can potentially lead to hearing damage (CDC 2022).

Vibration can lead to disturbance or structural damage to nearby facilities. Vibration can be caused by operating heavy construction machinery and ground-breaking construction activities (e.g., drilling or excavating). The effects of vibration range from feeling the floor shake and experiencing rumbling sounds to structural damage. Vibration is expressed in terms of the peak particle velocity (PPV), in inches per second (in/sec), when used to evaluate human annoyance and building damage impacts. Vibration levels are highest closest to the source and dissipate with increasing distance, generally at a rate of D_{ref}/D , where D is the distance from the source in feet, and D_{ref} is the reference distance of 25 feet. Other factors that affecting vibration include soil conditions and the type of equipment and vibration (i.e., continuous or transient).

Table 3.10-2 summarizes standard thresholds commonly used to assess human perception and reaction to and effects on buildings from vibration.

Table 3.10-2. Human Response and Damage to Buildings from Vibration

PPV ^a (in/sec)	Human Response	Effect on Buildings
0.01	Barely Perceptible	No effect.
0.04	Distinctly Perceptible	Vibration unlikely to cause damage of any type to any structure.
0.08	Distinctly Perceptible to Strongly Perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected.
0.1	Strongly Perceptible	Virtually no risk of damage to normal buildings; risk of damage to historic structures.
0.2 – 0.3	Strongly Perceptible to Severe	0.20 or 0.25 PPV are thresholds where there is a risk of damage to historic and older buildings; 0.3 PPV is threshold where there is a risk of damage to older residential dwellings (e.g., plaster or ceilings).
0.5	Severe	Threshold at which there is a risk of damage to newer residential structures.

Source: Caltrans 2020; FTA 2018; Wilson Ihrig et al. 2012

^a Continuous or frequent short-term vibration levels

For historic structures, appropriate vibration limits vary. A conservative PPV limit of 0.1 inch per second may be used, while 0.5 inch per second or even 0.2 inches per second may be considered appropriate (Wilson Ihrig et al. 2012). For structures not designated as historic, typical PPV vibration thresholds are 0.5 inch per second for buildings structurally sound and designed to modern engineering standards and 0.3 inch per second for buildings that are found to be structurally sound but where structural damage is a major concern (Wilson Ihrig et al. 2012). For the purposes of this analysis, PPV limits of 0.1 inch per second and 0.3 inch per second are used to conservatively determine potential vibration impacts to historic structures and non-historic structures, respectively.

Humans are generally considered less sensitive to transient (impulsive) vibration, than to similar vibration from continuous (steady state) sources. For continuous vibration (e.g., vibratory compaction or pile driving), human responses usually result from the PPV limits shown in Table 3.10-2. For this analysis, a PPV limit of 0.2 inch per second was used for potential human response to vibration.

3.10.1 Affected Environment

3.10.1.1 Region of Influence

The boundary distance for a noise study is generally set using professional judgement and standard practice. For this EIS a 500-foot ROI is used for both LPOEs since noise levels from standard construction equipment beyond this distance would attenuate to levels deemed either highly tolerable and safe or non-detectable (i.e., an outdoor noise level of 70 dBA or less). The Lynden LPOE is located within a rural area and the closest noise-sensitive receptors include two residential properties that are located within 500 feet of the project boundary. While the Sumas LPOE is located within a more urbanized area, 500 feet captures the noise receptors that are most likely to be impacted by operations and potential construction of the LPOE.

The ROI for vibration impacts is 400 feet from the maximum proposed limits of disturbance. 400 feet is approximately the distance at which vibration levels from most construction equipment would be anticipated to be well below levels that would cause an impact (FTA 2018).

3.10.1.2 Regulatory Setting

The Noise Control Act of 1972 (PL 92-574) directs federal agencies to comply with applicable federal, state, and local noise control regulations. In 1982, the USEPA transferred the primary responsibility of regulating noise to state and local governments. As such there are no federal noise standards. The FHWA regulates noise for transportation projects that use federal transportation funding. The proposed LPOE

projects are not funded with federal transportation funding and would not fall under FHWA noise requirements.

WAC 173-60, Maximum Environmental Noise Levels, is the state noise regulation (Washington State Legislature 2022). Section 173-60-050(3)(a) exempts temporary construction noise except between the hours 10 PM and 7 AM. Construction noise during those hours would require a variance. Section 173-60-050(4) exempts motor vehicle noise when regulated by Section 173-62, which requires motor vehicles to have properly equipped and maintained exhaust and muffler systems. GSA has no control over whether vehicles comply with Section 173-62. Section 173-60-050(4)(f) further exempts sounds created by emergency equipment and work necessary in the interest of law enforcement or for the health, safety or welfare of the community are exempt. The operation of the LPOEs is a law enforcement activity required to protect the health, safety, and welfare of all residents of the U.S. and therefore would be exempt from the Washington State Administrative Code maximum environmental noise levels.

The Lynden LPOE is within Whatcom County and outside of any incorporated municipality. Whatcom County codes include a nuisance noise regulation, which includes loud music and other such temporary nuisances, but does not include any requirements for general environmental noise.

Noise regulations are encoded in the city of Sumas Municipal Code, under Chapter 8.26, Noise (City of Sumas 2024). The code includes maximum permissible environmental noise levels and exemptions from those maximum levels that are identical to the levels and exemptions under the Washington State Administration Code. Construction noise is exempt under Section 8.26.050(d) except for the hours between 10 PM and 7 AM. As with the state requirements, a variance would be required for construction activities between those hours. In addition, Section 8.26.50, subpart (a)(10), exempts sounds created by emergency equipment and work necessary in the interest of law enforcement or for the health, safety or welfare of the community and subpart (f) exempts motor vehicles when regulated by Section 8.26.40. As noted under the state requirements, the operation of the LPOEs is a law enforcement activity and therefore would be exempt from maximum noise levels. In addition, as discussed under the state requirements, GSA has no control over whether vehicles comply with Section 8.26.40 of the City Code.

The OSHA noise standard (29 CFR 1910.95) establishes minimum workplace noise requirements and states that constant noise exposure must not exceed 90 dBA over an eight-hour period. The highest allowable sound level for constant exposure is 115 dBA, which must not exceed 15 minutes within an eight-hour period. The standards limit instantaneous exposure (impact noise) to 140 dBA. If noise levels are exceeded, employers must provide hearing protection equipment (OSHA 2008).

There are no federal standards for vibrations.

3.10.1.3 Existing Conditions

3.10.1.3.1 Lynden LPOE

The area surrounding the Lynden LPOE is rural. The primary source of noise at the Lynden LPOE is traffic on SR 539 and through the LPOE. Two farms are located just south of the existing LPOE with one adjacent to each side of SR 539. The residences at these farms are the only noise-sensitive receptors within 500 feet of the Lynden LPOE. There are no historic structures within the vibration ROI for the Lynden LPOE.

3.10.1.3.2 Sumas LPOE

The area surrounding the Sumas LPOE is urban. The primary sources of noise at the Sumas LPOE are the railroad to the west and traffic on the roadways through and surrounding the LPOE. Within 500 feet of the Sumas LPOE is a railroad and forested land to the west, the U.S. – Canada border to the north, and mixed commercial/community/residential uses to the east and south. Existing noise-sensitive receptors within 500 feet of the maximum proposed limits of disturbance include the American Legion building, single family homes, B&B Border Inn, an apartment building, Valley Community Church, and Sumas City Hall. Except for the church and City Hall, all of the noise-sensitive receptors are located east of the project site, with

about 8 to 10 residential properties adjacent to the project boundary. The old Customs House is located within the vibration ROI for the Sumas LPOE.

3.10.2 Environmental Consequences

3.10.2.1 Methodology

To evaluate potential impacts on noise and vibration, GSA reviewed the project alternatives to determine whether any activities have the potential to cause the following within the ROI:

- whether any activities have the potential to cause the addition of new point or line noise sources;
- conflict with any federal, state, or local noise requirements;
- induce long-term perceptible increases in ambient noise levels above regulatory thresholds at sensitive receptors during operations; or
- cause excessive ground-borne vibration to persons or existing structures.

A major adverse impact would occur if an alternative would result in noise levels that exceed applicable environmental noise limit guidelines or vibration levels that cause structural damage.

As discussed further in Section 3.10.2.2 and 3.10.2.3, adverse impacts from construction vibration may occur due to operation of heavy machinery. Primary construction activities that could result in vibration impacts include site clearing and removal, site grading and soil compaction, trenching for pipeline networks, and borehole drilling. Table 3.10-3 presents average source PPVs at varying distances for the types of construction equipment most likely to be used during construction of the Proposed Action and provides reasonable estimates for a wide range of soil conditions. These values are compared to the PPV limits (Section 3.10.1.2) to evaluate potential for structural damage resulting from the implementation of action alternatives, and the effects of human response from vibration.

Table 3.10-3. Vibration Levels for Construction Equipment at Various Distances from the Source

Construction Equipment	PPV (inches per second) at Various Distances						
	25 feet ^a	50 feet	70 feet	100 feet	150 feet	200 feet	400 feet
Large bulldozer	0.089	0.045	0.032	0.022	0.015	0.011	0.006
Caisson drilling	0.089	0.045	0.032	0.022	0.015	0.011	0.006
Loaded trucks	0.076	0.038	0.027	0.019	0.013	0.010	0.005
Small bulldozer	0.003	0.002	0.001	0.001	0.001	0.0004	0.0002

^a Source of PPV at 25 feet: FTA 2018

^b Estimated vibration levels are highest closest to the source and dissipate with increasing distance at a rate of D_{ref}/D , where D is the distance from the source in feet, and D_{ref} is the reference distance of 25 feet.

3.10.2.2 Lynden LPOE Alternatives

3.10.2.2.1 Lynden LPOE Alternative 1 – No Action Alternative

Lynden LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impact on noise levels and associated vibration. Under Lynden LPOE Alternative 1, GSA would not modernize or expand the Lynden LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. No ground or subsurface disturbance, demolition and construction of facilities and infrastructure, or changes to onsite operations would occur.

3.10.2.2.2 Lynden LPOE Alternative 2 – East-West Oriented LPOE Expansion

Construction

Lynden LPOE Alternative 2 demolition and construction would have direct, short-term, minor, local, adverse impacts on noise levels and no anticipated vibration impacts. As stated in Section 3.10.1.2, construction noise is exempt from Washington State maximum environmental noise levels. While construction noise is exempt from established thresholds, this EIS still considers the potential impacts of construction noise within the ROI for the Lynden LPOE. To estimate the noise level at a receptor, it was conservatively assumed that construction equipment listed in Table 3.10-4 would be operating simultaneously (an unlikely and highly conservative scenario), resulting in a combined noise level of approximately 90 dBA at 50 feet. The closest residence likely to be present during construction of the Lynden LPOE is about 440 feet from areas where construction would occur. Outdoor noise levels at this distance would be anticipated to be approximately 73 dBA if all equipment were operating at the same time; indoor noise levels would be approximately 53 dBA (with windows shut). As such, noise impacts would be short-term and minor at the Lynden LPOE during construction.

Table 3.10-4. Noise Levels of Common Construction Equipment

Equipment	Typical Noise Levels at Varying Distances		
	50 feet (dBA)	500 feet (dBA)	1,000 feet (dBA)
Backhoe	80	60	54
Concrete mixer	85	65	59
Dozer	85	65	59
Grader	85	65	59
Loader	80	60	54
Roller	85	65	59
Scraper	85	65	59
Truck	84	64	58
Combined	90^a	70	64

Source: FTA 2018

^a Calculated assuming simultaneous operation of several pieces of construction equipment.

Short-term and temporary increases in noise levels would also occur from traffic associated with trucks and commuting construction workers. Increases in traffic noise would occur mainly during peak morning and afternoon commuting hours. Approximately 50 to 60 commuting workers and eight to 12 trucks per day are estimated during peak construction, which represent a small fraction of the existing daily vehicles on surrounding public roadways (see Section 3.9, Traffic and Transportation); therefore, the increase in noise level would result in direct, short-term, minor, adverse noise impacts along primary transportation corridors. The need for nighttime and/or weekend construction activity would be determined during construction. If construction activities would be anticipated between the hours of 10 PM to 7 AM, a variance would be required.

As previously noted (see Table 3.10-2), non-historic structures could suffer structural damage at 0.3 inches per second. The vibration threshold that could result in an adverse human response (annoyance) is 0.2 inches per second. None of the equipment shown in Table 3.10-3 would reach these PPV levels. Therefore, no vibration impacts would be expected at the Lynden LPOE.

Operations

Lynden LPOE Alternative 2 operations would have no impact on noise levels or vibration at the LPOE. As discussed in Section 3.9, Traffic and Transportation, there would be no increase in traffic as a result of Lynden LPOE Alternative 2. While FHWA noise regulations do not apply to the Proposed Action, it is

noted that Lynden LPOE Alternative 2 would not result in any noticeable increase in traffic noise during operation of the modernized and expanded LPOE. As stated in the introduction to this section, traffic volumes would need to triple to result in a readily noticeable increase in noise. Therefore, no noticeable change in traffic noise would result during operations as a result of Lynden LPOE Alternative 2.

As stated in Section 3.10.1.2, the primary responsibility for regulating noise falls on state and local governments as there are no federal noise standards. The Lynden LPOE is exempt from Washington State maximum environmental noise standards. There are no local noise standards in the area of the Lynden LPOE. Lynden LPOE Alternative 2 would not be in conflict with any federal, state, or local noise standards. No federal, state, or local noise thresholds apply to the project per the stated exemptions.

No new line or point noise sources would be introduced as a result of the project.

Operation of Lynden LPOE Alternative 2 would have no activities that result in ground-borne, or equipment generated, vibration that would impact any nearby buildings.

3.10.2.2.3 Lynden LPOE Alternative 3 – North-South Oriented LPOE Expansion

Construction

Lynden LPOE Alternative 3 demolition and construction activities would have short-term, minor, adverse impacts on noise levels and no vibration impacts similar to Lynden LPOE Alternative 2 as described above in Section 3.10.2.2.2 under *Construction*.

Operations

Lynden LPOE Alternative 3 operations would have no impact on noise levels and no vibration impacts similar to Lynden LPOE Alternative 2 as described above in Section 3.10.2.2.2 under *Operations*.

3.10.2.3 Sumas LPOE Alternatives

3.10.2.3.1 Sumas LPOE Alternative 1 – No Action Alternative

Sumas LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impact on noise levels and associated vibration. Under Sumas LPOE Alternative 1, GSA would not modernize or expand the Sumas LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. No ground or subsurface disturbance, demolition and construction of facilities and infrastructure, or changes to onsite operations would occur.

3.10.2.3.2 Sumas LPOE Alternative 2 – Feasibility Study Preferred Alternative

Construction

Sumas LPOE Alternative 2 demolition and construction would have short-term, minor to moderate, local, adverse impacts on noise levels and no vibration impacts. As stated in Section 3.10.1.2, construction noise is exempt from both Washington State and city of Sumas maximum environmental noise levels. At the Sumas LPOE the closest residences to areas where construction would be anticipated are approximately 80 feet away. Noise levels at this distance would be anticipated to be about 89 dBA outdoors and 69 dBA indoors (with windows shut), conservatively assuming that all equipment was operating simultaneously. The Valley Community Church and Sumas City Hall would be adjacent to areas where construction would occur along Cherry Street at the southern end of the maximum proposed limits of disturbance. Noise levels at these locations during construction would not be expected to exceed 90 dBA outdoors and 70 dBA indoors (with windows shut) for temporary periods. Noise levels would likely be lower as the only construction work at this far southern end of the project area is repaving work on Cherry Street. A paving machine or a roller would be the only equipment likely operating in this area. It would be anticipated that paving would be completed in less than one day (i.e., less than eight hours). The resulting indoor noise levels at the closest residences, the church, and City Hall represent a worst-case scenario and would not be over the thresholds considered harmful by the USEPA and WHO (70 dBA over 24 hours and 75 dBA over

8 hours) (CDC 2022). In addition, estimated noise levels would not be continuous and would only occur while equipment was actually operating. The increase in noise levels would result in direct, short-term, minor to moderate, adverse noise impacts to noise-sensitive receptors during construction. Construction noise would be minimized using the measures listed in Section 3.10.2.6.

Short-term and temporary increases in noise levels would also occur from traffic associated with trucks and commuting construction workers. Increases in traffic noise would occur mainly during peak morning and afternoon commuting hours. Approximately 50 to 60 commuting workers and eight to 12 trucks per day are estimated during peak construction, which represent a small fraction of the existing daily vehicles on surrounding public roadways (see Section 3.9, Traffic and Transportation); therefore, the increase in noise levels would result in direct, short-term, minor, adverse noise impacts along primary transportation corridors. The need for nighttime and/or weekend construction activity would be determined during construction. If construction activities would be anticipated during the hours between 10 PM to 7 AM, a variance would be required.

As previously noted (see Table 3.10-2), PPV thresholds at which structural damage could occur are 0.1 inches per second for historic structures and 0.3 inches per second for non-historic structures. The vibration threshold that could result in an adverse human response (annoyance) is 0.2 inches per second. None of the equipment shown in Table 3.10-3 would reach these PPV levels. A large bulldozer or a drilling operation would have to be within 25 feet to result in potential damage to a historic building. The old Customs House is approximately 120 feet from where construction would occur at the Sumas LPOE and, therefore, would not be at risk for structural damage from construction vibration. No vibration impacts would be anticipated.

Operations

Sumas LPOE Alternative 2 operations would have no impact on noise levels or vibration at the LPOE. As discussed in Section 3.9, Traffic and Transportation, there would be no increase in traffic as a result of Sumas LPOE Alternative 2. Traffic volumes would need to triple to result in a readily noticeable increase in noise. Therefore, no noticeable change in traffic noise would result from operation of the Sumas LPOE under Alternative 2.

As stated in Section 3.10.1.2, the primary responsibility for regulating noise falls on state and local governments as there are no federal noise standards. The Sumas LPOE is exempt from Washington and city of Sumas maximum environmental noise standards. The alternative would not be in conflict with any federal, state, or local noise standards. No federal, state, or local noise thresholds apply to the project per the stated exemptions.

No new line or point noise sources would be introduced as a result of the project.

While noise levels would not be expected to increase and FHWA noise regulations do not apply to the Proposed Action, there is public concern regarding noise from traffic, particularly idling commercial vehicles, through the LPOE. The primary concern appears to be from trucks idling northbound on Sumas Avenue where northbound trucks are waiting to enter Canada through the Canadian port of entry. The Canadian commercial inspection area is less than 200 feet from the U.S. border, leaving little space for northbound trucks to queue north of the border. This cannot be addressed by GSA as part of this project as it results from infrastructure outside of the U.S. The improvements proposed under Sumas LPOE Alternative 2 would improve the efficiency of the limited, scheduled-only, outbound inspections that occur in the Sumas LPOE. This improved efficiency could help to reduce idling time of commercial vehicles scheduled for outbound inspection; however, there would likely be no noticeable change in outbound commercial vehicles.

Sumas community members requested that GSA consider installing a noise wall along Sumas Avenue adjacent to the residential areas. GSA evaluated the installation of a noise wall and determined that this type of noise mitigation would not be feasible or effective due to existing site conditions. There is generally

15 to 18 feet between the east edge of Sumas Avenue and the residences along the roadway. Due to noise wall dimensions and spatial requirements (e.g., 2-foot wall thickness, 5 to 10-foot setback from roadway, and 10 feet behind the wall for maintenance and drainage), constructing a noise wall would result in displacement of existing structures (i.e., residential structures). Additionally, due to length requirements, it is not possible to construct a wall of sufficient length without having a break in the noise wall, which would result in an ineffective noise barrier. GSA has determined that constructing a noise wall would not be feasible or effective, and since the Proposed Action is not subject to any federal, state, or local regulations mandating such measures, noise mitigation is not being further investigated.

Operation of Sumas LPOE Alternative 2 would have no activities that result in ground-borne, or equipment generated vibration that would impact any nearby buildings.

3.10.2.3.3 Sumas LPOE Alternative 3 – Commercial Inspection West

Construction

Sumas LPOE Alternative 3 demolition and construction activities would have short-term, minor to moderate, adverse impacts on noise levels and no vibration impacts similar to Sumas LPOE Alternative 2 as described above in Section 3.10.2.3.2 under *Construction*.

Operations

Sumas LPOE Alternative 3 operations would have no impacts on noise levels and no vibration impacts similar to Sumas LPOE Alternative 2 as described above in Section 3.10.2.3.2 under *Operations*.

3.10.2.3.4 Sumas LPOE Alternative 4 – Multi-Story Construction LPOE Expansion

Construction

Sumas LPOE Alternative 4 demolition and construction activities would have short-term, minor to moderate, adverse impacts on noise levels and no vibration impacts similar to Sumas LPOE Alternative 2 as described above in Section 3.10.2.3.2 under *Construction*.

Operations

Sumas LPOE Alternative 4 operations would have no impact on noise levels and no vibration impacts similar to Sumas LPOE Alternative 2 as described above in Section 3.10.2.3.2 under *Operations*.

3.10.2.4 Construction Sequencing Options

Due to the distance between the two LPOEs (i.e., 10 miles), how construction is sequenced between the two sites would have no impact on construction noise levels or vibration impacts. Although there may be some increases in traffic along SR 546 during the Sequential Construction Option as discussed in Section 3.9, Traffic and Transportation, traffic volumes would need to triple to result in a readily noticeable increase in noise. Therefore, no noticeable change in traffic noise would result during construction as a result of the Sequential Construction Option.

3.10.2.5 Lynden and Sumas LPOE Combined Alternative Implementation

Potential noise and vibration impacts from construction activities for all Lynden and Sumas LPOE action alternatives would be short-term and local as described in Sections 3.10.2.2 through 3.10.2.4. Also, as discussed in those sections, the proposed Lynden and Sumas Alternatives would have no impact on noise during Operations as there would be no change in traffic volumes or compositions as a result of the Proposed Action. Therefore, considering the distance between the two LPOEs, the combined impacts during construction and operations of any combination of Lynden and Sumas LPOE action alternatives would not result in any greater level of impacts to infrastructure and utilities beyond those discussed in Sections 3.10.2.2 through 3.10.2.4. If Lynden LPOE Alternative 1 and Sumas LPOE Alternative 1

(No Action Alternatives) are both selected there would be no direct or indirect, short- or long-term, local or regional, adverse impact on noise and vibration.

3.10.2.6 Impacts Reduction Measures

Potential construction noise impacts would be minimized to the extent practicable utilizing standard noise control measures, such as equipment noise controls (e.g., mufflers), limitations or prohibition of equipment idling, minimizing equipment usage to short periods of time to the extent possible, and limitations or prohibitions on running equipment for extended periods when not necessary. OSHA regulations (i.e., wearing hearing protection and limiting exposure) would be followed to reduce the impact of high noise levels on construction workers that could occur during construction.

Nighttime (10 PM to 7 AM) construction activities at either LPOE would require a variance from Washington State. Nighttime construction activities at the Sumas LPOE would require a variance from the city of Sumas.

No impact reduction measures are required for vibration as no impacts would occur.

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3.11 SOCIOECONOMICS

This section describes the baseline conditions for the social and economic environment within the region of the project areas and assesses the potential for socioeconomic impacts from implementation of the Proposed Action and No Action Alternative as discussed in Chapter 2. Socioeconomics encompasses a range of aspects of the human environment. A socioeconomic analysis considers conditions such as population, housing, employment, public services, and quality of life, and informs the relationship between these factors. A socioeconomic analysis uses historical and current data trends and takes into consideration future projections and plans for the area.

3.11.1 Affected Environment

3.11.1.1 *Region of Influence*

The ROI for the socioeconomic analysis focuses on the populations within the Lynden and Sumas census county divisions (CCDs) of Whatcom County. CCDs are sub-county statistical geographic areas that typically represent a single contiguous area consisting of one or more communities, economic centers, or major land use areas in a county or county equivalent (USCB 2020). Socioeconomic impacts would be felt most by individuals, residents, and workers within these CCDs. This section also considers the availability of temporary housing for construction workers; therefore, some of the discussion extends to areas outside of the identified ROI.

3.11.1.2 *Regulatory Setting*

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (the Uniform Act) provides important protections and assistance for people affected by federally funded projects. Congress enacted this law to ensure that people whose real property is acquired, or who move as a result of projects receiving federal funds, are treated fairly and equitably and receive just compensation for, and assistance in moving from, the property they occupy.

3.11.1.3 *Existing Conditions*

3.11.1.3.1 *Lynden LPOE*

Temporary Housing

Within a 25-mile radius of the Lynden LPOE, there are approximately 78 hotels. Forty-two are in Washington, while 36 are located across the border in BC. Combined, these hotels have approximately 5,601 rooms available for rent. The nearest hotel in Washington is the Homestead Resort, which is located approximately 4.5 miles away and offers 30 rooms. The nearest hotel in BC is the Best Western Plus Country Meadows Inn, which is located approximately 4.3 miles away and offers 77 rooms.

Local Economy of Lynden

The city of Lynden is located approximately 6 miles south of the Lynden LPOE and U.S. - Canada border. The city of Lynden and the Lynden LPOE are surrounded by agricultural areas. Businesses in Lynden benefit from regional accessibility to the north and south that is provided by SR 539, which serves as a major route for Canadians who are heading south to Bellingham and allows Lynden to capture Canadian customers traveling into other parts of the U.S. Lynden similarly has good access to the east and west, albeit not as strong as its north and south access.

In the immediate vicinity of the Lynden LPOE, a privately owned farm is located to the south and west, with cattle grazing pasture on the west side and a farmhouse with supporting farm structures to the south. The farm is currently used for corn production. To the east of the LPOE is the Aldergrove Duty-Free Shop (GSA 2023c).

3.11.1.3.2 Sumas LPOE

Temporary Housing

Within a 25-mile radius of the Sumas LPOE, there are approximately 50 hotels. Twenty-seven of these are in Washington, while 23 are located across the border in BC. Combined, these hotels have approximately 3,658 rooms available for rent. The nearest hotel in Washington is the B & B Border Inn, which is located within the project area and offers 20 rooms. The nearest hotel in BC is the Super 8 by Wyndham Abbotsford BC, which is located approximately 2.8 miles away and offers 98 rooms.

Local Economy of Sumas

The city of Sumas is a small city located along the U.S. – Canada border surrounded primarily by agricultural areas. This proximity to the border has a strong influence on the economy of Sumas, which depends on border-related commerce. Many Canadians travel through the border on foot to purchase goods or collect mail at various mail and shipping businesses in town. Some businesses such as commercial fueling stations and food markets heavily rely on consumers from Canada to stay in business.

The COVID-19 pandemic had detrimental impacts to Whatcom County’s labor market due in part to the loss of cross border traffic. When border restrictions were enacted in 2020, it essentially eliminated all cross-border leisure travel, which significantly affected the tourism industry in Whatcom County as a whole, and in particular in the city of Sumas. Whatcom County lost over 506,000 Canadian tourists, which was approximately 13 percent of all Canadian passenger travel that might have occurred from late March to September 2020 (Border Policy Research Institute 2020). Additionally, in 2021, a major flooding event occurred in Sumas that directly damaged approximately 85 percent of homes, businesses, and structures. (GSA 2023d). Five of the town’s sixteen businesses closed as a result. A year after the floods, 30 percent of residents had still not been able to return to their homes, causing a further loss of commercial activity for businesses that were still dealing with the impacts of COVID-19 (King 5 News 2022).

Properties within the LPOE project area include the American Legion Post 212, a duty-free shop, a filling station, an industrial coin book production building, a motel, and an inactive commercial business. American Legion Post 212 is a prominent meeting place for veterans and the Sumas community. A one-story building for a multi-use commercial business that is currently under construction is also located within the project area. Multiple residencies lie to the east of the LPOE and are adjacent to the project area (GSA 2023d).

3.11.2 Environmental Consequences

3.11.2.1 Methodology

To evaluate potential impacts on socioeconomics, GSA reviewed the project alternatives to determine whether any activities have the potential to cause the following within the ROI:

- Alter the local economy;
- Change housing characteristics (types of units, occupancy, housing values, etc.) or residential development patterns;
- Alter population growth or demographic patterns;
- Displace populations, residents, or businesses to accommodate construction;
- Require an amount of public or private resources (time and/or money) that interferes with the performance of other local government functions or the viability of proposed projects; or
- Induce growth without adequately supporting community services (e.g., education, public health and safety).

A major adverse impact to socioeconomics would occur if the project alternative would result in:

- Substantial changes to the local economy without the capacity to absorb a decrease or increase;
- Substantial changes in housing characteristics or residential development patterns;
- Changes to population growth or demographic patterns in ways that alter the overall character of communities;
- An amount of public or private resources (time and/or money) that substantially interferes with the performance of other local government functions or the viability of proposed projects; or
- Induced growth that exceeds the capacity of supporting community services, including:
 - Change in the number of users of community services that exceed existing capacity;
 - Change in the demand for emergency and public protection services that would increase response times based on existing personnel resources and equipment; or
 - Change in the funding needed to sustain services or to increase access to services.

3.11.2.2 Lynden LPOE Alternatives

3.11.2.2.1 Lynden LPOE Alternative 1 – No Action Alternative

Lynden LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impacts on socioeconomics including existing population and housing, labor and income, the local economy, or public services within the Lynden CCD. Under Lynden LPOE Alternative 1, GSA would not modernize or expand the Lynden LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure or changes to onsite operations would occur.

3.11.2.2.2 Lynden LPOE Alternative 2 – East-West Oriented LPOE Expansion

Construction

Lynden LPOE Alternative 2 would result in direct, short- to long-term, minor to moderate, local and regional, adverse impacts to socioeconomics. Construction of Lynden LPOE Alternative 2 would require the acquisition of nearby land parcels, which would impact a private farm and displace the duty-free store. GSA would provide relocation assistance for applicable stakeholders in accordance with the Uniform Act, as enacted in the *Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally-Assisted Programs* (49 CFR Part 24). GSA would negotiate with private landowners as applicable during the land acquisition process to provide fair compensation.

Direct, short-term, minor, local and regional, adverse impacts to housing would be anticipated during construction of Lynden LPOE Alternative 2 as a result of an influx of construction workers, which would temporarily increase demand for local housing. Peak construction could require up to 70 workers; typical non-peak construction would require between 10 to 15 workers. Temporary lodging, which is somewhat limited in the project area, could be required for construction workers. As stated in Section 3.11.1.3, within 25 miles of Lynden LPOE are 78 hotels, which should provide more than adequate temporary housing within a reasonable commuting distance of the project area.

Construction impacts to the local economy are discussed in Section 3.11.2.4.

Operations

Lynden LPOE Alternative 2 would result in direct, long-term, negligible to minor, local, beneficial impacts on population. Following construction of the new facilities for the Lynden LPOE, CBP anticipates adding 20 more full-time employees to the current staff of 36 workers. While it is difficult to estimate the exact

amount of in-migration, it is assumed that a maximum of 20 workers may relocate to the Lynden CCD and the surrounding communities. Any influx of new workers would have a direct, long-term, negligible to minor, local, beneficial impact on the population, labor, and earnings. Any new workers relocating to the Lynden CCD would further decrease the amount of available housing in the area, resulting in a direct, long-term, minor, local, adverse impact on housing. The reduced traffic times resulting from the improved traffic circulation would have direct, long-term, minor to moderate, local, beneficial impacts on personal travel expenditures, which would create indirect, long-term, minor to moderate, beneficial economic impacts for the Lynden CCD. Shorter wait times for tourists at the modernized and expanded LPOE during peak travel periods have the potential to result in an increase in spending in the area. As a result, there could be direct and indirect, long-term, minor to moderate, local, beneficial impacts on earnings and employment within the Lynden CCD.

Operations of the expanded and modernized LPOE facilities are expected to result in direct and indirect, long-term, minor, local, beneficial impacts to community services. The reduced congestion and improvements are expected to result in safer roads for residents and tourists and improve access for emergency services. The marginal increase in population that could occur locally is not expected to affect capacities of existing community services. Any additional CBP personnel and their families that may relocate to the Lynden CCD would contribute to a permanent population increase and raise demand on the local school system. However, the potential maximum influx of workers with school-age children is expected to be small and would have a direct, long-term, negligible, local, adverse impact on the school system.

3.11.2.2.3 Lynden LPOE Alternative 3 – North-South Oriented LPOE Expansion

Construction

Lynden LPOE Alternative 3 would result in direct, short- to long-term, minor to moderate, local and regional, adverse impacts to socioeconomics similar to Lynden LPOE Alternative 2 as discussed in Section 3.11.2.2.2 under *Construction*. The primary difference would be that construction would require the acquisition of privately owned farming facilities and a farmhouse to the south of the existing LPOE. GSA would provide relocation assistance for applicable stakeholders, similar to as described for Lynden LPOE Alternative 2 in Section 3.11.2.2.2 under *Construction*. Direct, short-term, minor, local and regional, adverse impacts to housing would be anticipated during construction of Lynden LPOE Alternative 3 as a result of an influx of construction workers, similar to as described for Lynden LPOE Alternative 2 in Section 3.11.2.2.2 under *Construction*.

Construction impacts to the local economy are discussed in Section 3.11.2.4.

Operations

Lynden LPOE Alternative 3 would result in similar impacts as described for the Lynden LPOE Alternative 2 in Section 3.11.2.2.2 under *Operations*. This would include direct, long-term, negligible to minor, local, beneficial impacts on population; direct, long-term, minor, local, adverse impacts on housing; direct and indirect, long-term, minor to moderate, local, beneficial impacts to the economy; direct and indirect, long-term, minor, local, beneficial impacts to community services; and direct, long-term, negligible, adverse, local impacts on the school system.

3.11.2.3 Sumas LPOE Alternatives

3.11.2.3.1 Sumas LPOE Alternative 1 – No Action Alternative

Sumas LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impact on socioeconomics including existing population and housing, labor and income, the local economy, or public services within the Lynden CCD. Under Sumas LPOE Alternative 1, GSA would not modernize or expand the Sumas LPOE and current facilities and infrastructure at the existing LPOE would remain

unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure or changes to onsite operations would occur.

3.11.2.3.2 Sumas LPOE Alternative 2 – Feasibility Study Preferred Alternative

Construction

Sumas LPOE Alternative 2 would result in direct, short- to long-term, minor to moderate, local and regional adverse impacts to socioeconomics. Construction of Sumas LPOE Alternative 2 would require the acquisition of nearby land parcels and would displace at least four active businesses as well as the American Legion Post 212. GSA would provide relocation assistance for applicable stakeholders, similar to as described for Lynden LPOE Alternative 2 in Section 3.11.2.2.2 under *Construction*.

Direct, short-term, minor, local and regional, adverse impacts to housing would be anticipated during construction of Sumas LPOE Alternative 2 as a result of an influx of construction workers, which would temporarily increase demand for local housing, similar to as described for Lynden LPOE Alternative 2 in Section 3.11.2.2.2 under *Construction*. As stated in Section 3.11.1.3, within 25 miles of Sumas LPOE are 50 hotels, which should provide more than adequate temporary housing within a reasonable commuting distance of the project area.

Construction impacts to the local economy are discussed in Section 3.11.2.4.

Operations

Sumas LPOE Alternative 2 would result in similar impacts as described for the Lynden LPOE Alternative 2 in Section 3.11.2.2.2 under *Operations*. This would include direct, long-term, negligible to minor, local, beneficial impacts on population; direct, long-term, minor, local, adverse impacts on housing; direct and indirect, long-term, minor to moderate, local, beneficial impacts to the economy; direct and indirect, long-term, minor, local, beneficial impacts to community services; and direct, long-term, negligible, local, adverse impacts on the school system. Following construction of the new facilities for the Sumas LPOE, CBP anticipates adding 26 more full-time employees to the current staff of 73 workers.

3.11.2.3.3 Sumas LPOE Alternative 3 – Commercial Inspection West

Construction

Sumas LPOE Alternative 3 would result in direct, short- to long-term, minor to moderate, local and regional, adverse impacts to socioeconomics similar to Sumas LPOE Alternative 2 as discussed in Section 3.11.2.3.2. GSA would provide relocation assistance for applicable stakeholders, similar to Lynden LPOE Alternative 2 as discussed in Section 3.11.2.2.1 under *Construction*.

Operations

Sumas LPOE Alternative 3 would result in direct, long-term, negligible to minor, local, beneficial impacts on population; direct, long-term, minor, local, adverse impacts on housing; direct and indirect, long-term, minor to moderate, local, beneficial impacts to the economy; direct and indirect, long-term, minor, local, beneficial impacts to community services; and direct, long-term, negligible, local, adverse impacts on the school system similar to Sumas LPOE Alternative 2 as discussed in Section 3.11.2.3.2 under *Operations*.

3.11.2.3.4 Sumas LPOE Alternative 4 – Multi-Story Construction LPOE Expansion

Construction

Sumas LPOE Alternative 4 would result in direct, short- to long-term, minor to moderate, local and regional, adverse impacts to socioeconomics similar to Sumas LPOE Alternative 2 as discussed in Section 3.11.2.3.2 under *Construction*. GSA would provide relocation assistance for applicable stakeholders, similar to Lynden LPOE Alternative 2 as discussed in Section 3.11.2.2.1 under *Construction*.

Operations

Sumas LPOE Alternative 4 would result in direct long-term, negligible to minor, local, beneficial impacts on population; direct, long-term, minor, local, adverse impacts on housing; direct and indirect, long-term, minor to moderate, local, beneficial impacts to the economy; direct and indirect, long-term, minor, local, beneficial impacts to community services; and direct, long-term, negligible, local, adverse impacts on the school system similar to Sumas LPOE Alternative 2 as discussed in Section 3.11.2.3.2 under *Operations*.

3.11.2.4 Construction Sequencing Options

Under the Concurrent Construction Option, both the Lynden and Sumas LPOE would remain open during construction, which may result in direct and indirect, short-term, minor to moderate, adverse local and regional socioeconomic impacts. During this time, the number of open processing lanes would be limited, and commercial traffic may need to be redirected to other ports in the region in order to permit adequate space to process POVs. Due to the limited number of processing lanes, delays would be likely, which would impact travel time for tourists and commuters accessing the LPOEs. Some travelers may choose to reroute to other LPOEs. The city of Lynden is 6 miles south of the Lynden LPOE and does not rely directly on the port for economic support; however, some businesses do rely on highway traffic, like gas stations. This may result in indirect, short-term, negligible to minor, local, adverse impact on Lynden's economy. The city of Sumas does rely directly on the Sumas LPOE for economic support. Less traffic through the port, which could occur during construction, could have indirect, short-term, minor, local, adverse impact on the city's businesses; however, the port would remain open, including for pedestrian traffic, which would allow for continued economic support. During construction of the Sumas LPOE, local businesses and residences adjacent to the project area may temporarily be more difficult to access, which may result in direct, short-term, minor, adverse local impacts. Concurrent construction at both ports could cause more travelers to detour to other ports, which could have indirect, short-term, moderate, local, adverse impacts on the Lynden and Sumas economies depending on the extent of the diversions. Because construction workers would be either hired locally or utilize local temporary lodging, most of their expenditures (e.g., rent, day-to-day spending) for the duration of their employment would remain in or flow into the local economies near both LPOEs. Construction workers staying at temporary lodging would spend the wages they receive at local retail stores and establishments. This would result in direct, short-term, negligible, local, beneficial impacts during non-peak construction and direct, short-term, minor, local, beneficial impacts during peak construction. Demolition and construction activities at both LPOEs would be anticipated to occur over a total period of approximately 24 months under the Concurrent Construction Option.

Under the Sequential Construction Option, the Lynden LPOE would be completely closed until construction is complete and the expanded and modernized LPOE is operational, which may result in direct and indirect, short-term, negligible to minor, local and regional adverse socioeconomic impacts. Traffic that would normally pass through the Lynden CCD to access the LPOE would travel to other nearby LPOEs, which may result in a decrease in spending in the city of Lynden, therefore adversely impacting local businesses. However, Lynden is not completely reliant on border traffic for business, as it can still attract consumers in the region through tourism and its accessibility to other communities in Washington. Additionally, the Sumas LPOE would remain open during this time, which would provide an access point at a relatively short detour if travelers from Canada wanted to access communities in the Lynden CCD. Construction workers would have similar beneficial impacts on the local economies as discussed under the Concurrent Construction Option, although slightly less as the overall construction period would be shorter. Having one of the ports fully open at all times under the Sequential Construction Option could result in less anticipated traffic diversions from the Lynden and Sumas areas, as a fully operational port would be available at all times. Under the Sequential Construction Option, the Sumas LPOE would remain open to pedestrians and POVs during construction to the greatest extent possible. Construction may result in partial closures, lane interruptions, and diversion of commercial traffic from the Sumas LPOE to other nearby ports, which may result in indirect, short-term, minor to moderate, local and regional adverse socioeconomic impacts. Any necessary closures would be kept to a minimum. The Sumas LPOE would not

completely close during construction, under either sequencing option, as any long-term closures would result in major adverse socioeconomic impacts. Construction of the Sumas LPOE would have similar adverse impacts on the accessibility of local businesses and residences as discussed under the Concurrent Construction Option, although slightly less as the overall construction period would be shorter. Demolition and construction activities would be anticipated to occur over a period of approximately 18 months under the Sequential Construction Option.

3.11.2.5 Lynden and Sumas LPOE Combined Alternative Implementation

Construction activities and operations would not have a major impact on socioeconomics regardless of which combination of Lynden and Sumas LPOE action alternatives are selected. Potential socioeconomics impacts from construction activities for all Lynden and Sumas LPOE action alternatives would be primarily local. Therefore, considering the distance between the two LPOEs, impacts to socioeconomics from the selection of any combination of Lynden LPOE and Sumas LPOE action alternatives would not differ from those described under Construction for each alternative (see Section 3.11.2.2 and 3.11.2.3). Operations of all Lynden and Sumas LPOE action alternatives would not differ from those described under Operations for each alternative (see Sections 3.11.2.2 and 3.11.2.3). If Lynden LPOE Alternative 1 and Sumas LPOE Alternative 1 (No Action Alternatives) are both selected there would be no direct or indirect, short- or long-term, local or regional, adverse impact on socioeconomics.

3.11.2.6 Impacts Reduction Measures

Measures to reduce construction impacts on quality of life-related concerns, such as fugitive dust, noise, or traffic from construction activities are discussed in Sections 3.6.2.7, Air Quality, Climate Change, and Greenhouse Gases; 3.9.2.6, Traffic and Transportation; and 3.10.2.6, Noise and Vibration, respectively. Measures described in Section 3.2.2.6, Land Use, may also benefit socioeconomic conditions and community services.

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3.12 ENVIRONMENTAL JUSTICE AND PROTECTION OF CHILDREN'S HEALTH AND SAFETY

This section describes the baseline conditions for race, income, and populations of children in the project areas and potential disproportionate impacts that could result on minority, low-income and disabled populations (also referred to as communities with environmental justice concerns), and on children's health and safety from implementing the Proposed Action and No Action Alternative as discussed in Chapter 2. In evaluating environmental justice under NEPA, agencies must recognize the interconnected cultural, social, occupational, historical, or economic factors that may amplify the natural and physical environmental effects of the proposed agency action (CEQ 1997).

3.12.1 Affected Environment

3.12.1.1 *Region of Influence*

The ROI for environmental justice and children's health and safety is a 1-mile radius centered individually on the Lynden LPOE and the Sumas LPOE.

3.12.1.2 *Regulatory Setting*

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, directs federal agencies to consider whether impacts on human health or the environment (including social and economic aspects) would be disproportionately high and adverse for minority and low-income populations, and would outweigh impacts on the general population or other comparison group.

EO 13990, *Protecting Public Health and the Environment and Restoring Science to Address the Climate Crisis* directs federal agencies to prioritize both environmental justice and employment. EO 13990 supports the national goal of improving public health and the environment by ensuring access to clean air and water, limiting exposure to dangerous chemicals and pesticides, and holding polluters accountable, including those who disproportionately harm people of color and low-income people.

EO 14030, *Climate-Related Financial Risk*, outlines the government approach to mitigating climate-related financial risks and ensuring financial security for workers, families, and businesses who may be disproportionately affected by climate change. The EO advises federal agencies to assess their government programs, assets, and liabilities, and to identify causes of and address disparate impacts on disadvantaged communities and communities of color.

EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, places a high priority on the identification and assessment of environmental health and safety risks that may disproportionately affect children. The EO requires that each agency "shall ensure that its policies, programs, activities, and standards address disproportionate risks to children." It considers that physiological and social development of children makes them more sensitive than adults to adverse health and safety risks, and it recognizes that children in minority and low-income populations are more likely to be exposed to and have increased health and safety risks from environmental contamination than the general population.

EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All*, directs federal agencies to consider whether impacts from a Proposed Action on human health or the environment (including social and economic aspects) would be disproportionately high and adverse for minority, low-income, tribal, and disabled populations, and would outweigh impacts on the general population or other comparison group.

The *Memorandum Addressing Children's Health through Reviews Conducted Pursuant to the National Environmental Policy Act and Section 309 of the Clean Air Act* recommends that an EIS "describe the relevant demographics of affected neighborhoods, populations, and/or communities and focus exposure assessments on children who are likely to be present at schools, recreation areas, childcare centers, parks, and residential areas in proximity to the project area, and other areas of apparent frequent and/or prolonged exposure" (USEPA 2012).

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 provides important protections and assistance for people affected by federally funded projects. Congress enacted this law to ensure that people whose real property is acquired, or who move as a result of projects receiving Federal funds, are treated fairly and equitably and receive just compensation for, and assistance in moving from, the property they occupy.

3.12.1.3 Existing Conditions

For purposes of clarity, this section discusses the general affected environment for both the Lynden and Sumas LPOEs together. Where there are differences between the sites requiring distinction between the two locations, these are described in the text as appropriate.

Environmental Justice

Relevant definitions to the environmental justice analysis are presented below:

Minority – Individual(s) who are members of the following population groups as designated by the CEQ and as updated per revised categorizations for race and ethnicity by the U.S. Census Bureau: Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, as well as Hispanic or Latino of any race (CEQ 1997; USCB 2024).

Low-income – The U.S. Census Bureau uses a set of income thresholds that vary by family size and composition to determine who is in poverty (i.e., classified as ‘low-income’). If a family's total income is less than the family threshold as set by the U.S. Census Bureau, then that family and every individual in it is considered in poverty. The official poverty thresholds do not vary geographically but are updated for inflation using the Consumer Price Index. The official poverty definition uses income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid, and food stamps) (USCB 2023).

Disabled – The U.S. Census Bureau defines a disability as a long-lasting physical, mental, or emotional condition that can make it difficult for a person to do activities such as walking, climbing stairs, dressing, bathing, learning, or remembering. This condition can also impede a person from being able to go outside the home alone or to work at a job or business (USCB 2024). Disability data is collected by asking questions about difficulty with hearing, vision, cognitive functions, ambulatory motion, self-care, and independent living. Respondents reporting any of these disability types are considered to have a disability (USCB 2021).

Minority, low-income, or disabled population – Populations where either: (a) the total number of minority, low-income, or disabled individuals of the affected area exceeds 50 percent of the overall population in the same area, or (b) the total number of minority, low-income, or disabled individuals within the affected area is meaningfully greater (e.g., 120 percent greater) than the minority, low-income, or disabled population percentage in an appropriate comparison unit of geographic analysis (CEQ 1998). A minority population also exists if there is more than one minority group present and the minority percentage, as calculated by aggregating all minority persons, meets one of the above-stated thresholds. In identifying minority or low-income populations, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a geographically dispersed/transient set of individuals (such as migrant workers or Indigenous people), where either type of group experiences common conditions of environmental exposure or effect. The selection of the appropriate unit of geographic analysis may be a governing body’s jurisdiction, a neighborhood, census tract, or other similar unit that is to be chosen so as not to artificially dilute or inflate the affected population.

Communities with Environmental Justice Concerns – Includes minority, low-income, and disabled populations as described above, as well as tribal communities.

Meaningfully Greater – A meaningfully greater population for a community with environmental justice concern within a geographic unit affected by a federal action is determined by comparing the applicable composition (i.e., minority, low-income, or disabled population) of the geographic unit to the corresponding

composition of the general population. As with selecting the appropriate unit of geographic analysis, a comparison population should be selected so as not to artificially dilute or inflate the affected environmental justice populations. For this analysis, the comparison population is the total population of Whatcom County.

The analysis of communities with environmental justice concerns focuses on U.S. Census Bureau data for geographic units (i.e., census tracts and block groups) that represent, as closely as possible, the potentially affected areas. A census tract is a geographic area for which the U.S. Census Bureau provides consistent sample data and is comprised of smaller census block groups. A census block group is the smallest geographic area for which the U.S. Census Bureau provides consistent sample data (USCB 2024).

Table 3.12-1 summarizes the percentage of minority and low-income populations within the Lynden and Sumas LPOE project areas, Whatcom County, and Washington for comparison purposes.

Table 3.12-1. Minority and Low-Income Populations Within the Lynden and Sumas LPOE ROIs

Population Group	Lynden LPOE ROI		Sumas LPOE ROI		Whatcom County		Washington	
	Pop.	Total (%)	Pop.	Total (%)	Pop.	Total (%)	Pop.	Total (%)
Nonminority	1,145	76.3	2,070	84.2	173,896	76.8	5,038,521	65.5
Black or African American	13	0.9	9	0.4	2,011	0.9	290,907	3.8
Total Hispanic or Latino	299	19.9	177	7.2	22,969	10.1	1,037,153	13.5
American Indian or Alaska Native	16	1.1	49	2.0	4,289	1.9	67,829	0.9
Asian	0	0	40	1.6	9,957	4.4	702,336	9.1
Other Minority ^a	28	1.9	112	4.6	13,401	5.9	551,803	7.2
Total Minority	356	23.7	387	15.8	52,627	23.2	2,650,028	34.5
Low-Income	47	3.1	158	6.4	28,469	12.6	747,538	9.7
Total Population	1,501	100	2,457	100	226,523	100	7,688,549	100

USCB 2022a and 2022b

^a Other Minority = Native Hawaiian or Other Pacific Islander; Some other race; or Two or more races.

Minorities comprise approximately 23.2 percent of Whatcom County’s population. The ROI of each LPOE project contains a single block group, with the Lynden LPOE ROI consisting of Block Group 1; Census Tract 103.01 and the Sumas LPOE ROI consisting of Block Group 2; Census Tract 102. If a block group’s percentage of minority individuals meets the 50 percent criterion or exceeds 120 percent of the total minority population within Whatcom County (i.e., 27.8 percent), the area is considered to be a minority community of environmental justice concern as defined above. The minority population present in the ROI of both the Lynden LPOE and Sumas LPOE would not exceed the 50 percent threshold defined by CEQ or the secondary threshold of 27.8 percent relative to the general population of Whatcom County. The total minority population residing within the ROI of the Lynden LPOE project area is approximately 356, or 23.7 percent of the entire population, while the total minority population residing within the ROI of the Sumas LPOE project area is approximately 387, or 15.8 percent of the entire population.

Low-income populations were evaluated using the absolute 50 percent and the relative 120 percent or greater criteria for potentially affected block groups within the ROI. If a block group’s percentage of low-income individuals meets the 50 percent criterion or is more than 120 percent of the total low-income population within Whatcom County (i.e., 13.3 percent), then the area is considered to be a low-income community of environmental justice concern as defined above. The low-income population residing within 1 mile of the Lynden LPOE project area is approximately 47, or 3.1 percent of the entire population, while the low-income population residing within 1 mile of the Sumas LPOE project area is approximately 158,

or 6.4 percent of the entire population, neither of which meets the 50 percent, or the relative 120 percent or greater criteria used to identify communities with environmental justice concern.

Table 3.12-2 summarizes the percentage of disabled populations in census tracts within the ROI of each project area, Whatcom County, and Washington for comparison purposes. Similar to minority and low-income populations, disabled populations were evaluated using the absolute 50 percent and the relative 120 percent or greater criteria for potentially affected census tracts within the ROI. Census tract data was used in place of block groups, as data regarding disabled populations is not available for block groups. As a result of this, the ROI used for disabled populations is larger than the ROI used for minority and low-income populations. If a census tract’s percentage of disabled individuals meets the 50 percent criterion or is more than 120 percent of the total disabled population within Whatcom County (i.e., 15.4 percent), then the area is considered to be a disabled community of environmental justice concern as defined above. Within the Lynden LPOE ROI, approximately 10.6 percent of the population has at least one disability, while within the Sumas LPOE ROI, approximately 14.7 percent of the population has at least one disability, neither of which meets the 50 percent, or the relative 120 percent or greater criteria used to identify communities with environmental justice concern.

Table 3.12-2. Disabled Populations within Census Tracts in the Lynden LPOE and Sumas LPOE ROIs

Age Group	Lynden LPOE ROI		Sumas LPOE ROI		Whatcom County		Washington	
	Pop.	Total (%)	Pop.	Total (%)	Pop.	Total (%)	Pop.	Total (%)
Under 18 Years	53	0.8	29	0.5	2,373	1.0	73,641	1.0
18 to 64 Years	339	4.8	515	9.5	14,715	6.5	502,805	6.5
65 Years and Older	357	5.1	255	4.7	11,968	5.3	409,209	5.3
Total Disabled	749	10.6	799	14.7	29,056	12.8	985,655	12.8
Total Population	7,057	100	5,438	100	226,523	100	7,688,549	100

Source: USCB 2022a and USCB 2022c

The USEPA EJSCREEN model was also considered in identifying communities with environmental justice concerns. EJSCREEN serves as a screening-level tool to identify areas that may have a higher susceptibility to environmental justice impacts because of their demographic composition and existing exposure to contaminants or proximity to facilities. The model uses environmental indicators (as quantified in 13 pre-determined indexes) to quantify susceptibility to exposure to various environmental contaminants, including proximity to O₃ and other air toxins, lead paint, USTs, hazardous waste sites, among other sources. USEPA typically considers a project to be in an area of potential environmental justice concern when an EJSCREEN analysis for the impacted area shows 1 or more of the 13 indices at or above the 80th percentile in the nation and/or state. Based on a review of the USEPA’s EJSCREEN model, no block groups within a 1-mile radius of either of the project areas were identified as meeting or exceeding the 80th national percentile threshold for any environmental justice indicators (USEPA 2024e). Review of the EJSCREEN model also considered the potential for communities to experience critical service gaps (e.g., food deserts, medically underserved areas, transportation access, broadband gaps, lack of health insurance) and locations where tribal members and indigenous peoples reside. Based on the EJSCREEN model, no block groups within a 1-mile radius of either of the project areas were identified as meeting or exceeding the 80th national percentile threshold for critical service gap indicators.

Protection of Children’s Health and Safety

Table 3.12-3 shows the population of children under age 5 and ages 5 to 19 in block groups within 1 mile of the Lynden LPOE and Sumas LPOE project areas, in Whatcom County, and in Washington for comparison purposes. Children under age 5 make up about 5.2 percent of the total population surrounding the Lynden LPOE project area, and 10.4 percent of the total population surrounding the Sumas LPOE

project area. Children aged 5 to 19 make up about 25.2 percent of the total population surrounding the Lynden LPOE project area, and 22.9 percent of the total population surrounding the Sumas LPOE project area.

Table 3.12-3. Youth Populations in the Lynden LPOE and Sumas LPOE ROIs

Location	Children under Age 5 (%)	Children 5 to 19 Years (%)
Lynden LPOE ROI	5.2	25.2
Sumas LPOE ROI	10.4	22.9
Whatcom County	4.8	17.5
Washington	5.7	18.3

Source: USCB 2022d

3.12.2 Environmental Consequences

3.12.2.1 Methodology

Consideration of the potential consequences for environmental justice and effects on children’s health and safety requires three main components:

1. A demographic assessment of the affected community to identify the presence of minority, low-income, disabled, and youth populations that may be affected.
2. An assessment of potential impacts identified to determine if any result in major adverse impacts to the affected environment.
3. An integrated assessment to determine whether any disproportionate and adverse impacts exist for minority, low-income, or disabled groups and youth populations present in or near the project ROI.

To evaluate potential impacts on communities with environmental justice concerns and effects on children’s health and safety, GSA reviewed the project alternatives to determine whether any activities have the potential to cause the following within the ROI:

- A disproportionate and adverse effect on a minority, low-income, or disabled population; or
- A disproportionate and adverse environmental health and safety risks to children.

Generally, the presence of disproportionate and adverse effects on minority, low-income, or disabled populations, or to the environmental health and safety risks to children, equates to a major impact under NEPA. Determination of major impacts for environmental justice is informed by the USEPA’s Promising Practices for EJ Methodologies in NEPA Reviews (USEPA 2016). Context and intensity of impacts on the impacted communities is considered when determining whether impacts from the Proposed Action would be considered major under NEPA. Factors considered when determining significance of impacts to communities with environmental justice concern include:

- Whether the action results in environmental, economic, or health impacts due to special vulnerabilities, unique routes of exposure, or cultural practices;
- The degree to which the action may establish a precedent for future actions with major effects;
- Whether the action results in loss of significant cultural or historical resources; or
- Whether the action results in impacts with specific concern to minority, low-income, or disabled populations that are highly controversial.

Determination of major impacts on children's health and safety is informed by USEPA's *Memorandum Addressing Children's Health through Reviews Conducted Pursuant to the National Environmental Policy Act* and Section 309 of the Clean Air Act (USEPA 2012).

3.12.2.2 Lynden LPOE Alternatives

3.12.2.2.1 Lynden LPOE Alternative 1 – No Action Alternative

Lynden LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impact on communities with environmental justice concern or children's health and safety. Under Lynden LPOE Alternative 1, GSA would not modernize or expand the Lynden LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure, or changes to onsite operations would occur.

3.12.2.2.2 Lynden LPOE Alternative 2 – East-West Oriented LPOE Expansion

Construction

Environmental Justice

Lynden LPOE Alternative 2 would not have an impact on communities with environmental justice concern during demolition and construction activities, as no such communities are located within a 1-mile radius of the Lynden LPOE project area.

Protection of Children's Health and Safety

Lynden LPOE Alternative 2 would have no impacts on children's health and safety during construction, as there are no areas within 1 mile of the maximum proposed limits of disturbance that children may regularly visit. Therefore, children are not expected to spend time in the vicinity of the project area.

Operations

Environmental Justice

Lynden LPOE Alternative 2 would not have an impact on communities with environmental justice concern during operation, as no such communities are located within a 1-mile radius of the Lynden LPOE project area.

Protection of Children's Health and Safety

Lynden LPOE Alternative 2 would have no impacts on children's health and safety during operation, as operations would generally remain comparable to current operations of the existing LPOE but would be more efficient.

3.12.2.2.3 Lynden LPOE Alternative 3 – North-South Oriented LPOE Expansion

Construction

Lynden LPOE Alternative 3 would have no impact on communities with environmental justice concern and children's health and safety during demolition and construction activities similar to Lynden LPOE Alternative 2 as described above in Section 3.12.2.2.2 under *Construction*.

Operations

Lynden LPOE Alternative 3 operations would have no impact on communities with environmental justice concerns and children's health and safety similar to Lynden LPOE Alternative 2 as described above in Section 3.12.2.2.2 under *Operations*.

3.12.2.3 Sumas LPOE Alternatives

3.12.2.3.1 Sumas LPOE Alternative 1 – No Action Alternative

Sumas LPOE Alternative 1 would have no direct or indirect, short- or long-term, local or regional, adverse impact on communities with environmental justice concern or children's health and safety. Under Sumas LPOE Alternative 1, GSA would not modernize or expand the Sumas LPOE and current facilities and infrastructure at the existing LPOE would remain unchanged. In addition, no ground or subsurface disturbance, demolition and construction of facilities and infrastructure, or changes to onsite operations would occur.

3.12.2.3.2 Sumas LPOE Alternative 2 – Feasibility Study Preferred Alternative

Construction

Environmental Justice

Sumas LPOE Alternative 2 would not have an impact on communities with environmental justice concern during demolition and construction activities, as no such populations are located within a 1-mile radius of the Sumas LPOE project area.

Protection of Children's Health and Safety

Sumas LPOE Alternative 2 would have direct, short-term, minor to moderate, local, adverse impacts on children's health and safety during construction. Within 1 mile of the project area, children may be present in the residences that are adjacent to the east of the proposed limits of construction. Children also regularly attend Sumas Elementary School, which is located about 0.5 miles from the project area. Increased levels of noise created by construction equipment and vehicles could affect children's learning. Noise levels would be greatest when children are outdoors, which is for a short period of the day. Air emissions from construction could impact children, particularly those in homes close to the construction site. Children are especially vulnerable due to higher relative doses of air pollution, smaller diameter airways, and more active time spent outdoors and closer to ground-level sources of vehicle exhaust. Emissions would be reduced through the use of BMPs such as watering of soils during excavation.

Operations

Environmental Justice

Sumas LPOE Alternative 2 operations would not have an impact on communities with environmental justice concern, as no such populations are located within a 1-mile radius of the Sumas LPOE project area.

Protection of Children's Health and Safety

Sumas LPOE Alternative 2 operations would have a direct, long-term, negligible, local, beneficial impact on children's health and safety, as operations would generally remain comparable to current operations of the existing LPOE but would be more efficient.

3.12.2.3.3 Sumas LPOE Alternative 3 – Commercial Inspection West

Construction

Sumas LPOE Alternative 3 would have no impacts on communities with environmental justice concern and direct, short-term, minor to moderate, local, adverse impacts to children's health and safety during demolition and construction activities similar to Sumas LPOE Alternative 2 as described above in Section 3.12.2.3.2 under *Construction*.

Operations

Sumas LPOE Alternative 3 operations would have no impacts on communities with environmental justice concerns and direct, long-term, negligible, local, beneficial impacts to children's health and safety similar to Sumas LPOE Alternative 2 as described above in Section 3.12.2.3.2 under *Operations*.

3.12.2.3.4 Sumas LPOE Alternative 4 – Multi-Story Construction LPOE Expansion

Construction

Sumas LPOE Alternative 4 would have no impacts on communities with environmental justice concern and direct, short-term, minor to moderate, local, adverse impacts to children's health and safety during demolition and construction activities similar to Sumas LPOE Alternative 2 as described above in Section 3.12.2.3.2 under *Construction*.

Operations

Sumas LPOE Alternative 4 operations would have no impacts on communities with environmental justice concerns and direct, long-term, negligible, local, beneficial impacts to children's health and safety similar to Sumas LPOE Alternative 2 as described above in Section 3.12.2.3.2 under *Operations*.

3.12.2.4 Construction Sequencing Options

Impacts to communities with environmental justice concern would be similar under each construction option. Under both construction sequencing options, Americans with Disabilities Act (ADA) compliant access points would be maintained during construction for both visitors and workers at both LPOEs. The contractor would be required to ensure ADA access is appropriate and, where necessary, includes conspicuous signage to ensure continuity of access and service at the LPOEs for all visitors and workers. In addition, buildings, parking areas, sidewalks, and other facilities would be designed to comply with ADA requirements to ensure full access to all, including disabled populations, during operation of the expanded LPOEs.

Impacts to children's health and safety would be similar under each construction option; the primary difference would be the length of time that temporary construction related impacts would be expected. The Concurrent Option would last longer than that of the Sequential Option, which would increase the duration of the temporary construction impacts discussed above.

3.12.2.5 Lynden and Sumas LPOE Combined Alternative Implementation

Construction activities and operations would not have a major impact on environmental justice and protection of children's health and safety regardless of which combination of Lynden and Sumas LPOE action alternatives are selected. Potential environmental justice and protection of children's health and safety impacts from construction activities for all Lynden and Sumas LPOE action alternatives would be primarily local. Therefore, considering the distance between the two LPOEs, impacts to environmental justice and protection of children's health and safety from the selection of any combination of Lynden LPOE and Sumas LPOE action alternatives would not differ from those described under Construction for each alternative (see Section 3.12.2.2 and 3.12.2.3). Operations of all Lynden and Sumas LPOE action alternatives would not differ from those described under Operations for each alternative (see Sections 3.12.2.2 and 3.12.2.3). If Lynden LPOE Alternative 1 and Sumas LPOE Alternative 1 (No Action Alternatives) are both selected there would be no direct or indirect, short- or long-term, local or regional, adverse impact on environmental justice and protection of children's health and safety.

3.12.2.6 Impacts Reduction Measures

Measures to reduce construction impacts on children's health and safety, such as air emissions and noise from construction activities are discussed in Sections 3.6.2.7, Air Quality, Climate Change, and Greenhouse Gases; 3.9.2.6, Traffic and Transportation; and 3.10.2.6, Noise and Vibration, respectively.

CHAPTER 4 CUMULATIVE IMPACTS

4.1 INTRODUCTION

Cumulative impacts are defined by the CEQ regulations in 40 CFR 1508.1(g)(3) as “effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable 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 of time.” Taken together, these land use activities may result in cumulative effects on a variety of natural resources, such as vegetation, species and their habitats, water resources, and air quality. The construction and operations for these actions also can contribute to cumulative impacts on the urban environment, such as changes in community character, traffic patterns, noise, housing availability, and employment. According to CEQ’s cumulative impacts guidance, the cumulative impact analysis should be narrowed to focus on important issues at a national, regional, or local level.

The cumulative effects analysis presented in this EIS is based on the potential effects (direct and indirect) resulting from the demolition, expansion, construction, and operation of facilities for the LPOE (as described in Chapters 1 through 3), combined with other past, present, and reasonably foreseeable future actions that could have effects in the project area.

4.2 PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS

To identify potential past, present, and reasonably foreseeable future actions that could result in cumulative impacts when combined with the Lynden and Sumas LPOE modernization and expansion projects, GSA coordinated with the city of Lynden, city of Sumas, Whatcom County, and WSDOT. A review of the WSDOT State Transportation Improvement Program (STIP) was also conducted using the WSDOT online searchable web database (WSDOT 2024f). The STIP is a four-year prioritized list of multimodal transportation projects organized by state, Metropolitan Planning Organizations (MPOs), municipalities, Tribal Governments, and transit agencies. The MPO for the project areas is the Whatcom County Council of Government (Whatcom COG). The Whatcom COG covers the entire county of Whatcom and includes the county’s seven cities, the Port of Bellingham, the Lummi Nation, and other regional entities, like the Whatcom County Transit Agency. Projects were identified that would have the potential to induce cumulative impacts on the resources that the Proposed Action would impact long-term, either adversely or beneficially as detailed in Chapter 3 of this EIS.

4.2.1 Past Actions

Original construction of the existing Lynden LPOE (as well as construction of SR 539) occurred during the late 1980s in a rural, sparsely developed area with a few homes and agricultural fields. Original construction of the existing Sumas LPOE (as well as construction of SR 9) also occurred in the late 1980s in an urbanized area containing what appear to be, based on historic aerial imagery, primarily commercial buildings (NETR Online 2024). The area surrounding the existing Lynden LPOE remains sparsely developed with agricultural land and buildings, and residences. The existing Sumas LPOE is located in an urbanized area surrounded by commercial buildings and homes. No recent past projects in the vicinity of either LPOE have been identified other than standard highway maintenance. Both existing LPOEs are within areas that have experienced soil and groundwater contamination from past actions, primarily related to gas stations. Monitoring wells are present on the Lynden LPOE property and nearby properties. Monitoring wells are also present in the vicinity of the Sumas LPOE. Long-term, site-specific and local, adverse impacts from contamination continue to exist in the soil and groundwater. No foreseeable long-term impacts on any of the remaining resources impacted by the Proposed Action have persisted to the present day; therefore, past actions are not contributing to any other adverse cumulative effects beyond contaminated soils and groundwater.

4.2.2 Ongoing Actions

The only identified ongoing construction project in the vicinity of the Lynden and Sumas LPOEs is a fish passage project listed in the STIP. The SR 546/Unnamed Tributary to Fishtrap Creek – Fish Passage project will remove an existing fish barrier and replace it with fish passable structure (i.e., a new culvert with fish baffles or other fish passage infrastructure). This project began construction in 2023 and is scheduled to be completed sometime in 2024. This fish passage improvement project is located 5.5 miles southeast of the Lynden LPOE and 10.5 miles southwest of the Sumas LPOE.

In addition, there is ongoing monitoring, sampling and remediation occurring within or near both the Lynden and Sumas LPOEs as a result of past soil and groundwater contamination. For details regarding this ongoing monitoring, sampling, and remediation see Section 3.7, Human Health and Safety.

4.2.3 Potential Future Actions

In addition to the previously mentioned soil and groundwater monitoring, one potential future action was identified within the vicinity of the Lynden and Sumas LPOEs. The Sumas Avenue Reconstruction project was identified immediately south of the Sumas LPOE. This project extends from SR-547 to Johnson Creek Bridge. It would include reconstructing SR 9 to include bike lanes, on-street parking, and sidewalks with ADA sidewalk ramps at intersections. It is anticipated that construction of the project would occur during the 2028 to 2029 time period. This project would have potential to increase site-specific and local impervious areas due to roadway widening and sidewalks. It is anticipated that the project would be designed to minimize land acquisition and would not result in any major land use changes (i.e., displacements or changes in use) as it is reconstruction of an existing highway. There is the potential for the Sumas Avenue project to encounter local soil and groundwater contamination.

Following is an overview of planned road repair and other improvement projects that were identified in the broader area surrounding the LPOEs.

- The proposed Benson Road, Sunrise Drive to Badger Road, improvements project is about 4 miles southeast of the Lynden LPOE and 11 miles southwest of the Sumas LPOE. The Benson Road project area is in agricultural use to the west and residential and institutional (hospital) to the east. It is anticipated that no major land use changes would result from the project. Some minor increase in impervious area could be expected if the project included widening. It is anticipated that this project would begin construction sometime in 2026.
- A similar improvement project, Blair Drive Improvements Reeds Lane to SR 544, would occur about 12.5 miles southeast of Lynden LPOE and 8 miles southwest of Sumas LPOE. This project would be similar to the Benson Road project and would be anticipated to possibly involve some increase in impervious areas but no major land use changes. Land uses surrounding Blair Drive are residential.
- The Bradley Road Safe Routes Pedestrian Improvements project is located just east of Vinup Road to Line Road in Lynden. The project area is about 6 miles southeast of the Lynden LPOE and 12 miles southwest of the Sumas LPOE. This project would also be anticipated to have similar impacts as the Benson Road and Blair Drive projects. It would be anticipated to possibly involve some increase in impervious areas but no major land use changes. Land uses surrounding Bradley Road are residential.
- The Liberty Street Sidewalk Gap Removal project would extend from British Columbia Avenue to 17th Street in the city of Lynden. The project would involve some widening to construct a missing section of sidewalk. No major land use changes would occur in what is currently a residential area. Construction is anticipated in 2027.

- The SR 544 South Everson Sidewalk Improvements Robinson Street to Everson Road project is about 8 miles southwest of the Sumas LPOE and 12 miles southeast of the Lynden LPOE. The project would be similar to the Liberty Street project in terms of impacts. Construction is anticipated in 2025.
- The STIP also included various pavement rehabilitation and preservation projects, like chip and seal, and projects to replace existing transit vehicles with cleaner fuel and electric vehicles throughout the 2024 to 2027 time period.

4.2.4 Impacts Analysis

As stated in Section 4.2.2, one ongoing construction project (culvert replacement for fish passage purposes) and one ongoing action (soil and groundwater contamination monitoring) were identified. The fish passage project has no potential to contribute to cumulative impacts from the Proposed Action.

All anticipated future projects discussed in Section 4.2.3, other than the Sumas Avenue Reconstruction project, are located several miles from both LPOEs and would not contribute to any site-specific or localized impacts from the Proposed Action. The Sumas Avenue Reconstruction project does have the potential to contribute a cumulative impact to local surface waters due to increased runoff from potentially increased impervious surface area. The Sumas LPOE project and the Sumas Avenue Reconstruction project would both include appropriate stormwater design and controls to comply with federal, state, and local regulations, as appropriate. These measures would minimize any long-term surface water impacts from increased impervious areas. The proposed projects would each need to ensure that post-construction runoff volumes match or reduce pre-construction runoff rates and therefore would have the potential for only negligible, long-term, local, cumulative impacts.

Greenhouse gas emissions would be generated during construction of any of the referenced projects. However, construction emissions would be short-term and would dissipate once construction was completed. No long-term, cumulative impact on air quality is anticipated when these projects are combined with the Proposed Action. The other ongoing and proposed actions identified in Sections 4.2.2 and 4.2.3 would not have potential for long-term air quality impacts as they are all improvements to existing transportation facilities that would not be anticipated to have any impact on traffic composition or volumes. It is anticipated that no cumulative impact to regional air quality would result from the Proposed Action and the identified projects. The aforementioned projects that would replace fossil fuel transit vehicles with electric/cleaner energy vehicles would also contribute cumulatively to an improvement in regional air quality.

The Proposed Action would have the potential to encounter soil and groundwater contamination, as would the Sumas Avenue Reconstruction Project. Both projects would be designed and constructed following applicable federal, state, and, as appropriate, local regulations regarding protection of the public and workers from contamination. The projects have some potential to result in at least some remediation of the contamination due to soil removal and replacement with clean fill. None of the identified projects would be anticipated to contribute to the existing contamination. Therefore, while soil and groundwater contamination is an ongoing site-specific and local issue to the Proposed Action project area, with proper mitigation measures during construction, none of the identified projects, including the Proposed Action, would contribute to a cumulative adverse impact on public health and safety.

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CHAPTER 5 ENVIRONMENTAL TRADE-OFFS AND COMMITMENTS OF RESOURCES

5.1 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE HUMAN ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Section 102(C)(iv) of NEPA [42 U.S.C. § 4332] and 40 CFR 1502.16 require an EIS to address “*the relationship between local short-term uses of the human environment and the maintenance and enhancement of long-term productivity.*” This involves environmental tradeoffs and the consideration of whether a Proposed Action is sacrificing a resource value that might benefit the environment in the long-term, for some short-term value to the project proponent (GSA) or the public.

The purpose of the Proposed Action is to support the mission of CBP and other tenant agencies by bringing the Lynden and Sumas LPOE facilities and operations in line with current land port design standards and operational requirements while addressing existing deficiencies identified with the ongoing port operations. As described in Section 1.3, these deficiencies relate to the inadequate capacity of existing facilities to meet increasing demand and spatial constraints that cause traffic congestion and safety issues for employees and users of the LPOE.

5.2 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF FEDERAL RESOURCES

Section 102(C)(v) of NEPA [42 U.S.C. § 4332] requires an EIS to address “any irreversible and irretrievable commitments of federal resources which would be involved in the proposed action should it be implemented.” Irreversible and irretrievable commitments of resources mean losses to or impacts on natural resources that cannot be recovered or reversed.

More specifically, “irreversible” implies the loss of future options. Irreversible commitments of resources are those that cannot be regained, such as permanent conversion of wetlands and loss of cultural resources, soils, wildlife, agricultural and socioeconomic conditions. The losses are permanent and incapable of being reversed. “Irreversible” applies mainly to the effects from use or depletion of nonrenewable resources, such as fossil fuels or cultural resources, or to those factors, such as soil productivity, that are renewable only over long periods of time.

“Irretrievable” commitments are those that are lost for a period of time, such as the temporary loss of timber productivity in forested areas that are kept clear for use as a right-of-way, road, or winter sports site. The lost forest production is irretrievable, but the action is not irreversible. If the use changes back again, it is possible to resume timber production.

5.2.1 Irreversible Commitments of Federal Resources

Under the Proposed Action, the following irreversible commitments of federal resources would occur:

- Consumption of fossil fuels (primarily diesel) and lubricants by heavy construction equipment (e.g., bulldozers, graders, scrapers, excavators, loaders, trucks) used to demolish structures, excavate land, and develop structures for the upgraded LPOEs and associated facilities;
- Materials used to construct the new facilities, including cement/concrete, soil cement, steel, iron and other metallic alloys, copper wiring, PVC pipe, plastic, etc.;
- Energy, supplied by fossil fuels or some other source of electricity, used over the operational life and maintenance of the upgraded LPOEs and associated facilities;
- Land required for development at the proposed expansion areas; and
- Water used for construction purposes.

5.2.2 Irretrievable Commitments of Federal Resources

As noted above, “irretrievable” commitments of federal resources are those that are lost for a period of time but not permanently. The Proposed Action would include the loss of vegetation such as trees and other maintained landscaped areas. However, GSA would incorporate new vegetated landscaped areas throughout the modernized and expanded LPOEs as part of the project design using native species and seed mixes.

CHAPTER 6 CONSULTATION AND COORDINATION

6.1 SCOPING AND PUBLIC ENGAGEMENT

The NEPA process provides several opportunities for public involvement to include public scoping and a public comment period following publication of the Draft EIS. During each opportunity for public involvement, interested and affected parties (i.e., stakeholders) may express their concerns and provide their views about:

- The project and its possible impacts on the natural and human environments;
- What should be addressed in the analysis and evaluation of the Proposed Action; and
- The adequacy of the NEPA analysis and documentation of potential impacts in the EIS.

Public participation with respect to decision-making on the Proposed Action is guided by GSA's implementing procedures for compliance with NEPA (GSA Order ADM 1095.1F, *Environmental Considerations in Decision Making* and GSA PBS *NEPA Desk Guide*). GSA considered comments from interested and affected parties in the preparation of the Draft EIS.

6.1.1 Scoping Phase for the Draft EIS

Scoping is an early and open process for determining the scope of issues to be addressed and for identifying potential major issues related to a proposed action. Internal scoping began with GSA and CBP staff identifying the purpose and need for the project, defining the proposed action, determining the environmental issues potentially required for detailed analysis, eliminating issues that are out of scope of the project, listing data needs, identifying cumulative actions, and confirming the appropriate NEPA path forward. External scoping began when the public and all interested stakeholders were notified about the Proposed Action and comments on the project and potential environmental issues were solicited.

To formally initiate the NEPA process for the Draft EIS, GSA published a Notice of Intent (NOI) to prepare a Draft EIS in the *Federal Register* on August 8, 2023. After issuing the NOI, GSA conducted a scoping process that included hosting a virtual public scoping meeting and consultation with various interested governmental agencies and stakeholders. GSA also published advertisements in the *Ferndale Record* and *Lynden Tribune* newspapers on August 9 and 16, 2023; the GSA Northwest/Arctic Region 10 websites; and on social media; and mailed letters to interested parties, in the days preceding the public scoping meeting. The advertisement and announcements indicated GSA's intent to prepare a Draft EIS and conduct a public scoping meeting; provided a brief description of the project; identified the public scoping meeting location and time; and included instructions on how to access the meeting and submit comments.

The virtual public scoping meeting was held on August 23, 2023 from 5:00 to 7:00 PM Pacific Standard Time (PST) via Zoom. Approximately 47 people attended the virtual scoping meeting. The meeting began with a presentation and then was followed by a public comment session where members of the public had an opportunity to provide feedback or questions on the project. The virtual scoping meeting was recorded and uploaded to the GSA YouTube channel (<https://www.youtube.com/watch?app=desktop&v=-YezqVX4Fqc>) and the GSA project websites (see Section 6.2.2).

Outside of the public scoping meeting, GSA invited written comments to be submitted via mail or email throughout the scoping period. More specifically, GSA invited comments on the key topics that should be covered in the Draft EIS; examples of potential adverse and beneficial impacts from the Proposed Action; and any other relevant information. Comments were submitted using comment forms and emails. A total of 57 unique commenters provided input during the scoping period. GSA used the results of the scoping efforts to further define the scope and areas of emphasis (or focus) of the Draft EIS.

6.1.2 Community Engagement Meetings

Although not required by NEPA, GSA held two in-person community engagement meetings. The first meeting was held in the city of Sumas on November 6, 2023 and the second meeting was held in the city of Lynden on April 16, 2024. At these meetings, GSA and CBP updated interested members of the public about the Lynden LPOE and Sumas LPOE modernization and expansion projects. The meetings also provided the public a chance to directly engage GSA and CBP leadership regarding their questions and concerns.

6.1.3 Draft EIS Public Comment Period

The Final EIS will provide a description of the Draft EIS comment period, including a summary of comments received on the Draft EIS.

6.2 FEDERAL AGENCY CONSULTATION

GSA determined that implementation of any combination of Lynden and Sumas action alternatives may affect but would not likely adversely affect the yellow-billed cuckoo and monarch butterfly, as detailed in Section 3.4. Therefore, GSA is consulting with the USFWS in accordance with Section 7 of the ESA regarding the potential impacts to protected species from the Proposed Action. The Final EIS will include all correspondence related to GSA's consultation with the USFWS in Appendix A.

As detailed in Section 3.5, GSA is coordinating with NRCS to determine if mitigation to reduce potential impacts to farmland or farmland soils from the proposed modernization and expansion of the Lynden and Sumas LPOEs is required. The Final EIS will include all correspondence related to this NRCS coordination in Appendix A.

6.3 STATE AGENCY CONSULTATION

GSA is in the process of conducting formal consultation with the Washington State Department of Archaeology and Historic Preservation (referred to throughout this document as the SHPO) under Section 106 of the NHPA. GSA initiated consultation with the SHPO regarding the Lynden LPOE project and the Sumas LPOE projects on December 21, 2022, and December 20, 2022, respectively, in separate correspondences. On June 9, 2023, GSA provided the APEs defined for each project, again in separate correspondences. The SHPO concurred with both project APEs on June 14, 2023.

GSA provided the historic architectural survey reports (dated October 2023) for both projects to the SHPO on November 14, 2023. The historic architectural survey reports identified six structures within the Lynden LPOE APE and seven structures within the Sumas LPOE APE that are greater than 50 years old; however, GSA does not recommend any of the identified properties as eligible for the NRHP. The SHPO provided a response dated November 15, 2023, requesting the following information: "Please create separate HPIS [Historic Property Inventory] for each building associated with the residence. There appears to be a few agricultural outbuildings along with the residence. As stated within the Washington Standards for Cultural Resource Reporting, each building/structure needs its own HPI." The SHPO provided a second response dated November 15, 2023, concurring with GSA's determination that the seven structures identified within the APE for the Sumas LPOE project are not eligible for listing in the NRHP. GSA provided the requested information regarding the Lynden LPOE project, and in a response dated November 21, 2023, SHPO concurred with GSA's determination that the six structures identified within the APE for the Lynden LPOE project are not eligible for listing in the NRHP.

GSA conducted pedestrian archaeological surveys between April 22 and 24, 2024 to examine exposed ground surfaces for cultural resources and subsurface excavations using shovel test probes to determine if previously documented or unknown sites were present on the Lynden and Sumas LPOEs and maximum proposed limits of disturbance. The archaeological surveys did not identify any cultural resources within either study area (ASM Affiliates 2024). As a result of these surveys, GSA submitted their findings to the

SHPO on May 31, 2024 recommending No Historic Properties Affected and that the projects proceed under an IDP. On June 3, 2024, SHPO concurred with GSA's recommendation of No Historic Properties Affected with the stipulation of proceeding with an IDP. Consultation letters documenting GSA's correspondence with the SHPO can be found in Appendix A.

6.4 TRIBAL CONSULTATION

GSA initiated Section 106 consultation with relevant tribal governments through their respective THPO to help inform the analysis of the project. Affiliated tribes were sent letters on December 28, 2022, to inform them of the scoping period for the project and preparation of the Draft EIS and seeking their input on the APE for archaeological studies. The following tribes were contacted:

- Confederated Tribes of the Colville Reservation
- Lummi Nation
- Nooksack Tribe

The Confederated Tribes of the Colville Reservation responded on October 23, 2023, indicating there was no comment. No response from the Lummi Nation or the Nooksack Tribe was received. Letters and responses are included in Appendix A.

The same tribes will be sent letters regarding the availability of the Draft EIS, to include details of the public hearing and public review period for the Draft EIS.

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B.A. Anthropology; Archaeology Concentration
6 years of experience

CHAPTER 9 LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS CONTACTED

U.S. Federal Agencies

Army Corps of Engineers
Customs and Border Protection
Department of Agriculture
Department of the Interior
Department of Transportation
Environmental Protection Agency
Food and Drug Administration
Federal Emergency Management Agency
Fish and Wildlife Service
Natural Resources Conservation Service

Canadian Government/Agencies/Organizations

Abbotsford International Airport
Aldergrove Regional Park
Applebarn Pumpkin Farm
Birchwood Dairy Farm
Customs and Border Services Agency
City of Abbotsford
City of Aldergrove
Kensington Prairie Farm

Tribal Nations and Organizations

Confederated Tribes of the Colville Reservation
Lummi Nation
Nooksack Indian Tribe

State Agencies

Department of Archaeology and Historic Preservation
Department of Ecology
Department of Fish and Wildlife
Department of Natural Resources
Department of Transportation

Local Government Agencies

City of Blaine
City of Lynden
City of Sumas

Whatcom County
Whatcom Council of Governments

Miscellaneous Organizations

American Legion
Burlington Northern Santa Fe
Community to Community Development
Delta Water Association
Duty-Free Americas
International Mobility and Trade Corridor Program
Lynden Public Library
Lynden Washington Chamber of Commerce
Nooksack Salmon Enhancement Association
Paragon Feeds Corporation
Recreation Northwest
Sumas Washington Chamber of Commerce
Whatcom Land Trust
Whatcom Parks and Recreation Foundation
Wild Whatcom

Elected Officials

Maria Cantwell, U.S. Senator
Patty Murray, U.S. Senator
Rick Larsen, U.S. Representative
Bruce Bosch, Mayor of Sumas
Scott Korthuis, Mayor of Lynden
Mary Lou Steward, Mayor of Blaine