ALCAN LAND PORT OF ENTRY
EXPANSION AND MODERNIZATION
FINAL ENVIRONMENTAL IMPACT STATEMENT
ALCAN, ALASKA

Lead Agency: U.S. General Services Administration, Region 10

Cooperating Agency: Native Village of Northway

September 2024

Cover Sheet

Title of Proposed Action: Alcan Land Port of Entry Expansion and Modernization in Alcan, Alaska

Subject: Final Environmental Impact Statement

Lead Agency: United States General Services Administration

Cooperating Agency: Native Village of Northway

County/State: Southeast Fairbanks Census Area, Alaska

Abstract: The United States General Services Administration Northwest/Arctic Region (Region 10) prepared this Final Environmental Impact Statement to evaluate the effects to the human and natural environment resulting from the expansion and modernization of the Alcan Land Port of Entry. The potential effects of a “no action” alternative and an action alternative on twelve resource areas were evaluated in detail. Effects were both adverse and beneficial and ranged from negligible to major over the short and long term. Mitigation measures and best management practices were identified to reduce potential effects on impacted resources.

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Acronyms and Abbreviations

AAC	Alaska Administrative Code
ACMs	Asbestos Containing Materials
AKDEC	Alaska Department of Environmental Conservation
AKDOT&PF	Alaska Department of Transportation and Public Facilities
AKDNR	Alaska Department of Natural Resources
ANILCA	Alaska National Interest Lands Conservation Act
APE	Area of Potential Effect
AST	Aboveground Storage Tank
B.C.E.	Before Common Era
BCC	Birds of Conservation Concern
BMP	Best Management Practice
C.E.	Common Era
CBP	U.S. Customs and Border Protection
CBSA	Canada Border Services Agency
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO_2e	Carbon Dioxide Equivalent
CT	Census Tract
CWA	Clean Water Act
dB	Decibels
dBA	Decibels (A-weighted for human response)
DHHS	U.S. Department of Health and Human Services
DNL	Day-night Sound Level
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EJ	Environmental Justice
EO	Executive Order
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
ft	Feet
GHG	Greenhouse Gas
GSA	U.S. General Services Administration

GSF	Gross Square Feet
HEPA	High Efficiency Particulate Air
HUBZone	Historically Underutilized Business Zone
HWP	Hazardous Waste Program
IECC	International Energy Conservation Code
L_{eq}	Equivalent Sound Level
LBP	Lead-based Paint
LEED®	Leadership in Energy and Environmental Design
LPOE	Land Port of Entry
MBTA	Migratory Bird Treaty Act
MOU	Memorandum of Understanding
MP	Milepost
M_W	Moment Magnitude
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOI	Notice of Intent
Northway	Native Village of Northway
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NWR	National Wildlife Refuge
OSHA	U.S. Occupational Safety and Health Administration
PBS	Public Buildings Service
PCB	Polychlorinated Biphenyl
pCi/L	Picocuries per liter of air
PCPI	Per Capita Personal Income
POV	Privately-owned Vehicle
RCRA	Resource Conservation and Recovery Act
ROC	Region of Comparison
ROI	Region of Influence
RV	Recreational Vehicle

SBA	U.S. Small Business Administration
SC-GHG	Social Cost of Greenhouse Gases
sf	Square Feet
SHPO	State Historic Preservation Office
SWPPP	Stormwater Pollution Prevention Plan
U.S.	United States
USC	United States Code
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank

EXECUTIVE SUMMARY

INTRODUCTION

The United States (U.S.) General Services Administration (GSA) Northwest/Arctic Region (Region 10) prepared this Final Environmental Impact Statement (EIS) to evaluate the effects to the human and natural environment resulting from the expansion and modernization of the Alcan Land Port of Entry (LPOE). The Alcan LPOE is located at Milepost (MP) 1221.8 on the Alaska Highway and is the only 24-hour LPOE serving personal vehicles and commercial traffic between the Yukon Territory, Canada, and mainland Alaska. GSA proposes to expand and modernize a new LPOE and housing units to replace the existing facilities at Alcan, Alaska.

This Final EIS analyzes two alternatives to the project: (1) Alternative 1 - Expansion and Modernization in Place, which involves the construction of a new, expanded replacement LPOE at the existing LPOE site, and (2) the No Action Alternative, which assumes the existing LPOE would continue to operate under current conditions and the construction of a new or expanded LPOE would not occur. Under Alternative 1, GSA and U.S. Customs and Border Protection (CBP) are considering an option to pursue joint operation of the Alcan LPOE with the Canada Border Services Agency (CBSA). CBSA and CBP officers would jointly operate the facility to conduct inspections of U.S. commercial vehicles and privately-owned vehicles (POVs) entering Canada.

GSA has prepared this Final EIS in compliance with the National Environmental Policy Act (NEPA), as amended (42 United States Code {USC} 4321 *et seq*.), NEPA regulations at 40 Code of Federal Regulations (CFR) 1500-1508, the GSA Public Buildings Service (PBS) NEPA Desk Guide, and other relevant federal and state laws and regulations. GSA is the lead agency for this Final EIS, and the Native Village of Northway (Northway) is a cooperating agency.

PURPOSE AND NEED

The purpose of the project is to expand and modernize the Alcan LPOE in order to improve the LPOE's functionality, capacity, security, comfort for cross border travelers and federal employees, and sustainability.

The project is needed to update the current facilities which are over 50 years old. Buildings within the inspection facility cannot effectively support CBP infrastructure, enforcement operations, public and employee safety, and housing needs. Updated security initiatives require increased capacity and new inspection technology to be installed and implemented. There is not a dedicated firing range on site, and CBP personnel must travel to Fairbanks, Alaska for weapons training and qualification. In addition, installation of energy and water conservation measures, security system updates, safety improvements, and replacement of housing units are needed across the Alcan LPOE to meet the resource efficiency, safety, and comfort standards of CBP. The current layout of inspection areas does not allow for optimal traffic flow, which can cause congestion and delays in processing times.

PROJECT ALTERNATIVES

Alternative 1 - Expansion and Modernization in Place

Alternative 1 would expand and modernize the Alcan LPOE on the existing LPOE site. Facility expansion and modernization would include site preparation, facility construction and renovation, and demolition and disposal of existing structures. GSA would acquire a use permit or develop an agreement with the U.S. Fish and Wildlife Service (USFWS) for use of up to 6.5 acres of land owned by the Tetlin National

Wildlife Refuge (NWR)[1]. Based on CBP and GSA design standards, the total enclosed building area required for the modernized Alcan LPOE and housing would be 129,145 square feet (sf) with an additional 3,820 sf of booths and canopies and 3,600 sf of outdoor parking and hard surfaces. Under Alternative 1, the following facilities would be constructed: a new Main LPOE Building, three inbound inspection lanes equipped with hi-lo booths (i.e., booths with high and low windows for processing both POV and commercial traffic), an indoor firing range, a total of 18 housing units, a new Recreation Building, and a helicopter landing zone. The existing Service Building would be renovated and the existing Main LPOE Building would be renovated and converted to an auxiliary support space. The existing triplex, fourplex, recreation, and support buildings would be demolished and disposed. Given the seasonal constraints of construction work in Alaska, Alternative 1 would likely follow a 6-year implementation timeline with three phases: site preparation, new building construction, and building switch-over. Site preparation, construction, demolition, and disposal would be phased to avoid disruption of LPOE operations.

No Action Alternative

The No Action Alternative assumes that no construction or renovations to the existing Alcan LPOE would occur. Minor repairs would occur as needed, and maintenance and operation of the existing facilities would continue. This alternative would not meet the purpose and need of the project as the expansion and modernization of existing facilities to address deficiencies of the Alcan LPOE would not occur.

PUBLIC INVOLVEMENT

GSA conducted internal scoping and external scoping, which included hosting a public scoping meeting as part of the NEPA process and development of the Draft EIS. Internal scoping consisted of the preparation of the Feasibility Study and initial development of action alternatives. GSA notified the public of the scoping meeting using multiple channels of communication, including publication of a Notice of Intent (NOI); a public press release on the GSA project website; advertisements in the *Fairbanks Daily News-Miner*, *Delta Wind*, and *Anchorage Daily News*; letters to interested parties identified through stakeholder analysis; and social media posts. GSA held a virtual public meeting on Wednesday, April 26, 2023 from 5:00 to 7:00 PM Alaska Daylight Time on the Zoom online meeting platform.

GSA invited scoping comments to obtain input from the public, agencies, and other interested parties on the proposed alternatives. More specifically, GSA invited comments on the key topics that should be covered in the Draft EIS, examples of potential adverse and beneficial effects from the considered alternatives, and any other relevant information. GSA offered multiple ways to submit comments, including comment forms, letters, emails, and spoken comments at the public scoping meeting. A total of 11 commenters submitted 33 different comments during the scoping period (several commenters submitted more than one comment). Public scoping meeting materials and the Final Public Scoping Report are also available on the project website at: https://www.gsa.gov/alcan.

GSA invited the public to review and comment on the Draft EIS with notifications that included newspaper ads, letters to interested parties, project website updates, and social media posts. Newspaper ads were run in the *Fairbanks Daily News-Miner*, *Delta Wind*, and *Anchorage Daily News*, and interested party letters were mailed and emailed on February 26, 2024. The public comment period started on

[1] The considered acreage from the Tetlin NWR may already be owned by GSA as the formal property boundary has not been surveyed since the original acquisition for the Alcan LPOE. GSA plans to complete land surveys during the development of the Project Development Study as part of the planning phase of the project. For the purposes of this Final EIS, GSA assumed that the 6.5 acres are still under control of the Tetlin NWR and refers to this property as the use of up to 6.5 acres from the Tetlin NWR.

February 26 2024, with the publication of a Notice of Availability that ran in the *Federal Register*, and ended on April 11, 2024. GSA hosted a hybrid public meeting consisting of an in-person component in Northway, Alaska, and a virtual component on Zoom on Tuesday March 12, 2024, from 6:00 to 8:00 PM Alaska Daylight Time. A total of 11 people attended the public meeting in addition to personnel from GSA, CBP, and Solv LLC (hereafter Solv) (GSA's environmental services contractor).

The public meeting included a 1-hour presentation followed by an open comment session for the public to ask questions or provide comments on the project. The presentation provided background on the project and an explanation of the NEPA process. The alternatives and impacts analysis were presented, including mitigation measures. GSA recorded the presentation and posted it to the GSA YouTube channel at https://www.youtube.com/watch?v=ACq15h5mCtg and the project website at https://www.gsa.gov/alcan.

Comments on the Draft EIS were received via mail, email, and during the public comment portion of the March 12, 2024 public meeting. A total of nine commenters submitted 60 different comments (i.e., many commenters submitted more than one comment).

ENVIRONMENTAL CONSEQUENCES

Table ES-1 presents a summary of the assessed environmental consequences associated with Alternative 1 and the No Action Alternative for the resources analyzed in the Final EIS. Mitigation measures and best management practices (BMPs) are included for each resource discussed.

Table ES-1. Effects Comparison, Mitigation Measures and Best Management Practiceses

Resource Area	Alternative 1 – Expansion and Modernization in Place	No Action Alternative	Mitigation Measures and BMPs
Land Use	**Beneficial, direct, local, long-term, negligible** effects as proposed project activities would increase the suitability of land to support the current use. **Adverse, direct, local, long-term, minor** effects to the Tetlin NWR resource area because an up to 6.5-acre area of refuge property would be set aside for a non-conservation use (helicopter landing) that would decrease the value of the land for habitat use due to noise and visual disturbance to wildlife.	**No effects** on land use.	None
Geology, Topography, and Soils	**Adverse, direct, local, long-term, negligible** effects to geology due to blasting activities. **Adverse, direct, site-specific, long-term, minor** effects on topography due to grading which would flatten and eliminate the topographic features in an approximately 14,400 sf area of Airs Hill south of the existing LPOE. **Adverse, direct, local, short-** and **long-term, moderate** effects on soils from erosion, compaction, loss of natural soil horizons from grading and covering of soils with impervious surfaces. **No effects** on permafrost.	**No effects** to geology and topography. **Adverse, direct, site-specific, long-term, negligible** effects to soils from regular maintenance activities.	BMPs to address potential geologic hazards including radon-resistant construction techniques to prevent radon pervasion into facilities such as using gravel as gas permeable layer located below the foundation; a gas and vapor barrier between gravel and foundation; a vent pipe from the gravel; and thorough sealing and caulking of foundation itself. GSA's Seismic Mitigation Program would be followed to ensure seismic preparedness.

Resource Area	Alternative 1 – Expansion and Modernization in Place	No Action Alternative	Mitigation Measures and BMPs
Geology, Topography, and Soils Continued			An Alaska Construction General Permit would be required to satisfy the National Pollutant Discharge Elimination System (NPDES) program. Development of a stormwater pollution prevention plan (SWPPP) to document the BMPs to be used to control soil erosion and sedimentation, including installing silt fencing and sediment traps, and reestablishing vegetation to minimize erosion and sedimentation. Revegetation around the buildings, parking lots, and other infrastructure where soils remain exposed after construction with regionally appropriate native plant species. BMPs to prevent impacts to permafrost from earthwork activities include constructing insulated foundations.

Resource Area	Alternative 1 – Expansion and Modernization in Place	No Action Alternative	Mitigation Measures and BMPs
Water Resources	**Adverse, direct, local, short-term, minor** effects to stormwater during project-related activities and **adverse**, **direct, local, long-term, negligible** effects to stormwater during LPOE operations. **Adverse**, **direct**, **local, short-term, minor** effects to surface waters during project-related activities and **adverse**, **direct**, **local, long-term, negligible** effects to surface waters during LPOE operations.	**Adverse**, **direct**, **local**, **long-term, negligible** effects to water resources.	BMPs would be implemented in accordance with the Alaska Construction General Permit, which establishes limits on pollutant discharges, monitoring and reporting requirements, and other provisions to minimize potential discharges and impacts to water quality. Development of a SWPPP to document the BMPs to be used on the construction site to reduce or prevent the discharge of pollutants. BMPs to prevent or mitigate the escape of sediment and manage or mitigate risk of spills include erosion control strategies during project activities, such as temporary seeding, use of silt fencing, installation of gravel construction entrances/exits, installation of temporary sediment basins, and other methods as determined during detailed design; and drop cloths, proper storage of chemicals, and immediate treatment of spill areas with absorbents and soil removal. Permanent stormwater BMPs, such as detention ponds, vegetated swales, or level spreaders, would be installed in compliance with local, state, and federal law. BMPs would be regularly maintained by mowing, removing debris, and repairing damage.

Resource Area	Alternative 1 – Expansion and Modernization in Place	No Action Alternative	Mitigation Measures and BMPs
Biological Resources	**Adverse**, **direct, local**, **short-term, negligible** effects to vegetation due to the destruction and removal of native plant species during project activities and **beneficial**, **direct**, **local**, **short-** and **long-term, negligible** effects to vegetation due to native replanting after project activities. **Adverse**, **direct, local**, **short-** and **long-term, negligible** effects to wildlife due to the removal of minimal available habitat and disturbances from noise and activity during project activities and operation of the expanded port. **Adverse, direct, local, long-term, moderate** effects on wetlands if there is filling of 0.3 acres of wetlands and destruction of wetland vegetation (0.3 acres represents a small fraction of the large wetland that surrounds the project site). **Adverse**, **direct**, **local**, **short-term, negligible** effects on migratory birds due to displacement from habitat surrounding the area of analysis during project activities. Also, **adverse, direct, local, long-term, negligible** effects due to operational, traffic, and routine maintenance disturbances.	**Adverse**, **direct, local**, **long-term, negligible** effects to biological resources due to noise and other disturbances to wildlife from operations and routine maintenance activities occurring at the existing port.	BMPs to minimize introduction and establishment of invasive species include equipment washing; proper disposal of invasive species found during project activities; use of existing roadways by construction vehicles to access the project area to avoid excessive disturbance to vegetation; replanting of disturbed areas with native vegetation after the end of project activities. BMPs to minimize effects to wildlife during project activities and operations include observation of maximum speed limits by construction vehicles to minimize the possibility for any wildlife-vehicle collisions; staging and stockpile areas located within or immediately adjacent to the construction footprint to reduce the area of habitat disturbance. BMPs to minimize erosion and potential effects to wetlands include the installation of a silt fence around the construction site and placement of gravel or rip-rap for heavy vehicle transit. A SWPPP would be implemented to minimize erosion and avoid potential effects of project activities to wetlands. Compensatory mitigation measures would be completed if wetlands are destroyed. BMPs to minimize effects to migratory birds include limits to site work to occur outside of migratory Birds of Conservation Concern (BCC) nesting season; conducting nest surveys to confirm presence or absence of nests in the area before work starts; and establishing buffers around active nests.

Resource Area	Alternative 1 – Expansion and Modernization in Place	No Action Alternative	Mitigation Measures and BMPs
Cultural and Tribal Resources	**Adverse, direct** and **indirect**, **local**, **short-term, minor** effects on the setting of the Alaska Military Highway Telephone and Telegraph Line due to noise and visual disturbance from project activities. No archaeological resources have been identified within the project area. If archaeological resources were discovered during project activities, there would be potential **adverse** or **beneficial, direct, local, long-term** effects to cultural resources. Due to the level of past ground disturbance, it is unlikely archaeological resources encountered would be in their original context, so **direct, local, short-term, negligible** effects would likely occur in the area of potential effect (APE). **Adverse**, **direct**, **local**, **short-term, minor** effects on subsistence activities could occur due to increased noise, emissions, and visual intrusions during project activities. **Adverse**, **direct**, **local**, **long-term, moderate** effects on subsistence activities due to continued access restrictions to traditional and modern fishing camps in the vicinity of the existing LPOE.	**Adverse**, **direct**, **local**, **long-term, moderate** effects on tribal resources due to continued access restrictions to traditional and modern fishing camps in the vicinity of the existing LPOE.	The design phase would avoid the Alaska Military Highway Telephone and Telegraph Line to the maximum extent feasible. If adverse effects to the historic telephone line are identified during the design phase, then GSA would develop and implement mitigation measures under the Section 106 process. GSA contractors would be provided with an Inadvertent Discovery of Cultural Resources Plan for cultural resources and human remains, which would be implemented if such materials were uncovered during project activities. GSA would consult with the Alaska State Historic Preservation Office (SHPO), Northway, and the Tanana Chiefs Conference to resolve any potential adverse effects resulting from an inadvertent discovery.

Resource Area	Alternative 1 – Expansion and Modernization in Place	No Action Alternative	Mitigation Measures and BMPs
Environmental Justice (EJ)	**Beneficial, direct, regional, short-term, moderate** effects due to jobs created in the Southeast Fairbanks Census Area that could employ members of EJ communities. **Beneficial, indirect, regional, short-term, moderate** economic effects depending on the amount of material purchased from local vendors. **Adverse, direct, local, short-term, moderate** effects on tribal subsistence activities and **adverse, direct, local, long-term, moderate** effects on tribal subsistence activities due to continued access restrictions at traditional and modern fishing locations. **Adverse, indirect, regional, long-term, moderate** effects on Native Alaskan communities due to the continued presence of the international border, which historically and currently has separated U.S. members of Native Alaskan communities from friends and family in Canada. **Adverse, direct, local, short-term, minor** effects to the health and safety of children due to project-related disturbances. No long-term effects would be anticipated.	**Adverse**, **direct**, **local**, **long-term, moderate** effects on subsistence activities due to continued access restrictions to traditional and modern fishing camps in the vicinity of the existing LPOE. **Adverse, indirect, regional, long-term, moderate** effects from continued separation of friends, family, and traditional places along the border.	All contractors employed by GSA would be subject to a background check and only passing candidates would work on the project. CBP officers' families would be temporarily relocated to minimize their presence onsite during project activities.

Resource Area	Alternative 1 – Expansion and Modernization in Place	No Action Alternative	Mitigation Measures and BMPs
Socioeconomics	**Adverse, direct, regional, short-term, negligible** effects would be expected on population and housing due to the influx of workers to temporary construction work camps and housing. **Beneficial, indirect, regional, short-term, moderate** effects on sourcing materials locally and the possible hiring of local workers from the Southeast Fairbanks Census Area during project activities. **Beneficial, indirect, regional, short-term, minor** effects on unemployment rates during project activities. **Beneficial, direct, regional, long-term, negligible** effects on trade due to the new LPOE's improved vehicle processing capabilities.	**Adverse, indirect, local, long-term, negligible** effects would be expected on population and housing due to the lack of housing for CBP officers. **No effects** to the economy or trade.	None
Recreation	**Adverse**, **direct**, **local**, **short-term, minor** effects on the accessibility and quality of recreational resources due to project-related activities. **Adverse**, **direct**, **local, long-term, negligible** effects on the accessibility and quality of recreational resources due to operation activities, such as noise from the indoor firing range and the helicopter landing zone. **Beneficial**, **direct**, **local**, **long-term**, **minor** effects due to increased accessibility of the Airs Hill Trailhead with road improvements.	**Adverse, direct, local, long-term, negligible** effects on recreation.	The indoor firing range would be constructed with design elements to minimize noise pollution.

Resource Area	Alternative 1 – Expansion and Modernization in Place	No Action Alternative	Mitigation Measures and BMPs
Visual Resources	**Adverse, direct, local, short-term, minor** effects to visual resources due to the presence of project-related activities, vehicles, and equipment. **Adverse**, **direct, local, long-term, minor** effects to visual resources due to the construction of additional developed areas such as buildings and inspection lanes.	**Adverse**, **direct**, **local, long-term, negligible** effects to visual resources due to the continued presence of existing structures.	None
Noise and Vibrations	**Adverse, direct, local, short-term**, **minor** effects from noise due to project-related activities. **Adverse, direct, local, short-term, moderate** effects from blasting noise and vibrations during project activities. **Adverse, direct, local, long-term, negligible** effects from noise during operations.	**Adverse, direct, local, long-term, negligible** effects due to a projected two percent increase in traffic.	Moving current Alcan LPOE residents to temporary housing would minimize the effects of project-related noise on residents. Blasting would be timed with tenant relocation and residence demolition to minimize exposure. A Blasting Plan would be prepared that limits the amount and placement of blasting agents. Personal Protective Equipment would be worn by workers during blasting activities or operations.

Solid and Hazardous Waste and Materials	**Adverse, direct, local, short-term, negligible** effects of solid and hazardous waste and materials from project activities. **Adverse, direct, local, long-term, negligible** effects during operations due to increase of solid waste, potential spills with the new Hazardous Materials (HAZMAT) canopy, and from the indoor firing range. The new fuel storage area would have **direct, beneficial, site-specific, long-term, minor** effects from reducing the potential for fuel leaks and spills.	**Adverse**, **direct, local, long-term, negligible** effects from the use of hazardous materials and the generation of solid and hazardous waste at the LPOE.	Lead-safe practices would be employed during demolition. National Emission Standards for Hazardous Air Pollutants (NESHAP) BMPs for demolition would include removing all asbestos-containing materials (ACMs), adequately wetting all regulated ACMs materials, sealing the material in leak tight containers, and disposing of the ACMs as expediently as practicable. All non-hazardous construction and demolition waste would be recycled to the maximum extent feasible. BMPs for hazardous waste separation would be followed and solid waste would be hauled to Tok, Alaska for disposal of standard materials. Existing Aboveground Storage Tank (ASTs) would be removed and disposed of according to state and federal standards. The demolition and disposal of the ASTs would be conducted using licensed contractors and proper closure procedures. A Spill Response Plan would be implemented to address potential spills or releases of hazardous materials. BMPs include regular vehicle inspections and maintenance, maintaining proper storage of hazardous materials, and maintaining clean working environment. BMPs would be implemented at the indoor firing range including ventilation, high efficiency particulate air (HEPA)-filtered exhaust areas, use of dust suppression and proper cleaning methods, and use of personal protective equipment such as ventilators by maintenance staff.

Resource Area	Alternative 1 – Expansion and Modernization in Place	No Action Alternative	Mitigation Measures and BMPs
Climate Change	**Adverse**, **direct**, **regional**, **short-term, negligible** effects to climate change during project-related activities. Short-term project activities effects on climate would have an incremental, albeit **negligible, long-term** effect on climate as well. **Beneficial, direct, regional, long-term, negligible** effects to climate change during operations due to the modernization and updated infrastructure at the LPOE. **Adverse, direct, regional, long-term, moderate** effects on the LPOE from climate change.	**Adverse**, **direct**, **regional**, **long-term, negligible** effects to climate due to the continued generation of existing emissions levels. **Adverse, direct, regional, long-term, moderate** effects on the LPOE from climate change.	Improvements to energy efficiency and building insulation would mitigate the effects of the updated LPOE on climate change due to expected decreases in fuel usage for heating residential and other LPOE buildings. The modernized and enhanced layout and updated infrastructure could reduce greenhouse gas (GHG) emissions.

Major Conclusions, Disputed Issues, and Issues to be Resolved

The only major effect could occur under Alternative 1 for Cultural Resources: Adverse or beneficial, direct, local, long-term, major effects could occur if a cultural resource is discovered during ground-disturbing activities. If a discovery were made, it would be assessed in consultation with SHPO, Northway, and the Tanana Chiefs Conference, and an appropriate course of action would be determined. GSA has developed an Inadvertent Discovery of Cultural Resources Plan, which would be implemented in case of a discovery, and would coordinate with the SHPO, Northway, and the Tanana Chiefs Conference to resolve any potential adverse effects resulting from an inadvertent discovery.

1.0 INTRODUCTION

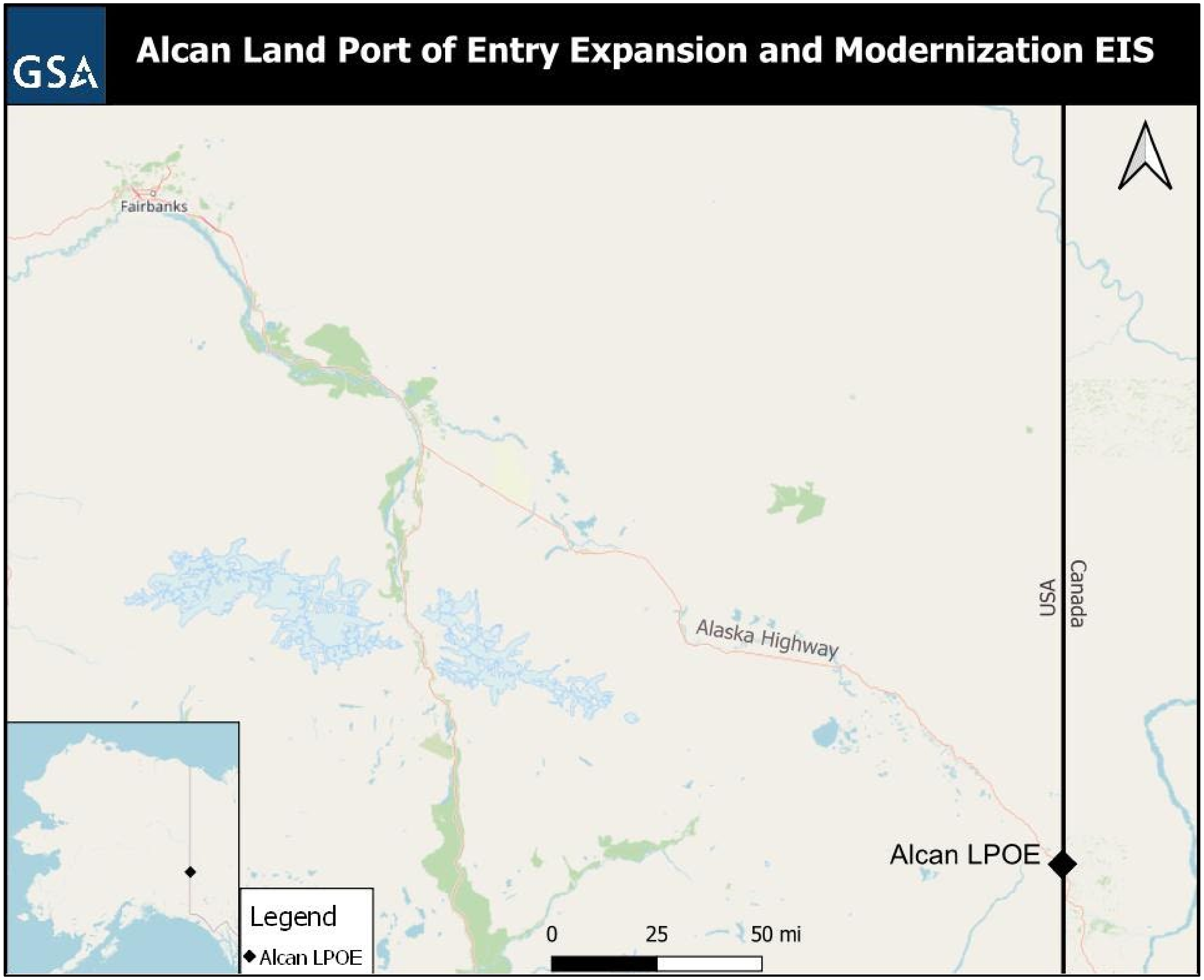
The United States (U.S.) General Services Administration (GSA) proposes to build a new expanded and modernized Land Port of Entry (LPOE) and housing units to replace the existing LPOE and housing units (hereafter LPOE) facility at Alcan, Alaska. The Alcan LPOE is located at Milepost (MP) 1221.8 on the Alaska Highway, 0.43 miles from the U.S. / Canada Border. This facility operates year-round in sub-arctic weather conditions and is the only 24-hour LPOE serving personal vehicles and commercial traffic between the Yukon Territory, Canada, and mainland Alaska. The U.S. Customs and Border Protection (CBP) currently processes privately-owned vehicles (POVs), commercial vehicles, and buses at the Alcan LPOE.

The Alcan LPOE is owned by GSA and operated by CBP. The Alcan LPOE site location was originally selected due to its proximity to the border, its ability to support onsite housing, the ease of securing land and a use permit from other government entities, and its ability to serve traffic entering the U.S. from Canada from both the Alaska Highway and Taylor Highway. Construction of the Alcan LPOE as it exists today was completed in 1972, with no major additions occurring since its original construction. **Figure 1.0-1** displays the regional location of the Alcan LPOE in relation to the State of Alaska.

GSA and their environmental services contractor, Solv, LLC (hereafter Solv) have prepared this Final Environmental Impact Statement (EIS) in compliance with the National Environmental Policy Act (NEPA), as amended (42 United States Code [U.S.C.] et seq.), which requires federal agencies to examine the impacts of their proposed projects or actions on the human and natural environment and consider alternatives to the proposal before deciding on taking an action. This Final EIS complies with the 2020 Council on Environmental Quality (CEQ) NEPA regulations (40 Code of Federal Regulations [CFR] § 1500-1508), as modified by the Phase I 2022 revisions. The effective date of the 2022 revisions was May 20, 2022, and reviews that began after this date are required to apply the 2020 regulations as modified by the Phase I revisions unless there is a clear and fundamental conflict with an applicable statute. The Alcan LPOE EIS effort began on January 10, 2023 and accordingly proceeds under the 2020 regulations as modified by the Phase I revisions. In addition, this Final EIS also complies with the GSA Public Buildings Service (PBS) NEPA Desk Guide and other relevant federal and state laws and regulations and executive orders (EOs), and it integrates the consultation processes required under Section 106 of the National Historic Preservation Act (NHPA) and Section 7 of the Endangered Species Act (ESA) with the NEPA process.

1.1 PROJECT BACKGROUND

GSA's PBS assists federal agency customers housed in GSA facilities with their current and future workplace needs based on their specific mission requirements. CBP's mission 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. The 2019 Feasibility Study for the Alcan LPOE (Feasibility Study) was developed to identify and validate facility deficiencies at the LPOE (Hennebery Eddy Architects, 2019). The Feasibility Study identified potential options for improvements to the Alcan LPOE and provided the basis for a 5-year plan to replace the LPOE and the associated housing complex (Hennebery Eddy Architects, 2019). The Infrastructure Investment and Jobs Act (enacted November 15, 2021), also known as the Bipartisan Infrastructure Law, includes $3.4 billion for GSA to undertake 26 construction and modernization projects at LPOEs nationwide (GSA, 2024a), including the Alcan LPOE.



Source: Open Street Map, 2023

Figure 1.0-1. Regional Location of the Alcan LPOE

1.2 PROJECT AREA AND EXISTING FACILITIES

The 55-acre Alcan LPOE is bounded by the U.S.-Canada border to its east; the Tetlin National Wildlife Refuge (NWR) to its south and west; and undeveloped state lands to its north. The Alcan LPOE is predominantly surrounded by woodlands and wetlands (see **Figure 3.5-1**).

1.2.1 Existing Facilities

The Alcan LPOE consists of 12 buildings with 43,166 gross square feet (GSF) of building space on a 55-acre campus. All buildings, except for employee housing, are connected via a utilidor, an underground insulated corridor used for connection of utilities and transit between buildings in extreme winter weather. GSA conducts regular inspection and maintenance of owned structures and LPOE utility infrastructure. LPOE buildings can be broadly characterized as the Main LPOE Building, Service Buildings, and Employee Housing which are described in terms of their structural components and operations below. **Figure 1.2-1** illustrates the existing Alcan LPOE campus layout.

1.2.1.1 Main LPOE Building and Port Operations

The Main LPOE Building houses CBP inspection and enforcement operations at the Alcan LPOE. The Main LPOE Building is sited on the median of the Alaska Highway, 0.43 miles from the U.S.-Canada border. Built in 1972, the building is a one-story, concrete-framed structure with basement utilidor access encompassing 5,875 GSF. The building also has two vehicle garages used for government-owned vehicles and storage. The structure has a flat, rubber roof with an attached canopy extending over two POV inspection lanes. Incoming traffic passes on the east side of the building and outbound traffic passes on the west side. The facility is open 24 hours per day, 7 days a week, and processes POVs, buses, and commercial traffic.

The facility includes three total inspection lanes, two covered and one uncovered. CBP personnel perform primary inspection of POV traffic in one primary inspection booth attached to the interior of the Main LPOE Building and one, covered, detached inspection booth. Commercial vehicles (i.e., trucks and buses) and large POVs such as recreational vehicles (RVs) or pickup trucks with attached camping trailers undergo primary inspection in the uncovered outermost lane. Secondary inspection occurs on an as-needed basis in the inspection lanes. **Figure 1.2-2** illustrates the two covered POV inspection lanes closest to the facility, the interior and detached inspection booths, and the uncovered outermost inspection lane.

The main level of the building includes an open office work area, individual offices, staff lockers, and a public waiting area with service counter, interview rooms, and storage rooms. The basement level provides access to the utilidor and houses utilities infrastructure. All interior spaces are fully utilized with no current room for expansion.

Source: Bing Virtual Earth, 2023

Figure 1.2-1. Existing Alcan LPOE Campus Layout

Photo Credit: Aaron Evanson, GSA

Figure 1.2-2. Northwest-Facing View of Three Primary Inspection Lanes with Inspection Booth and POV Canopy

1.2.1.2 Service Building and Wastewater Pump Building

The Alcan LPOE Service Building contains centralized heating, water, power generators, and electricity distribution for the Alcan LPOE campus. The Service Building is a one-story 7,954 GSF concrete structure with a rubber roof, full basement, and utilidor access located northwest of the Main LPOE Building. The main level of the building has an open office area, two loading bays, a boiler room, and a generator room. The building receives domestic water supply from two local wells. The basement of the facility contains the ion exchange or water softening equipment for the reverse osmosis water treatment system, hot water heaters, well pumps, and distribution piping as well as utilidor access. Two underground storage tanks (UST), one 10,000-gallon tank and one 500-gallon tank, provide primary diesel fuel storage for the facility, and there is a 500-gallon aboveground storage tank (AST) for auxiliary fuel storage.

The Wastewater Pump Building is a one-story 894 GSF wood-frame structure on a concrete slab located in the northwest corner of the Alcan LPOE campus. The building houses pumps and infrastructure for sanitary sewage to be collected and distributed to the three adjacent wastewater lagoons and overflow leach field. The leach field is rarely used due to the high rate of evaporation from the lagoons. The Wastewater Pump Building is heated via electric space heaters.

1.2.1.3 Employee Housing, Recreation, and Storage

The Alcan LPOE has a total of seven residential buildings: one fourplex; one triplex; three modular, single-family residences; and two modular duplexes. The Alcan LPOE has 13 full time positions, with 12 positions currently filled and one vacancy. The current vacant housing unit located at the port is slated for the one vacant staff position.

The fourplex is a one-story 11,502 GSF wood-frame building with built-up roof and full basement located within the northern portion of the residential campus. The main level and basement contain four individual, two-level residential spaces. The building receives electricity, water, and heating from the primary Service Building. The heating system consists of vertical or horizontal hot water convection units.

The triplex is a one-story 10,930 GSF wood-frame building with built-up roof and full basement located within the northwest portion of the residential campus, directly adjacent to the fourplex. The main level and basement consist of three individual two-level residential spaces as well as two garage bays. The building receives electricity, water, and heating from the primary Service Building. The heating system consists of vertical or horizontal hot water convection units.

The three modular single-family residences are 2,424 GSF wood-frame buildings with built-up roofs and full basements located within the southern half of the residential campus. The homes have finished residential space on the main level and basement. These homes receive electricity and water from the Service Building, but each home has its own heating system, a diesel-fired furnace. Each modular home is equipped with an external 1,000-gallon AST with secondary containment for storage of heating fuel. No cooling is provided.

The two modular duplexes are 3,840 GSF and 3,072 GSF, respectively. Both duplexes are one-story wood-frame buildings with built-up roofs located within the southern half of the residential campus. The duplexes each have two finished residential spaces on the main level and private one-car garages. These buildings receive electricity and water from the Service Building, but each unit has its own heating system, a diesel-fired furnace. Each unit is equipped with an external 1,000-gallon AST with secondary containment for storage of heating fuel. No cooling is provided.

The Recreation Building is a one-story 1,227 GSF wood-frame structure on a concrete slab with a hip roof covered in asphalt shingles. The building contains one large recreation space furnished with exercise equipment. Water and electricity are provided to the building from the Service Building. The Recreation Building is fully heated by a diesel-fired furnace and is equipped with an external 500-gallon AST, with secondary containment for storage of heating fuel.

The Pole Building is a one-story 894 GSF wood-frame structure on a concrete slab with a hip roof covered in asphalt shingles. The building is unfinished and does not have associated heating or cooling. This building is used for storage of excess building materials and ethylene glycol heat transfer fluid.

1.3 Purpose and Need for the Proposed Action

1.3.1 Purpose of the Project

The purpose of the project is to provide an updated LPOE to support CBP’s mission. Accomplishing this purpose would increase operational efficiency, effectiveness, security, sustainability, safety, and comfort for cross-border travelers and federal employees at the Alcan LPOE. More specifically, the goals of the project are to:

- Increase vehicle inspection processing capacities and efficiencies at the Alcan LPOE;
- Modernize facilities to accommodate current and future demands and implementation of border security initiatives;
- Expand the LPOE to accommodate anticipated staffing needs;

- Improve the comfort and safety of the Alcan LPOE for employees of the LPOE and the transiting public; and
- Reduce the carbon footprint of the facility.

1.3.2 Need for the Project

As the only year-round, 24-hour commercial LPOE between mainland Alaska and Canada, the Alcan LPOE serves as a critical land-based connection between mainland Alaska, Canada, and the lower 48 states. The facility operates in temperatures ranging from -52° Fahrenheit to 94° Fahrenheit depending on the season (NOAA, 2023). During the winter, the facility operates in extreme cold and near 24-hour darkness, which causes major operational constraints on the LPOE and housing components of the facility.

The current layout of inspection areas does not allow for optimal traffic flow. The facility serves approximately 150 vehicles a day, of which roughly 11 percent are heavy vehicles such as tractor trailers, RVs, and buses (BTS, 2023). Although commercial vehicle traffic is relatively stable regardless of the season, personal vehicle traffic is primarily concentrated during the months of May through September (BTS, 2023). With the existing LPOE configuration, operational delays can result from the primary processing lanes being blocked by vehicles moving from primary lanes to secondary inspection bays or by commercial vehicle processing. Helicopters do not have a dedicated landing area at the Alcan LPOE and must land along the highway or in the nearby Airs Hill Trail parking area, which is part of the Tetlin NWR, for CBP inspection.

The current facilities of the Alcan LPOE present concerns regarding public and employee safety and border security. Buildings within the inspection facilities are over 50 years old and cannot effectively support CBP infrastructure, enforcement operations, and housing needs. Updated security initiatives require increased capacity and new inspection technology to be installed and implemented. For example, the detention areas in the Main LPOE Building do not meet current CBP design guide standards for ventilation. The facility does not currently have enclosed areas to conduct secondary commercial inspections during winter months, and CBP officers are required to follow trucks roughly 300 miles to Fairbanks, Alaska where cargo can be safely inspected during intense cold (Ellis, 2022). Furthermore, CBP housing areas are not adequately separated from LPOE operations and are unsecured from public access, placing residents at unnecessary risk. Housing units are outdated and require updates to meet resident comfort and energy efficiency standards. There is not a dedicated firing range on site, and CBP personnel must travel to Fairbanks, Alaska for weapons training and qualification. In addition, installation of energy and water conservation measures, security system updates, safety improvements, and replacement of housing units are needed across the Alcan LPOE to meet the resource efficiency, safety, and comfort standards of CBP.

1.4 PUBLIC INVOLVEMENT

The NEPA process provides several opportunities for public involvement. Interested and affected parties may provide their views regarding the project, its possible impacts on the natural and human environment, what should be addressed in the analysis and evaluation of the action alternatives, and the adequacy of the NEPA analysis. Public participation with respect to decision-making on the project is guided by GSA's implementing procedures for compliance with NEPA (GSA Order ADM 1095.1F, Environmental Considerations in Decision Making) and the GSA PBS NEPA Desk Guide (GSA, 1999).

1.4.1 Scoping

GSA conducted internal scoping and external scoping. Internal scoping consisted of the preparation of the Feasibility Study and initial development of action alternatives. External scoping included the hosting of a public scoping meeting as part of the NEPA process and development of the Draft EIS. The public scoping period began on April 7, 2023 with the publication of a Notice of Intent (NOI) to prepare a Draft EIS that ran in the *Federal Register* through May 15, 2023. The Public Scoping Report describes the project (i.e., background information, project location and facilities, and action alternatives), scoping meeting, scoping materials, and summarizes the public comments received. The public comments received during the scoping period are summarized in Section 1.4.2, and the Public Scoping Report is included as Appendix A to this Final EIS.

Notification of the scoping meeting was accomplished using multiple channels of communication, including publication of the NOI; a public press release on the GSA project website; advertisements in the *Fairbanks Daily News-Miner*, *Delta Wind*, and *Anchorage Daily News*; letters to interested parties identified through stakeholder analysis; and social media posts.

GSA held the scoping meeting on Wednesday, April 26, 2023 from 5:00 to 7:00 PM Alaska Daylight Time on the Zoom online meeting platform. A total of 19 people attended the public meeting, including six members of the public or other government agencies and 13 personnel affiliated with the project from GSA, CBP, and Solv.

GSA used a virtual meeting format, which consisted of an approximately 45-minute presentation followed by an open house session that facilitated discussion between GSA and the public. The meeting format was designed to encourage discussion and information sharing and to ensure that the public had opportunities to speak with representatives of GSA. The presentation provided background on the project and an explanation of the NEPA process. The presentation was recorded and posted to the GSA YouTube channel and project website. After the presentation, attendees were provided with the opportunity to ask questions and submit comments.

GSA shared an informational handout in the chat box during the virtual meeting that contained details about the project background, NEPA process, project alternatives, and how to submit comments. Two action alternatives were included in the public meeting presentation; however, based on issues and concerns identified during the scoping period, one of the two action alternatives presented to the public was subsequently dismissed, as described in Section 2.3.1. Additionally, GSA distributed a mailable comment form to attendees in case they wished to provide written comments. Attendees also had the opportunity to sign up for additional project email updates.

1.4.1.1 Summary of Public Scoping Comments

GSA invited scoping comments to obtain input from the public, agencies, and other interested parties on the proposed alternatives, potential adverse and beneficial impacts from the alternatives, and any other relevant information.

GSA offered multiple ways to submit comments, including comment forms, letters, emails, and spoken comments at the public scoping meeting. Comments were submitted to GSA verbally at the public scoping meeting and through email.

A total of 11 commenters submitted 33 different comments during the scoping period (several commenters submitted more than one comment). **Table 1.4-1** shows the number of comments received by subject and commenter type.

Table 1.4-1. Commenters and Comments by Subject – Public Scoping

Subject	Number of Agency Commenters	Number of Public Commenters [a]	Total Number of Comments
Air Quality	1	0	2
Biological Resources	1	0	2
Climate Change	1	0	1
Cumulative Impacts	1	0	1
Environmental Justice (EJ)	1	0	1
Light Pollution	0	1	1
Meaningful Public Engagement	2	0	4
Outside the Scope of the EIS	0	2	2
Permits	1	0	2
Recreational and Subsistence Resources	1	0	4
Requests for Information	4	2	11
Water Resources	1	0	2

[a] Public commenters include individual members of the public

The Alcan LPOE EIS Final Public Scoping Report in Appendix A includes a more detailed description of the scoping comments. Public scoping meeting materials are also available on the project website at https://www.gsa.gov/alcan.

1.4.2 Draft EIS Public Comment Period

GSA invited the public to review and comment on the Draft EIS with newspaper ads, letters to interested parties, project website, and social media posts. Newspaper ads were run in the *Fairbanks Daily News-Miner*, *Delta Wind*, and *Anchorage Daily News*, and interested party letters were mailed and emailed on February 26, 2024. The public comment period started on February 26, 2024, with the publication of a Notice of Availability that ran in the *Federal Register*, through April 11, 2024. GSA hosted a hybrid public meeting consisting of an in-person component in Northway, Alaska, and a virtual component on Zoom on Tuesday March 12, 2024, from 6:00 to 8:00 PM Alaska Daylight Time. A total of 11 people attended the public meeting in addition to personnel from GSA, CBP, and Solv.

The public meeting included a 1-hour presentation followed by an open comment session for the public to ask questions or provide comments on the project. The presentation provided background on the project and an explanation of the NEPA process. The alternatives and impacts analysis were presented, including mitigation measures. GSA recorded the presentation and posted it to the GSA YouTube channel (https://www.youtube.com/watch?v=ACq15h5mCtg) and the project website (https://www.gsa.gov/alcan).

Comments on the Draft EIS were received via mail, email, and during the public comment portion of the March 12, 2024 public meeting. A total of nine commenters submitted 60 different comments (i.e., many commenters submitted more than one comment).

1.4.2.1 Summary of Public Comments on the Draft EIS

Table 1.4-2 shows the number of commenters and the comments received by subject. The comments received on the Draft EIS and GSA's responses to those comments are provided in Appendix B.

Table 1.4-2. Commenters and Comments by Subject – Draft EIS

Subject	Number of Agency Commenters	Number of Public Commenters [a]	Total Number of Comments
Air Quality	1	0	4
Alternatives	1	0	2
Alaska National Interest Lands Conservation Act (ANILCA) Section 810	2	0	6
Biological Resources	1	1	2
Climate Change	1	1	10
Consultation and Coordination	2	0	2
Cultural and Tribal Resources	0	2	3
Environmental Justice	1	0	3
NEPA Process	1	1	2
Outside the Scope of the EIS	1	1	7
Pollution	1	0	1
Proposed Action	2	4	12
Public Outreach	0	1	1
Socioeconomic Resources	0	1	1
Water Resources	1	0	3
Wetlands	1	0	1

[a] Public commenters include individual members of the public

1.5 COOPERATING AGENCIES

A federal agency with jurisdiction by law or with special expertise regarding environmental issues can be a cooperating agency under NEPA. A state, tribal, or local agency can also become a cooperating agency by agreement with the lead agency. GSA is the lead agency for this Final EIS, and the Native Village of Northway (Northway) is a cooperating agency for this Final EIS.

Northway's role as a cooperating agency includes participating in the NEPA process, including identifying environmental, social, or economic impacts to tribal resources resulting from the proposed action, and assisting with coordinating and publicizing public meetings regarding the Final EIS. GSA and Northway signed a Memorandum of Understanding (MOU) dated December 20, 2023 that details the roles and responsibilities for the lead and cooperating agencies. The MOU is provided in Appendix C.

1.6 Relevant Environmental Laws and Regulations

1.6.1 National Environmental Policy Act and NEPA Process

NEPA was signed into law on January 1, 1970. NEPA requires federal agencies to assess the environmental effects of their proposed actions prior to making decisions (42 USC 4332). The primary purpose of an EIS is to ensure federal agencies consider environmental impacts in their decision-making (40 CFR 1502.1). Agencies must provide a full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of reasonable alternatives that would minimize adverse impacts or enhance the quality of the human environment (40 CFR 1502.1). GSA's EISs and other NEPA documents are prepared in accordance with the CEQ regulations for implementing NEPA (40 CFR 1500-1508), GSA Order ADM 1095.1F – Environmental Considerations in Decision Making, and the GSA PBS NEPA Desk Guide (October 1999).

Federal agencies are required to provide meaningful opportunities for public participation in a proposed action. Opportunities for the public and interested stakeholders to become involved in the NEPA process occur when an agency begins scoping with the publication of an NOI (40 CFR 1501.9) and when draft and final EISs are published prior to the conclusion of the decision-making process (40 CFR 1502.9).

1.6.2 Section 106 of the National Historic Preservation Act

The NHPA (54 USC 300101 et seq.) directs each federal agency, and those tribal, state, and local governments that assume federal agency responsibilities, to protect historic properties and to avoid, minimize, or mitigate possible harm that may result from agency actions. The process for identifying and assessing the effects a federal agency's actions may have on historic properties is known as the Section 106 process and is detailed in 36 CFR 800 (Protection of Historic Properties). Early consideration of historic or cultural resources in project planning and full consultation with interested parties are key to effective compliance with Section 106. GSA contacted the Alaska State Historic Preservation Office (SHPO), Ahtna Inc., Doyon Limited, Tanana Chiefs Conference, Tetlin Native Village, and Northway to establish primary consulting parties. The Alaska SHPO, Tanana Chiefs Conference, and Northway have indicated they wish to consult.

Historic properties are those that are listed in or are eligible for listing in the National Register of Historic Places (NRHP). The NRHP is a list of districts, sites, buildings, structures, and objects that have been determined by the National Park Service to be significant in American history, architecture, archaeology, engineering, or culture at the local, state, or national level. Generally, a property must be at least 50 years old to qualify for listing in the NRHP (36 CFR 60.4), but there are exceptions.

The Section 106 process includes four steps:

(1) Initiate consultation with the primary consulting parties;
(2) Identify and evaluate historic properties;
(3) Assess effects of the project on sites listed in or eligible for listing in the NRHP; and
(4) Resolve any adverse effects via design changes or mitigation.

1.6.3 Section 7 of the Endangered Species Act

The ESA provides a means for conserving the ecosystems upon which threatened and endangered species depend and a program for the conservation of such species. The ESA directs all federal agencies to participate in conserving these species and to use their authorities to further the purposes of the ESA. Specifically, Section 7(a)(1) of the ESA 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. Section 7 of the ESA (16 USC 1531 et seq.) outlines the procedures for federal interagency cooperation to conserve federally listed species and designated critical habitats.

Upon review of the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation online database, no ESA-listed species, candidate species, or designated critical habitat were found to be present in the vicinity of the considered LPOE site (USFWS, 2023a and 2023b). Therefore, no further Section 7 ESA consultation is needed for this project.

1.6.4 Relevant Laws and Regulations

Other potentially relevant laws and regulations that GSA must comply with as part of the project planning and NEPA process include:

Statutes

- Archaeological Resources Protection Act of 1979 (16 USC 470aa-mm);
- Native American Graves Protection and Repatriation Act (25 USC 3001 et seq.);
- Clean Air Act of 1970 as amended (42 USC 7401, et seq.);
- Clean Water Act (CWA) of 1977 as amended (33 USC 1251, et seq.);
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 USC 9601, et seq.);
- Energy Independence and Security Act (EISA) (42 USC 17001, et seq.);
- National Energy Conservation Policy Act (42 USC 8231, et seq.);
- Resource Conservation and Recovery Act (RCRA) of 1976 (42 USC 6901, et seq.);
- Alaska National Interest Lands Conservation Act (ANILCA), Section 810 (16 USC 410hh-3233; 43 USC 1602-1784); and
- Energy Policy Act of 2005.

Regulations

- 32 CFR 229 – Protection of Archaeological Resources: Uniform Regulations;
- 40 CFR 300-399 – Hazardous Substance Regulations;
- 40 CFR 6, 51, and 93 – Conformity of General Federal Actions to State or Federal Implementation Plans;
- CEQ Regulations (40 CFR 1500-1508); and
- Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 Federal Register 44716, Thursday, September 29, 1983).

Executive Orders

- EO 11593 – *Protection and Enhancement of the Cultural Environment*;
- EO 11988 – *Floodplain Management*;
- EO 11990 – *Protection of Wetlands*;
- EO 12898 – *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*;
- EO 13007 – *Indian Sacred Sites*;
- EO 13175 – *Consultation and Coordination with Indian Tribal Governments*;
- EO 13287 – *Preserve America*;
- EO 13327 – *Federal Real Property Asset Management*;

- EO 13589 – *Promoting Efficient Spending*;
- EO 14008 – *Tackling the Climate Crisis at Home and Abroad*;
- EO 14030 – *Climate Related Financial Risks*; and
- EO 14057 – *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*.

Alaska Administrative Code

- Air Quality Control (18 Alaska Administrative Code {AAC} 50.010 – 18 AAC 50.025, 18 AAC 50.055 – 18 AAC 50.065, 18 AAC 50.110);
- Solid Waste Management Requirements (18 AAC 60.005 – 18 AAC 60.040);
- Water Quality Standards (18 AAC 70.005 – 70.050);
- Oil and Other Hazardous Substances Pollution Control (18 AAC 75.005 – 18 AAC 75.090, 18 AAC 75.400 – 75.496);
- USTs (18 AAC 78.005 – 18 AAC 78.090);
- Drinking Water (18 AAC 80.005 – 18 AAC 80.055); and
- Alaska Pollutant Discharge Elimination System Program (18 AAC 83.005 – 18 AAC 83.020).

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

GSA identified one action alternative that meets the stated purpose and need of the proposed project and thus has been analyzed in detail in this Final EIS. This alternative is presented in Section 2.1.

Per CEQ regulations, GSA also analyzed a "No Action" alternative, which evaluates the effects that would occur if GSA continued to operate the LPOE under current conditions (i.e., the status quo). The No Action Alternative is presented in Section 2.2.

2.1 Alternative 1 - Expansion and Modernization in Place

Under Alternative 1, the existing LPOE site would be expanded and modernized. Alternative 1 would include:

- Use of up to 6.5 acres from Tetlin NWR;
- Site preparation and grading;
- Construction and operation of a new Main LPOE Building;
- Addition of enclosed inspection spaces for commercial vehicles and POVs;
- Construction of new housing units with adequate separation from LPOE operations;
- Implementation of security measures for the LPOE housing complex;
- Construction of an indoor firing range and a helicopter landing zone; and
- Demolition of existing LPOE structures.

All facility and infrastructure improvements proposed under the action alternative (Alternative 1) 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 the Facilities Standards for the PBS (P100) and associated 2022 Addendum in facilities design (GSA, 2021), which establishes standards and criteria for GSA-owned facilities;

- Mandatory standards for energy and sustainable design, historic preservation, accessibility, and other codes and standards;

- Implementation of the International Energy Conservation Code (IECC) 2021 building standards, with the goal of achieving a 30 percent reduction in energy consumption below the target levels established by the IECC (IECC, 2021);

- Reductions in air emissions, water use, and wastewater pollutant discharge to the extent possible in a remote location; and

- Consideration of renewable energy sources including, but not limited to, photovoltaic cells with battery storage and microturbines.

Based on CBP and GSA design standards, the total enclosed building area required for the modernized Alcan LPOE and housing would be 129,145 square feet (sf) with an additional 3,820 sf of booths and canopies and 3,600 sf of outdoor parking and hard surfaces.

The expanded and modernized alternative would provide dual-purpose inspection lanes to allow for flexibility of inspection operations as well as enclosed spaces for secondary inspection of POVs and commercial vehicles. A modernized Main LPOE Building would also enhance interview capabilities of the Alcan LPOE to meet current CBP security standards. The updated residential campus would be separated from LPOE operations and would have sufficient security infrastructure to minimize risk to resident personnel and their families. Two of the three existing wastewater lagoons would remain in place. GSA and CBP would finalize the layout of the modernized LPOE through the Project Development Study process during the design phase of the project. **Figure 2.1-1** displays what would be the maximum extent of the modernized Alcan LPOE under Alternative 1 as well as its relation to the Tetlin NWR and the U.S. / Canada border; GSA would obtain a permit or other agreement from the USFWS for use of up to 6.5 acres of Airs Hill south of the LPOE, which is assumed to be part of the Tetlin NWR (see Section 2.1.1).

All new and modernization construction would seek to achieve Leadership in Energy and Environmental Design (LEED®) certification at the highest feasible level within reasonable cost. The new and modernized facilities would be net zero ready. Renewable energy sources would be planned for future installation and provided with minimum infrastructure to accommodate the energy source (e.g., photovoltaics, geothermal), if GSA decides to install such infrastructure. The new facilities would also comply with EISA. Between EISA and LEED®, the project would adhere to whichever requirements are higher. Furthermore, the project would also adhere to the CEQ's Guiding Principles for Sustainable Federal Buildings. The design team would use GSA's Guiding Principles Checklist to track and report compliance.

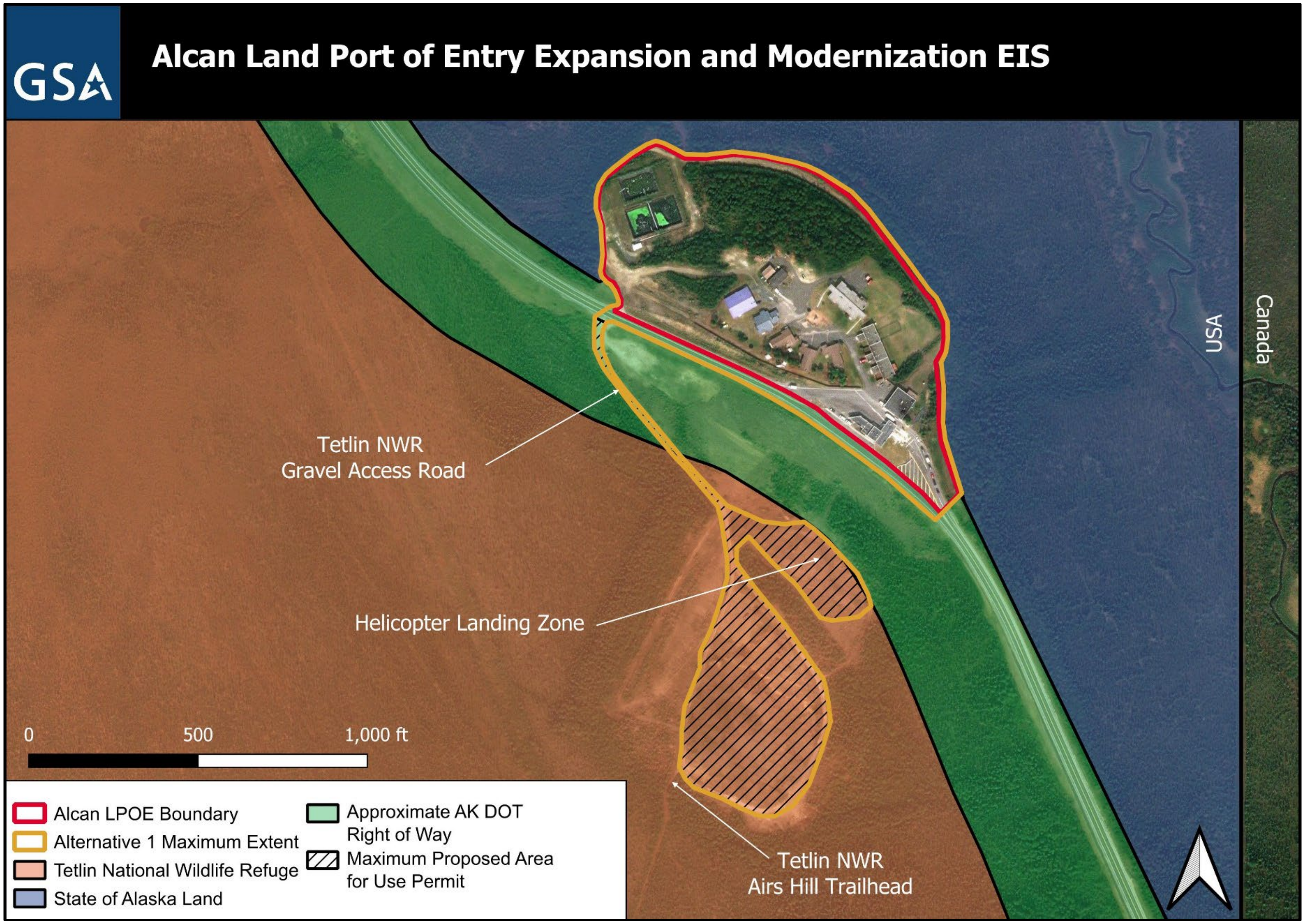
There would be approximately 15 acres of temporary ground disturbance and 5 acres of permanent ground disturbance, with approximately 15 acres of vegetation removed. Approximately 5 acres would be used for staging; the location is yet to be determined. There are currently 8 acres of impermeable surfaces at the project site; after expansion and modernization there would be approximately 4 additional acres for a total of approximately 12 acres of impervious surfaces.

Facility expansion and modernization would include the following measures: use of up to 6.5 acres from Tetlin NWR, site preparation, facility construction and renovation, and demolition, disposal, and relocation of existing structures.

GSA and CBP are considering an option under Alternative 1 to pursue joint operation of the Alcan LPOE with the Canada Border Services Agency (CBSA), which was not initially considered during the preparation of the Feasibility Study. CBSA and CBP officers would jointly operate the facility to conduct inspections of U.S. commercial vehicles and POVs entering Canada; however, no housing would be provided for CBSA officers at Alcan. This option would not affect the design or CBP staffing of the expanded and modernized Alcan LPOE, nor contribute additional environmental impacts under the action alternative, and hence is not analyzed further in this document.

2.1.1 Site Expansion

Under Alternative 1, GSA would acquire a use permit or develop an agreement with the USFWS for use of up to 6.5 acres of Airs Hill, located south of the existing LPOE. For the purposes of this Final EIS, the agreement for use of up to 6.5 acres of Tetlin NWR is referred to as a use permit. The formal property boundary has not been surveyed since the original acquisition for the Alcan LPOE land from the U.S. Department of Interior, and the considered acreage may already be owned by GSA. GSA would complete land surveys during the development of the Project Development Study as part of the planning phase of the project. For the purposes of this Final EIS, GSA assumes that the 6.5 acres are still under control of the Tetlin NWR.



Source: Bing Virtual Earth, 2023; AKDNR, 2023a; AKDEC, 2023a

Figure 2.1-1. Existing LPOE and Proposed Extent of the Alcan LPOE Under Alternative 1

2.1.2 Site Preparation

Site preparation is the first phase of the construction process and includes elements such as site surveying, grading, leveling, blasting, clearing land, drainage, and earthmoving. The hillside to the south of the existing LPOE rises approximately 40 feet (ft) above the highway, with an average slope gradient of 33 percent (Google Earth, 2023a). Under Alternative 1, an approximately 14,400 square-foot-area of previously disturbed land on Airs Hill would be cleared, graded, and compacted for use as a helicopter landing zone. In addition, Alternative 1 would incorporate improvements to the existing hillside access road to include grading and new guardrails on the hill's steep sections.

No blasting is planned for the hillside south of the existing LPOE. Blasting would only occur, where necessary, for foundations or buried utilities on existing GSA property.

2.1.3 Facility Construction and Renovation

Under Alternative 1, the following facilities would be constructed:

- Main LPOE Building (20,615 sf) – The expanded and modernized Main LPOE Building would be staffed by 17 CBP officers. The facility would include open office working space for CBP personnel, private offices, storage, interview rooms, restrooms, relief officer quarters, enclosed government vehicle parking, and attached enclosed garages for commercial inspection and secondary POV inspection. These facilities would meet current and projected future CBP operational needs. Utility service would be provided by the renovated Service Building.
- Inspection Booths and Canopies (3,820 sf) – The modernized Main LPOE Building would include three inbound inspection lanes equipped with hi-low booths (i.e., booths with high and low windows for processing both POV and commercial traffic). Two of these lanes would be covered by a canopy and one lane would remain uncovered for the processing of larger vehicles. The facility would also have one covered outbound inspection lane with accompanying hi-low inspection booth.
- Outdoor Parking (3,600 sf) – Six parking spots equipped with electrical hookups for engine block heaters would be provided outside of the Main LPOE Building. Four outdoor visitor parking spaces would also be provided.
- Indoor Firing Range (7,126 sf) – An indoor firing range would be located on GSA property and constructed with four enclosed shooting lanes and support spaces. This facility would allow CBP personnel to undergo weapons training and qualification on the Alcan LPOE campus. Utility service would be provided by the renovated Service Building.
- Employee Housing (49,080 sf) – Up to 18 housing units would be constructed to provide housing for CBP personnel, GSA operations, and maintenance staff. These units would include a combination of four-bedroom, two-bathroom single family homes; three-bedroom, two-bathroom single family homes; two-bedroom, two-bathroom duplexes; and two-bedroom, one-bathroom apartments. Exterior yards would be fenced to prevent wildlife access to residential areas. Utility service would be provided by the renovated Service Building.
- Recreation Building (4,494 sf) – A new Recreation Building would be constructed with gym space, a community room, media and gaming rooms, and a kitchenette as well as support spaces. Utility service would be provided by the renovated Service Building.
- Helicopter Landing Zone (approximately 14,400 sf [120 ft x 120 ft]) –A previously-disturbed area of Airs Hill, which is part of the Tetlin NWR and is located south of the existing LPOE, would be

cleared, graded, and compacted for use as a helicopter landing zone, which would facilitate safer helicopter inspections in a dedicated area.

- The existing dirt road that provides access to the Airs Hill Trailhead would be improved as a compacted dirt road, and guardrails would be added along the steep sections of the roadway. The improved road would increase the accessibility of the Airs Hill Trailhead which is currently only accessible to 4x4 vehicles.

All newly constructed structures other than the firing range, helicopter landing zone, and employee housing would be connected to the existing maintenance utilidor. Under Alternative 1, the following facilities and infrastructure at the existing LPOE would be renovated and modernized:

- Service Building and Storage (13,623 sf) – The existing Service Building and storage structures would be renovated to meet updated building codes and energy consumption standards with a primary focus on exterior envelope assemblies (i.e., walls, roof, doors, and windows). The existing core utilities would remain in place and would be reused to the extent possible, although space would also be provided for the accommodation of new equipment.
- Existing Main LPOE Building (7,954 sf) – The existing Main LPOE Building would be renovated and converted to auxiliary support space for service operations and utilities. As with the Service Building, this would primarily entail updating the exterior envelope to meet modern building codes and energy consumption standards.

2.1.4 Demolition, Disposal, and Relocation of Existing Structures

Under Alternative 1, all housing units, recreation, and support buildings would be demolished and disposed. Asbestos and lead-based paint (LBP) are known to be present on this site (EMI, 2015). Dedicated disposal contractors would haul demolished materials to Tok, Alaska for disposal of standard materials. Any remaining asbestos-containing materials (ACMs) would be planned for abatement. Any hazardous materials would be transported to Fairbanks, Alaska for disposal by licensed disposal contractors. GSA would comply with net zero waste disposal guidelines to the maximum extent possible. The existing ASTs at each housing unit and various outbuildings and the USTs adjacent to the Service Building would also be demolished and disposed of using licensed contractors and all proper closure procedures. The USTs would remain in place until the new Utility Building is fully operational (at which point they would be removed and disposed off-site). A new fuel AST would be installed adjacent to the Utility Building. Depending on the utility plans developed during the project design phase, the Utility Building may also house batteries and panels associated with the photovoltaic system.

During the design phase, plans would be developed for temporary housing for construction workers.

2.1.5 Construction Phasing and Duration

Given the seasonal constraints of construction work in Alaska, Alternative 1 would likely follow a 6-year implementation timeline with three phases: site preparation, new building construction, and building switch-over. Construction crews would be stationed in work camps near the facility to reduce commute times to the remote location. Work camps would likely consist of temporary housing (i.e., RVs) at locations with utility hookup access or on vacant sites.

The site preparation phase would occur over the first three years of the construction timeline. Housing unit relocation would occur in Year 2 of the construction timeline, along with demolition of all housing and rough site work and grading. Site utility preparation would occur during Year 3, including the expansion of the existing utilidor maintenance tunnel to updated facilities.

New building construction would begin in Year 3 and would be initiated by the preparation of building foundations at all new construction sites. Year 4 would consist of the construction of the new Main LPOE Building, Housing Units, and Recreation Buildings, with the intent of completing basic building enclosures before winter. All new construction would use modular or off-site construction to the extent possible due to the limited construction season, remote nature of the site, and availability of modular construction manufacturers in Alaska. Main LPOE Building interior finishing and commissioning would occur in the winter of Year 4. Year 5 would complete the new building phase with construction of the firing range, helicopter landing zone, and smaller support or ancillary phases.

Building switch-over for housing is anticipated to occur in Years 5-6 and would occur for the Main LPOE Building in Year 5. Renovation of the existing Main LPOE Building would occur in Year 5 after LPOE operations have moved to the newly-constructed building. Interior finishing of all other buildings would occur in the winter of Year 5 as needed. Renovation of the Service Building would occur in Year 6 and would conclude the active construction phase of the process. **Figure 2.1-2** illustrates the projected construction phasing under Alternative 1.

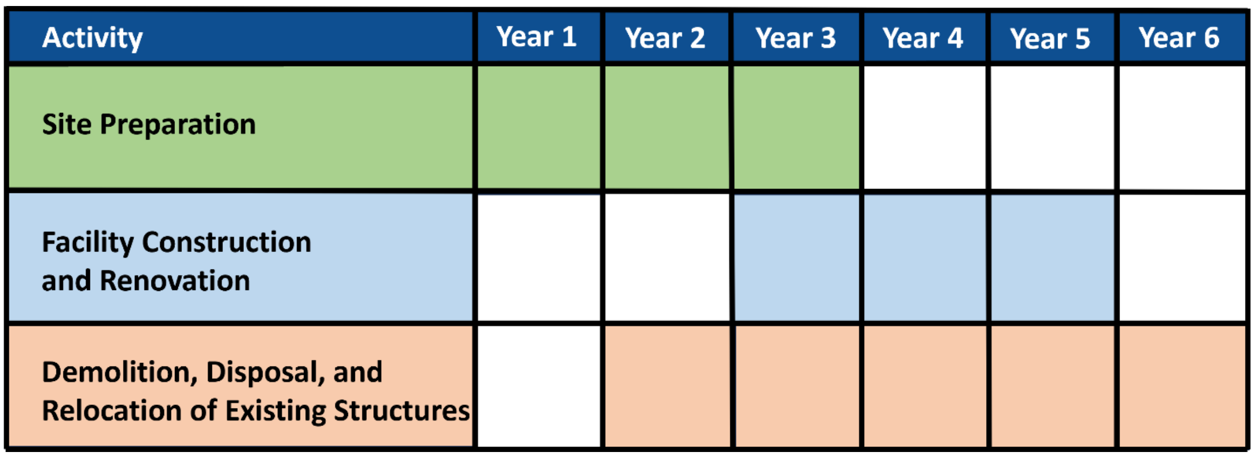


Figure 2.1-2. Projected Construction Phasing for the Alcan LPOE Under Alternative 1

2.2 No Action Alternative

The No Action Alternative assumes that no construction or renovations to the existing Alcan LPOE site would occur. Minor repairs would occur as needed, and maintenance and operation of the existing facilities would continue as described in Section 1.2.1.

This alternative would not meet the purpose and need of the project (as identified in Chapter 1 of this Final EIS) as the expansion and modernization of existing facilities to address deficiencies of the Alcan LPOE would not occur.

2.3 Alternatives Considered and Dismissed from Detailed Analysis

GSA initially considered four additional alternatives, including relocation of the LPOE to an inland location 4 miles northwest of the existing LPOE, an altered layout of the Main LPOE Building on the current site, relocation of the Alcan LPOE to the Alaska-Canada border, and relocation of the Alcan LPOE to a flat lowland location approximately 1 mile inbound from the current location. These alternatives were dismissed from further consideration due to operational and logistical constraints.

2.3.1 Inland Acquisition Site Alternative

GSA considered an alternative under which a modernized LPOE would be constructed at an acquired site approximately 4 miles northwest of the current LPOE. Under this alternative, GSA would have required 40 acres of land acquisition - 10 acres from private individuals and 30 acres from the State of Alaska. Based on CBP and GSA design standards, the modernized LPOE and housing would have required construction of approximately 129,145 sf in addition to 3,820 sf of booths and canopies and 3,600 sf of outdoor parking and hard surfaces.

This alternative was dismissed for the following reasons: 1) CBP expressed concerns that moving the LPOE further inland to an alternative site would create "no man's land" issues that increase operational complexity; 2) The Tanana Chiefs Conference issued a letter to GSA documenting significant concerns with the alternative site, including impacts to contemporary use of the site for food gathering activities and impacts to native allotments; 3) Initial investigation of this site revealed potential lithics and other native artifacts; 4) USFWS expressed concerns that this site location would create access issues for hunters and recreational users of the Tetlin NWR; and 5) CBSA has determined their border security interests would not be served at the alternative site, and they would not co-locate with CBP at that site. CBP and CBSA have previously indicated that colocation is their preference for effective border security. Due to these issues and concerns, GSA dismissed this alternative from further consideration.

2.3.2 Separate Main Port and Secondary Inspection Building Alternative

GSA initially considered a facility layout at the current LPOE site which would separate the Main LPOE Building from commercial and secondary POV inspection buildings. This alternative would have relocated the new Main LPOE Building to a level location halfway between the existing LPOE and the border. The existing Main LPOE Building would have then been repurposed to house commercial inspection and secondary POV inspection. However, due to the approximately nearly 1,000-foot distance between primary and secondary inspection buildings, this facility layout would require additional CBP staffing as on duty officers would not be able to transit between buildings to perform inspections concurrently. Furthermore, given its distance from the Service Building, the new Main LPOE Building would have also required separate utility and building systems for its operation. As such, this layout was dismissed from further consideration.

2.3.3 Alaska-Canada Border Alternative

GSA considered relocating the Main LPOE Building to the Alaska-Canada Border to allow for a joint-use facility. Housing would have remained at the current Alcan LPOE housing campus, and the existing Main LPOE Building would have been repurposed for secondary POV and commercial inspection.

Under this alternative, Canada would have been expected to construct an adjacent facility for CBSA operations, which would have offered efficiencies in staffing and minimized the footprint of both facilities. However, as with the separated Main LPOE Building alternative, this alternative would have required separate utility and building systems from those of the housing campus and additional staffing for primary and secondary inspection activities. The proposed location for this alternative also has a relatively high water table and poor soil for construction and would require large amounts of site preparation. Lastly, this alternative would have required a high degree of coordination with Canada and was considered too speculative for further consideration.

2.3.4 Relocation and Border City Housing Alternative

GSA initially considered relocating the Main LPOE Building to a flat, lowland location approximately one mile inbound from the existing Alcan LPOE site. The housing component of the facility would have been relocated to the Border City site so that housing would have been fully separated from LPOE operations. However, the considered site has a very high water table, extremely poor soils for building, and is susceptible to flooding. Building at this location would have required substantially more extensive filling and site preparation than the other action alternatives. Furthermore, the low elevation of the site also would have restricted sightlines of outbound traffic. Due to these logistical and operational constraints, this alternative was dismissed from further consideration.

2.4 Comparison of Alternatives

Table 2.4-1 compares Alternative 1 and the No Action Alternative by project element. Project elements include the use of up to 6.5 acres from Tetlin NWR, site preparation, demolition and disposal, new construction and renovation, and construction phasing and duration.

Table 2.4-1. Comparison of Alternative 1 and the No Action Alternative

Project Element	Alternative 1 - Expansion and Modernization in Place	No Action Alternative
Land Use Permit	Up to 6.5 acres of Tetlin NWR proposed for a use permit.	No land use permit would be required.
Site Preparation	• Minor grading and rough site work around new construction. • Clearing, grading, and compacting of a previously disturbed area of Airs Hill, located on Tetlin NWR property south of the existing LPOE.	No site preparation activities would occur.
Demolition and Disposal	• Demolish existing housing and recreation buildings, and ASTs and USTs. • Dispose of demolished building materials. • Relocate modular housing units to Border City.	No demolition or disposal activities would occur.
Construction and Renovation	• Construct new Main LPOE Building, Inspection Booths, Outdoor Parking, Housing Buildings, Recreation Building, Firing Range, and Helicopter Landing Zone. • Improve dirt road to Airs Hill Trailhead. • Renovate existing Main LPOE Building and Service Building.	No construction and renovation would occur beyond routine maintenance activities.

Project Element	Alternative 1 - Expansion and Modernization in Place	No Action Alternative
Construction Duration and Phasing	Project activities would occur over a 6-year timeline consisting of three phases: • Site Preparation (Years 1-3): Housing relocation and grading. • Facility Construction and Renovation (Years 3-5): Construction of all new buildings, fit-out and commissioning of new Main LPOE Building. • Demolition, Disposal, and Relocation of Existing Structures (Years 2-6): Service Building renovation, obsolete Main LPOE Building renovation.	No construction and renovation would occur beyond routine maintenance activities.

3.0 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

Chapter 3 describes the current environment for resource areas that may be affected by the alternatives and the potential environmental consequences associated with the alternatives. Through internal and external scoping, GSA has identified the following resource areas to evaluate in detail in this Final EIS:

- Land Use;
- Geology, Topography, and Soils;
- Water Resources (Stormwater, Surface Water, Groundwater, Wetlands, and Floodplains);
- Biological Resources (Vegetation, Wildlife, Threatened and Endangered Species, and Migratory Birds);
- Cultural and Tribal Resources;
- Environmental Justice;
- Socioeconomics;
- Recreation;
- Visual Resources;
- Noise and Vibrations;
- Solid and Hazardous Waste and Materials; and
- Climate Change.

Transportation and traffic; utilities; and air quality were considered but dismissed from detailed analysis. The reasons for dismissing these resource areas from detailed analysis are provided in Section 3.14.

3.1 METHODOLOGY

The affected environment summarizes the current physical, biological, social, and economic environments of the area within and surrounding the Alcan LPOE site. For each resource area, the area of analysis and elements or components of the resource area that could be impacted by the alternative are defined. The geographic area may extend beyond the boundaries of the site or may be limited to the footprint of the project site.

The analysis of environmental consequences for each resource area describes the methodology used to characterize potential effects and states relevant assumptions. The effects analysis considers how the condition of a resource area would change as a result of implementing each of the alternatives and describes the types of effects that would occur. The significance of effects is assessed using three parameters: intensity, duration, and geographic extent. Types of effects and significance criteria are further described in this section.

3.1.1 Types of Effects

According to the CEQ's NEPA Implementing Regulations at 40 CFR 1500-1508, direct and indirect effects are defined as:

Direct effects: Effects that are caused by the action and occur at the same time and place (1508.8[a]). Examples include filling a wetland or digging up an archaeological site.

Indirect effects: Effects that are caused by the action and occur later in time or are farther removed in distance but are still reasonably foreseeable. Indirect effects also include "induced changes" in the human and natural environments (1508.8[b]).

Identified effects may be either adverse or beneficial. The CEQ Guidelines that govern NEPA implementation describe the need for identifying and differentiating between adverse and beneficial effects but do not offer a definition of these terms. For this Final EIS, the following definitions have been used:

Adverse effects: Those effects which, in the judgment of an expert resource area analyst, are regarded by the general population as having a negative and harmful effect on the analyzed resource area. An adverse effect causes a change that moves the resource area away from a desired condition or detracts from its appearance or condition.

Beneficial effects: Those effects which, in the judgment of an expert resource area analyst, are regarded by the general population as having a positive and supportive effect on the analyzed resource area. A beneficial effect constitutes a positive change in the condition or appearance of the resource area or a change that moves the resource area toward a desired condition.

Adverse and beneficial effects from the alternatives are not combined into a single, net effect; they are noted and assessed separately because an action may result in an adverse effect to a resource area even though there may be an overall beneficial effect.

3.1.2 Evaluation Criteria

The significance of effects was determined systematically by assessing three parameters of environmental effect: intensity (how much), duration (how long), and geographic context (sphere of influence), as defined in **Table 3.1-1**.

Table 3.1-1. Effect Parameters

Effect Descriptor	Definition
Intensity	• None – The effect is below the threshold of detection with no perceptible consequences. • Negligible – The effect is not measurable or discernable from current conditions. • Minor – The effect is slight but detectable. • Moderate – The effect is readily apparent, and there would be a noticeable change from current conditions. • Major – The effect is severe, significant, and highly noticeable; major effects may be above a threshold of significance.
Duration	• Short-term – Effects would occur only during project activities. • Long-term – Effects would occur after project activities.
Geographic Context	• Site-specific – Effects are limited to the Alcan LPOE. • Local – Effects extend beyond the Alcan LPOE and affect the area in the general vicinity of the site. • Regional – Effects affect a larger area.

3.2 LAND USE

This section assesses the potential for existing land use patterns and development trends within the project area and vicinity to affect, or be affected by, implementation of the proposed alternatives. The property on which the proposed project would take place is in Southeast Fairbanks Census Area of the Unorganized Borough of Alaska. It includes the property associated with the existing 55-acre Alcan LPOE, as well as the up to 6.5-acre parcel considered for a use permit from the Tetlin NWR under Alternative 1. **Figure 2.1-1** shows the location of the Tetlin NWR parcel considered for a use permit.

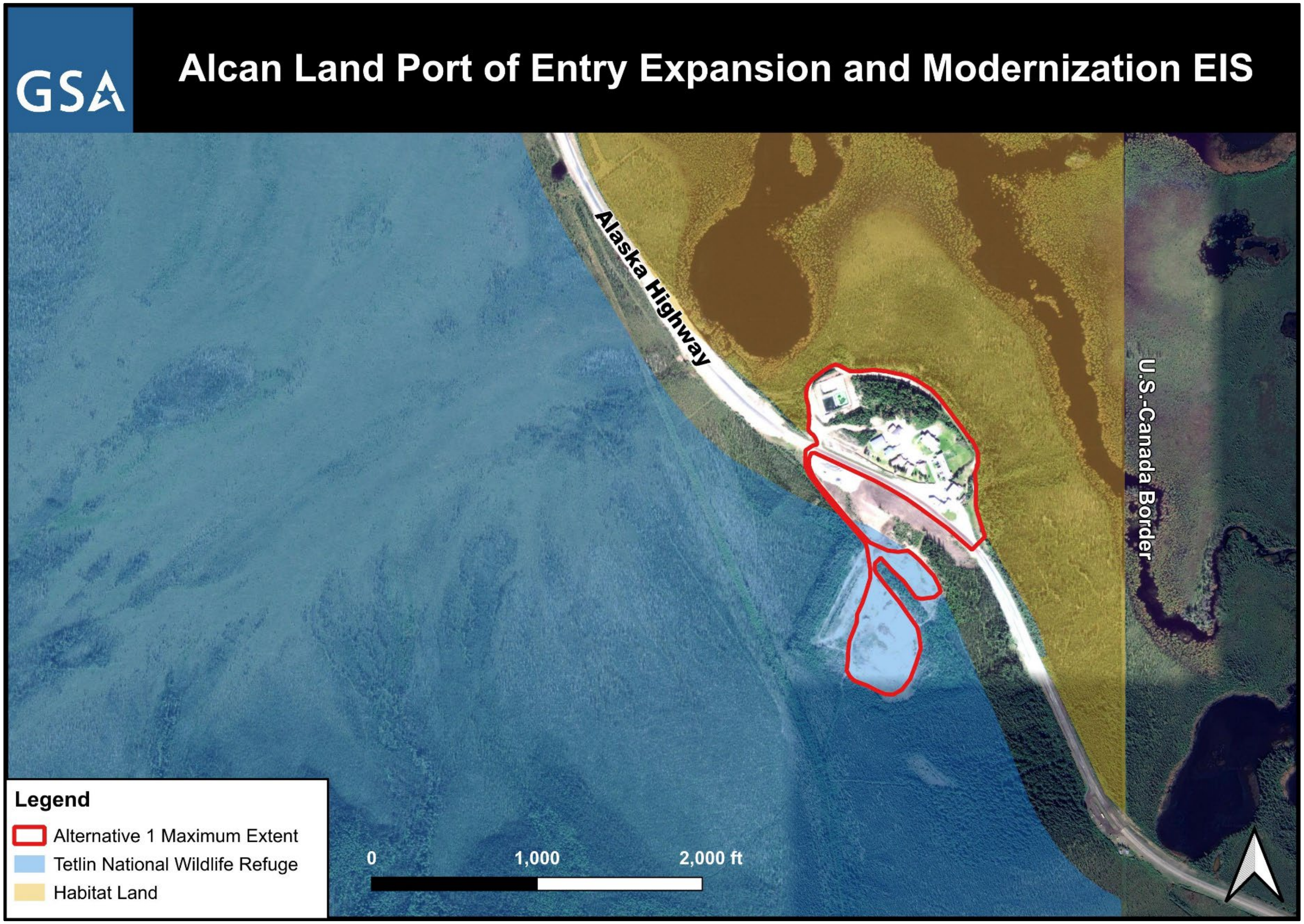
3.2.1 Affected Environment

The Alcan LPOE is surrounded mainly by undeveloped forest, tundra, and wetlands (GSA, No Date). The village at the Alcan LPOE is composed of families primarily employed by CBP (USCB, 2020a). The U.S.-Canada border bounds the LPOE in the east, the Tetlin NWR in the south and west, and undeveloped state lands in the north. The area of analysis for effects to land use includes the existing LPOE-related structures and paved areas (55 acres) and the Tetlin NWR parcel of up to 6.5 acres considered for a use permit, which is an area of Airs Hill that has a dirt road and has been mostly cleared of trees.

3.2.1.1 Municipal Zoning Designations

The AAC (11 AAC 55) establishes zoning regulations for the State of Alaska, and the Alaska Department of Natural Resources (AKDNR) Alaska Mapper depicts state zoning designations (AKDNR, No Date-b). Facilities built on federal property are exempt from state and local building codes; however, in keeping with federal law (including the Public Buildings Amendments of 1988 and the Federal Urban Land Use Act of 1949), GSA complies with state and local building codes to the maximum extent practicable, while maintaining final authority (GSA, 2021). According to the official AKDNR Mapper, the existing LPOE and the 6.5 acres proposed for a land use permit from Tetlin NWR under Alternative 1 are Habitat Land (or Wildlife Habitat Land; AKDNR, No Date-b). According to 11 AAC 55.230, Habitat Land is primarily useful for fish and wildlife resource production or for an assemblage of a single or multiple species of regional, state, or national significance. Habitat Land includes wildlife habitat such as tundra, forest, and wetlands surrounding or within the area of analysis. **Figure 3.2-1** depicts the location of designated Habitat Land and the Tetlin NWR relative to the Alternative 1 LPOE site. The existing LPOE has been operational since 1972, lessening the land's suitability for Habitat Land designation. Furthermore, the Tetlin NWR parcel considered for a use permit is mostly cleared of trees and contains a dirt road.

The U.S. Department of Agriculture reports that 0.1 percent of land in the Fairbanks Borough (including the Southeast Fairbanks Census Area) is under agricultural use (USDA, 2017). No agricultural activity was observed during site inspections or in aerial photography. Agricultural activity in the region is limited by hydric soils (see Section 3.3 Geology, Topography, and Soils), low temperatures, and a short growing season. Therefore, prime agricultural land does not exist in the area of analysis or vicinity and no further evaluation is necessary.



Sources: AKDNR, No Date-b; Bing Virtual Earth, 2023; USFWS, 2023c

Figure 3.2-1. Alcan LPOE and Vicinity Land Use Designations

3.2.1.2 Community Management Plan

The Alcan LPOE has 36 residents as of 2020 (USCB, 2020c) and does not have a Community Management Plan; the South Fairbanks Census Region of the Unincorporated Borough does not have a Community Management Plan or similar guidelines. However, historical land usage at all parcels dating from the 1950s to the present include commercial (and associated residential) activities discussed in Section 3.2.1.1, including the existing LPOE.

3.2.2 Environmental Consequences

This section evaluates effects to land use that may result from implementation of Alternative 1 and the No Action Alternative at the project site and its vicinity.

3.2.2.1 Alternative 1 - Expansion and Modernization in Place

Under Alternative 1, effects to land use would likely differ between the existing LPOE parcel and the Tetlin NWR use permit acres. At the existing LPOE, short-term effects to land use are unlikely because the LPOE is already disturbed and has supported LPOE activities since 1972; thus, construction, renovation, and operations associated with LPOE modernization are compatible with existing and envisioned land use. In the long term, activities associated with Alternative 1 would be anticipated to have beneficial, direct, local, long-term, and negligible effects on land use in the area of analysis. This is because proposed project activities under this Alternative would increase the suitability of land to support the current use.

Effects to the Tetlin NWR parcel proposed for a use permit would involve a maximum of 6.5 acres of disturbed land that would be used for a helicopter landing zone. This change in use would decrease the value of the Tetlin NWR land for habitat use due to noise and visual disturbance to wildlife. However, the Tetlin NWR includes over 900,000 acres, and the surrounding region comprises hundreds of thousands of acres of undeveloped Habitat Land. Therefore, development on these 6.5-acres of Tetlin NWR land would have adverse, direct, local, long-term, and minor effects to land use of the overall Tetlin NWR resource area.

3.2.2.2 No Action Alternative

Under the No Action Alternative, land use at the existing LPOE site and at the Tetlin NWR parcel under consideration for a use permit for Alternative 1 would remain the same. Overall, the No Action Alternative would have no effect on land use.

3.3 Geology, Topography, and Soils

This section presents an overview of geology, topography, and soils within the area of analysis. Geology is the study of the Earth, how it was formed, what it is made of, and the processes that act on it. Topography refers to the three-dimensional arrangement of physical attributes (e.g., shape, height, and depth) of a land surface in a place (Crippen, 2010). Soil is a collective term for the inorganic and organic substrate covering bedrock which supports vegetation growth and vegetative cover for animal habitat and feeding.

3.3.1 Affected Environment

The area of analysis for Alternative 1 includes the existing 55-acre Alcan LPOE property at the Alaska Highway MP 1221.8 and the use of up to 6.5 acres from the Tetlin NWR. The existing Alcan LPOE property has been disturbed and developed with multiple structures, paved surfaces, and landscaped areas. The

6.5-acre Tetlin NWR property currently includes land that is mostly cleared of trees and a dirt access road with small, dispersed patches of trees within the boundaries.

3.3.1.1 Geology

The area of analysis occurs within the interior lowlands of eastern Alaska between the Wrangell Mountains of the Alaska Range to the south and the Yukon-Tanana Uplands to the north (Alaska Science Center, 2018). The interior lowlands are an area of rolling hills separated by low-lying, boggy areas. The area of analysis is underlaid entirely by undivided Quaternary deposits from the Quaternary period spanning the past 2.6 million years (Elias, 2013). The deposits consist predominantly of river, lake, ocean, swamp, and wind as well as widespread glacial deposits (Wilson et al., 2015).

3.3.1.1.1 Geologic Hazards

The area of analysis does not contain any active faults; however, the Denali Fault, a strike slip fault, is located approximately 32 miles to the south (Plafker et al., 1994). The Denali Fault is an active fault which resulted in the 2002 Denali Fault Earthquake with a moment magnitude (M_W) of 7.9 approximately 210 miles west northwest of the area of analysis (USGS, 2005; Google Earth, 2023b). Two aftershock earthquakes of 5.0 M_W or greater occurred as a result of the 2002 Denali Fault Earthquake within 60 miles of the area of analysis, while one 5.3 M_W earthquake occurred in 2017 (USGS, 2023a). Within 60 miles of the area of analysis, earthquakes up to 5.0 M_W have occurred repeatedly in the last 50 years (USGS, 2023a). Similar seismic activity is expected in the future. Earthquake hazards within the area of analysis are medium, determining this area to have a moderate chance of experiencing a severe earthquake in the next 50 years (USGS, 2019).

The area of analysis contains radon observations above the U.S. Environmental Protection Agency's (EPA) limit of 4.0 picocuries per liter of air (pCi/L) (AEL, 2011). Radon is a naturally-occurring, inert, radioactive gas which is produced by the decay of uranium found in rocks and soils. Radon gas escapes into the air overtime and enters buildings through cracks and holes in the foundation (EPA, 2023g). The AKDNR Geology & Geophysical Surveys observed radon levels of 9.9 pCi/L in the area, including the area of analysis (AKDNR, 2023b). A 2011 radon test sampled 12 locations within the Alcan LPOE and found levels between 1.9 and 11.4 pCi/L with an average of 4.9 pCi/L (AEL, 2011).

Other acknowledged geological hazards such as landslides and rockslides, volcanoes, avalanches, subsidence, and Karst topography are not issues within the relevant vicinity of the area of analysis.

3.3.1.2 Topography

The area of analysis ranges from approximately 1,860 to 2,040 ft above mean sea level. It rises towards the south-southeast at an average slope of 8.2 percent (Google Earth, 2023b). The area of analysis additionally includes a 40-foot hillside with an average slope of 33 percent, positioned south of the highway to the south of the existing Alcan LPOE. A topographic map of the area of analysis is shown in **Figure 3.3-1**.

3.3.1.3 Soils

The area of analysis is underlaid by Histic Pergelic Cryaquepts, which are predominately peat with seasonal saturation and a majority component of permafrost. Histic Pergelic Cryaquets permit very slow infiltration rates and act as poorly draining soils. The existing Alcan LPOE was built upon rocky fill sourced from the nearby Tetlin NWR, as indicated in the user interview (Solv, 2023). Other soil types that may appear in the general area of analysis include very gravelly silt loam, silt loam, and/or weathered bedrock (EDR, 2023b).

3.3.1.3.1 Permafrost

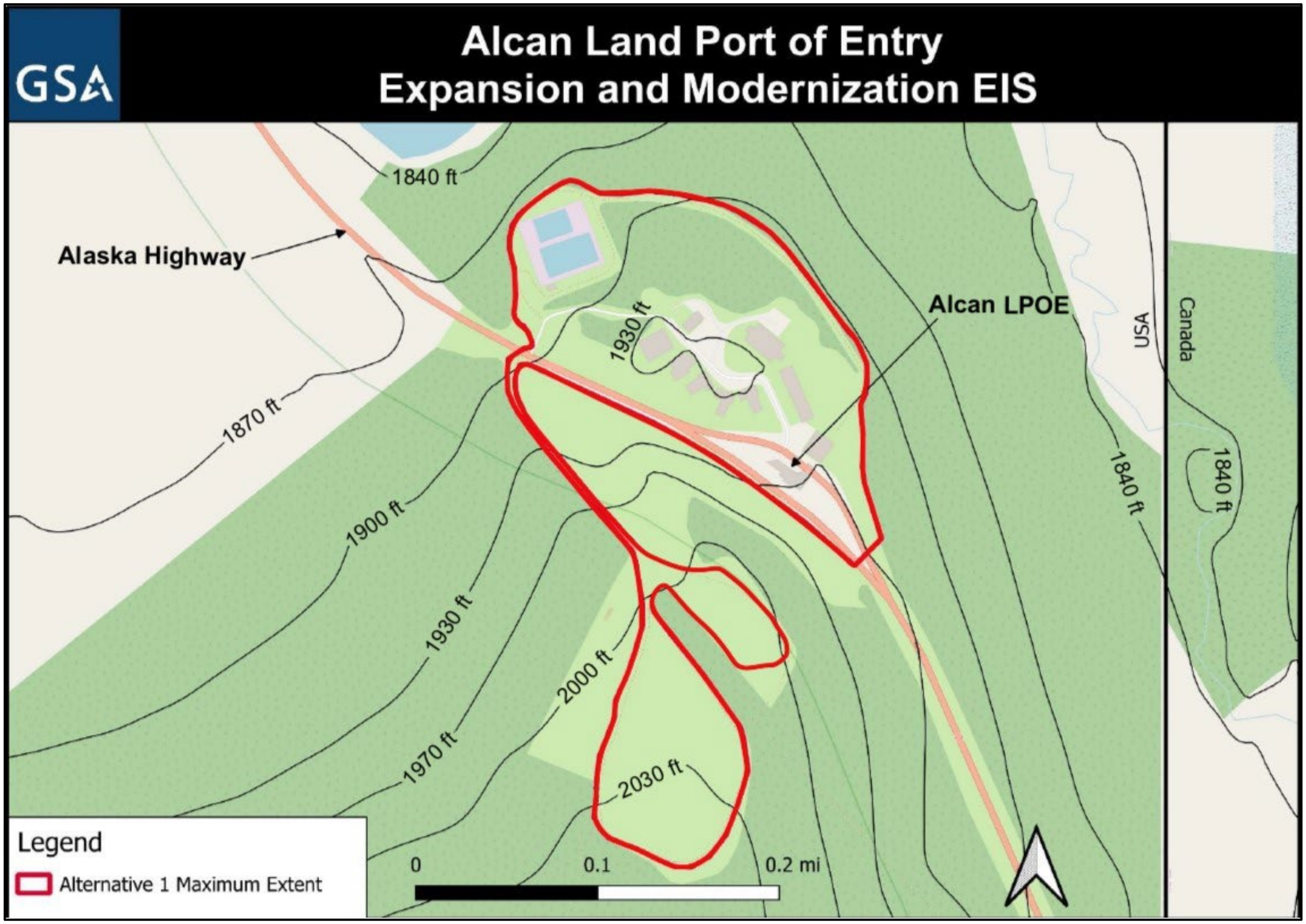
Permafrost, which is discontinuously present throughout this region of Alaska, is defined as unconsolidated deposits of bedrock that are continuously below freezing for two or more years (USGS, 1999). The existing LPOE site is located within a region of discontinuous permafrost, with a coverage of between 50 and 90 percent at a depth of approximately 360 ft (Jorgenson et al., 2008; UAF, 2008). The area of analysis includes areas of sporadic (10-50 percent) coverage to the north, west, and south, and areas of extensive discontinuous coverage to the east across the Canadian border (see **Figure 3.3-2**; AKDNR, No Date-c; NSSI, 2021; Government of Canada, 2022). Permafrost provides a stable foundation for structures and infrastructure in cold-climate regions as long as the temperature of the frozen ground is well below freezing. Permafrost can exist as a solid sheet or as distinct patches; these characterizations are referred to as continuous and discontinuous permafrost. Increased temperatures lead to permafrost thaw resulting in soil degradation, destabilization, and erosion (AKDNR, No Date-c).

3.3.2 Environmental Consequences

This section evaluates effects to geology, topography, and soils that may result from implementation of Alternative 1 and the No Action Alternative at the project site and vicinity. Effects to geology, topography, and soils would occur given the following conditions:

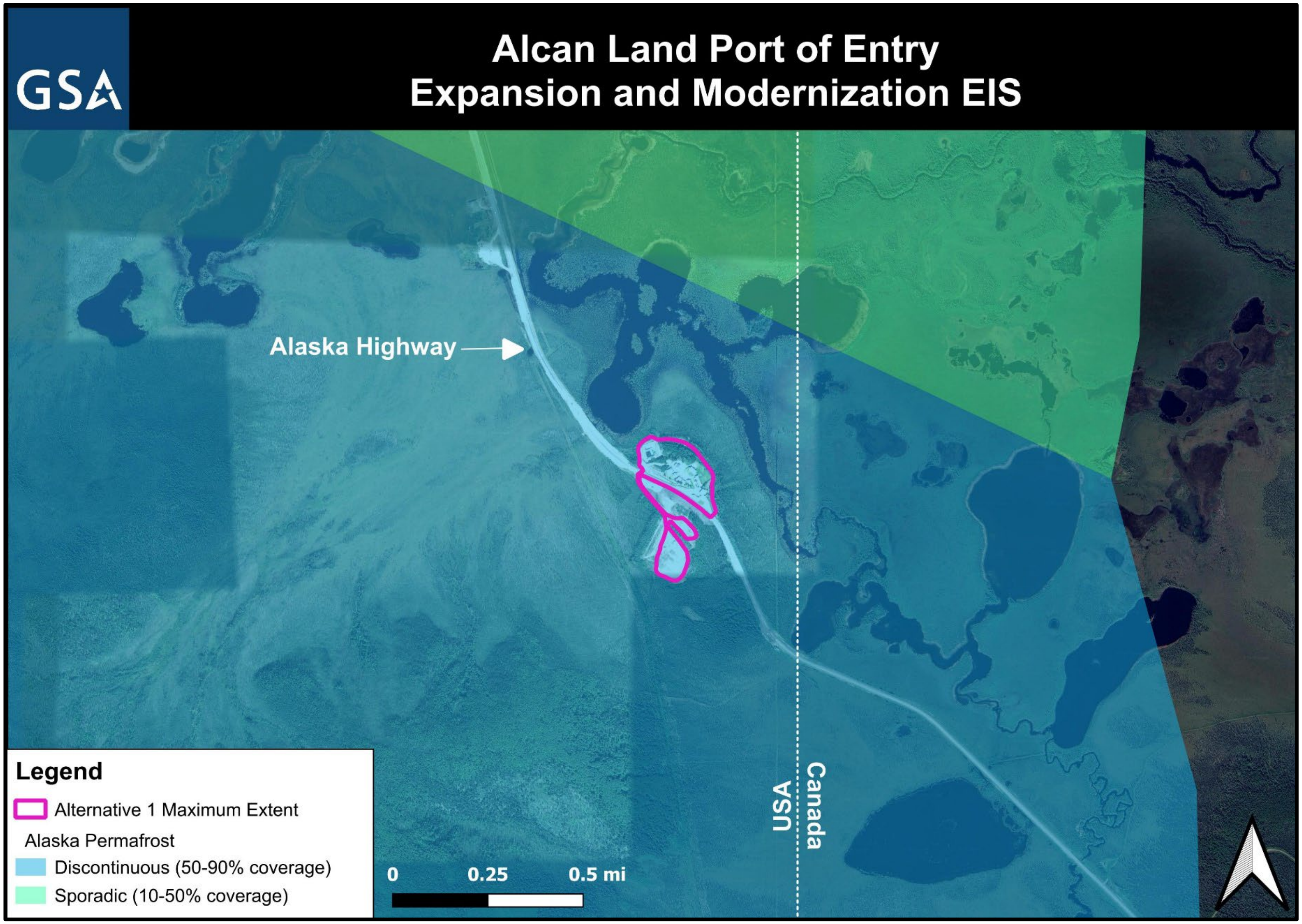
- Direct, adverse effects to geology, topography, and soils would occur if the alternatives:
    - Constitute a fundamental change in geology, topography, and soils - i.e., excavating existing bedrock, eliminating topographic features such as hills, or impairing the natural function of soils; or
    - Reduce the natural state of geology, topography, and soils from its current quality.
- Indirect, adverse effects to geology, topography, and soils would occur if the alternatives:
    - Result in indirect changes to the quality or natural state of existing geology, topography, and soils - i.e., erosion of nearby soils as result of stormwater draining off of newly added impervious surfaces.

The following sections describe the anticipated environmental consequences to geology, topography, and soils of each alternative.



Source: EDR, 2023a

Figure 3.3-1. Topographic Map of the Area of Analysis



Sources: Bing Virtual Earth, 2023; NSSI, 2021

Figure 3.3-2. Map of the Permafrost Continuity in the Vicinity of the LPOE Site

3.3.2.1 Alternative 1 - Expansion and Modernization in Place

3.3.2.1.1 Geology

For the geological risk of seismic activity, construction under Alternative 1 would follow GSA's Seismic Mitigation Program to ensure seismic preparedness and would be evaluated as part of the design process. To address the potential geologic hazards within the area of analysis, GSA would implement radon-resistant construction techniques to mitigate radon pervasion into the buildings that would be constructed under Alternative 1. Techniques to prevent radon pervasion into facilities include using gravel as a gas permeable layer located below the foundation, a gas and vapor barrier between gravel and foundation, a vent pipe from the gravel, and thorough sealing and caulking of the foundation itself (EPA, 2023h).

Blasting under Alternative 1 would be limited, and only used where necessary for foundations or buried utilities on existing GSA property, and best management practices (BMPs) would be used to constrain the potential effects of stress-induced damage to local geological features. By limiting blasting and following BMPs, the effects on geological features in Alternative 1 would be adverse, direct, local, long-term, and negligible.

3.3.2.1.2 Topography

A large portion of the LPOE site has previously been graded and filled to accommodate the existing Alcan LPOE property. The up to 6.5-acre area of Tetlin NWR proposed for a use permit and the Airs Hill access road have been previously disturbed. Alternative 1 would require grading of an approximately 14,400 square-foot-area (120 ft x 120 ft) of Airs Hill south of the existing Alcan LPOE for a helicopter landing zone. The process of grading would flatten and effectively eliminate the topographic features in that approximately 14,400 sf area. As such, Alternative 1 would have adverse, direct, site-specific, long-term, and minor effects on topography in the area of analysis.

3.3.2.1.3 Soils

There would be approximately 15 acres of temporary ground disturbance and 5 acres of permanent ground disturbance at the LPOE site from construction and demolition activities. Heavy equipment would compact, loosen, and destroy the structure and function of organic and mineral soils, while reducing soil moisture and increasing runoff and erosion. Ground disturbance would cause soil detachment, and wind and stormwater runoff would transport freshly disturbed soil and cause soil erosion. Soil productivity, which is the capacity of the soil to produce vegetative biomass, would decrease in temporarily disturbed areas. Soil compaction by heavy equipment and other vehicles could decrease soil porosity resulting in the decreased transfer of air and water through the soil; and decreased vegetative productivity due to root restriction. These activities and their associated effects would occur at the existing Alcan LPOE, where some of the soils have been previously disturbed, and on the 6.5 acres of Tetlin NWR land proposed for a use permit, where all land has been previously disturbed. While clearing vegetation would increase the potential for erosion and sedimentation in the short term, soil erosion would be minimized by implementing BMPs during project activities. BMPs could include installing silt fencing and sediment traps, and reestablishing vegetation to minimize erosion and sedimentation. Areas around the buildings, parking lots, and other infrastructure where soils remain exposed after construction would be revegetated with regionally appropriate native plant species. Short-term and long- effects on soils would be adverse, direct, local, and minor with the implementation of BMPs. The grading for Alternative 1 on approximately 14,400 sf on Airs Hill south of the existing Alcan LPOE would require the movement of soil throughout the area of analysis. Grading and improvements to the existing hillside access road, including new guardrails on the hill's steep sections, would permanently destroy any remaining natural soil horizons in the disturbed area. Previously noted BMPs would be implemented during earthwork activities to reduce the direct effects on soils.

Alternative 1 would result in approximately 4 acres of additional impervious surfaces (e.g., buildings, parking lots, roads). Additional impervious surfaces would increase potential water runoff and soil erosion. Soil erosion would occur as a result of increased runoff from the new impervious surfaces, but BMPs such as revegetation would lessen the severity of these effects. The roots of native plants would minimize erosion and sedimentation by re-stabilizing the topsoil. The effects to soils would be adverse, direct, local, long-term, and minor to moderate from grading, the use of heavy equipment, vehicle and foot traffic compaction, and the covering of soils with concrete, asphalt, and other impermeable surfaces. The effects to soils would result in the loss of soil drainage, function, and structure.

The demolition, earthwork activities, and construction proposed under Alternative 1 are not expected to affect the thermal stability of underlying permafrost given the 360-ft depth of the permafrost at the Alcan LPOE. If permafrost thaws, soil shifts and collapses could have adverse effects on the structure and the resiliency of the construction project. BMPs such as constructing insulated foundations would be used to protect permafrost in the area of analysis. Due to the depth of permafrost in the area of analysis, the activities proposed under Alternative 1 would have no effects on permafrost. Long-term operations of the LPOE and routine maintenance also would not affect permafrost.

3.3.2.2 No Action Alternative

In the short term, there would be no effects to geology, topography, or soils in the area of analysis under the No Action Alternative as there would not be any ground disturbing activities. In the long term, disturbance to soils would continue to occur from routine maintenance activities (e.g., facility repairs, septic system monitoring, landscaping) on-site. These effects would not noticeably alter soil compaction, soil horizons, runoff, or erosion within the area of analysis. Overall, effects of the No Action Alternative on soils would be adverse, direct, site-specific, long-term, and negligible.

3.4 WATER RESOURCES

3.4.1 Affected Environment

This section describes the affected environment in terms of the local water resources, which include stormwater, surface water, groundwater, and floodplains (see Section 3.5 for analysis of wetlands). The area of analysis includes the existing LPOE site and the 6.5 acres from Tetlin NWR parcel proposed for a use permit.

3.4.1.1 Stormwater

Stormwater is the runoff of water when precipitation falls on impervious surfaces such as roads, roofs, and sidewalks and is a potential source of sediments and other contaminants that could degrade downstream receiving waters. Impervious areas like parking areas, roofs, and sidewalks are sources of contaminants such as sediments from muddy tires, brake dust and leaked oil from vehicles, animal droppings, and litter. Impervious surfaces prevent rainwater from infiltrating into the soils, and as a result, stormwater runs off at higher rates and volumes as compared to undeveloped sites. These higher flow rates and volumes could lead to increased flooding and erosion.

Under Section 438 of the EISA of 2007, federal agencies are required to reduce stormwater runoff from federal development and redevelopment projects to protect water resources.

At the Alcan LPOE site, stormwater is generally discharged from impervious surfaces within the LPOE either overland or via collection structures such as inlets and underground piping, and small ditches. The existing LPOE site is 55 acres, of which 8 acres comprise impervious cover. Stormwater generally drains from the LPOE site to the northeast towards Scottie Creek. To the northwest of the LPOE, a 58-inch diameter steel pipe culvert passes under the Alaska Highway to convey runoff downstream (AtkinsRealis, 2024).

3.4.1.2 Surface Water

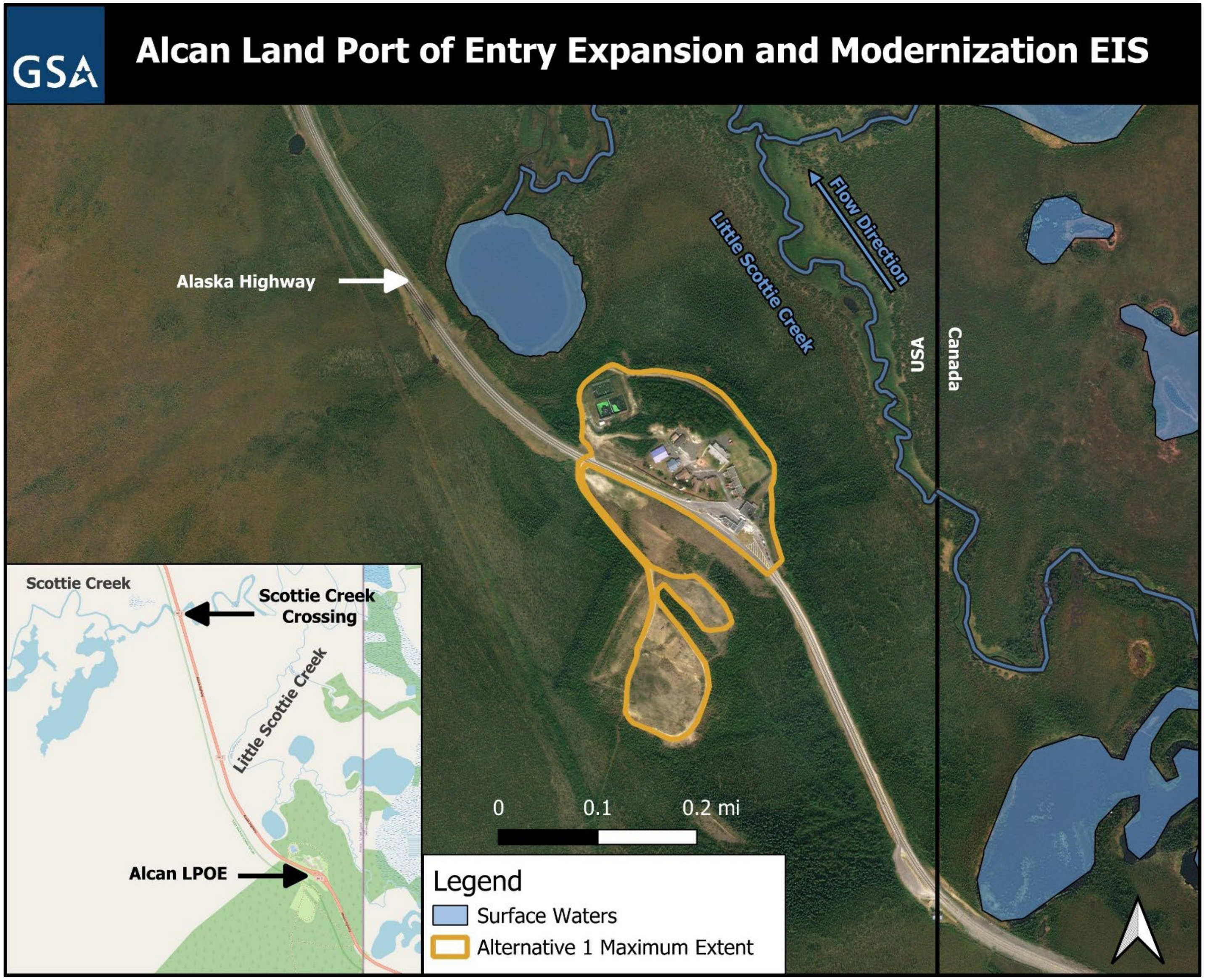
Surface water resources in eastern Alaska generally consist of lakes, rivers, streams, and wetlands. Surface water is important for its contributions to the economic, ecological, recreational, and human health of a community. Year-round presence of water in surface water features varies, falling into the categories of perennial, intermittent, and ephemeral.

The existing LPOE site drains to the northeast towards Scottie Creek, which turns to flow under a bridge to cross the Alaska Highway approximately one mile north of the LPOE, as shown in **Figure 3.4-1**. Watersheds are delineated by the U.S. Geological Survey using a nationwide system based on surface hydrologic features; the system divides the country into areas and assigned Hydrologic Unit Codes. Scottie Creek is located within the Nebesna-Chesana Rivers Hydrologic Unit Code-8 (ID#19080301). It eventually combines with the Chisana River, forming the Tanana River at Northway Junction, about 40 miles west of the U.S.-Canada border. The Chisana River and many of the streams and rivers in the region are generally fed by glacial tributaries and melting ice fields (USGS, 1916). Sediment builds up in the streams and wide, shallow floodplains form during periods of high flow. In the colder months, when little water is discharged from the glaciers, the streams are free from sediment. During the summer months, the rivers are subject to rapid fluctuations due to sunny days or warm rains on the ice fields (USGS, 1916).

Water quality describes the condition of water, including chemical, physical, and biological characteristics, usually with respect to its suitability for a designated use. The most common standards used to monitor and assess water quality define the health of ecosystems, safety of human contact, extent of water pollution, and condition of drinking water. Water quality standards are provisions of state, territorial, authorized tribal or federal law approved by the EPA that establish the basic structure for protecting water resources. These standards consist of designated beneficial uses such as recreation, drinking water, and agriculture. Water quality standards form a legal basis for controlling pollutants entering the waters of the U.S. The CWA requires the EPA to develop criteria for surface water quality that accurately reflect the latest scientific knowledge on the effects of pollutants on human health and the environment (EPA, No Date). Section 303(d) of the CWA requires each state to provide a program to monitor the quality of their waters and provide a list of waters that do not meet the state water quality standards. This list is commonly referred to as the 303(d) list.

The latest document containing water quality information for compliance with the CWA Section 303(d) is the Alaska 2022 Integrated Report. This report indicates that the reach of Scottie Creek near the Alcan LPOE (Assessment Unit ID "AK_R_8030106_003") is designated as a Category 3 body of water, which means that not enough information is known about its condition for the body of water to be categorized under Section 303(d) (AKDEC, 2022).

Further downstream in the watershed, the Chisana River is also described as a Category 3 body of water. The Tanana River is the closest downstream categorized segment (AK_R_8030204_004); it is listed as "supporting" its designated uses of Fresh Water (Growth and Propagation of Fish, Shellfish, and Other Aquatic Life and Wildlife; Water Recreation [Contact Recreation]; Water Recreation [Secondary Recreation]; Agriculture; Aquaculture; Drinking, Culinary and Food Processing) (AKDEC, 2022).



Sources: Bing Virtual Earth, 2023; Open Street Map, 2023; USGS, 2023b

Figure 3.4-1. Local Surface Water Features

3.4.1.3 Groundwater

Groundwater consists of subsurface hydrologic resources. It is an essential resource often used for drinking water, agricultural irrigation, and industrial applications. Groundwater is typically described in terms of its depth from the surface, aquifer or well capacity, water quality, surrounding geologic composition, and recharge rate.

Permafrost can act as a confining feature that restricts the movement of groundwater. It is not known if groundwater is affected by permafrost at the LPOE site (Hennebery Eddy Architects, 2019). Permafrost in this region is also discussed in Section 3.3.1.3.1.

Potable water at the existing LPOE site is provided by two groundwater well sources. Well #1, located just south of the triplex, was drilled in 1985 and is 380 ft deep. Well #2, located just beyond the northwest corner of the triplex, was drilled in 1971 and is 400 ft deep (GEG, 2011). Well #1 is used for fire and flushing water, and Well #2 is used for potable water applications; they are independently piped. The piping arrangements allows for cross-over valving and either well to feed the water system (Hennebery Eddy Architects, 2019). Potable wells are tested regularly in compliance with statewide requirements and AK Dept of Health Standards. Only Well #2 appears in the Alaska Well Log Tracking System (AKDNR, No Date-a). The use of groundwater by LPOE staff is strictly to service the LPOE facilities in their operation, and therefore groundwater use is quite small. There is no other demand for groundwater resources in the vicinity. Detailed design would determine if new groundwater wells would be necessary.

This system is in a remote area. There are no major sources of potential contamination besides the LPOE's wastewater infrastructure and a class V injection well, which is located east of the utility building (GSA, 2020). A class V injection well is used to inject non-hazardous fluids underground. Sewage from the facility is disposed of in wastewater lagoons to the west of the LPOE.

Groundwater resources are not considered further in this Final EIS because they would not be affected by modification or operation of the LPOE.

3.4.1.4 Floodplains

EO 11988, *Floodplain Management*, requires federal agencies to avoid adverse impacts associated with the occupancy and modification of floodplains. The Federal Emergency Management Agency administers the National Flood Insurance Program which aims to reduce the effects of flooding on private and public structures. No municipality or other entity in the area of analysis participates in the National Flood Insurance Program. The area of analysis is unmapped by the Federal Emergency Management Agency (FEMA, No Date). Discussions with the LPOE staff in November 2023 indicated that no flood event has overtopped the Alaska Highway in recent memory (AtkinsRealis, 2024).

As in much of remote Alaska, there is little information available about either historical flooding or current flood risk; therefore, a hydrology and hydraulics study was conducted in April 2024 to assess the risk and hazard at the LPOE site. A formal land survey was not performed; however, a visit was carried out, and measurements were taken of the nearby structures. During this site visit, LPOE staff reported that the greatest observed flooding in the past eight years occurred in June 2023 when the water surface elevations reached the tree line of the boreal forest north of the site. During regular high flow conditions, flood waters were also reported to fill the pond adjacent to the site to the northwest (AtkinsRéalis, 2024).

The analyses included the development of a pseudo-steady two-dimensional hydraulic model to estimate flood elevations and corresponding flood inundation extents and water surface elevations for the 1- and 0.2 percent annual chance events (AtkinsRéalis, 2024). The results of the hydrologic and hydraulic analyses indicate that the lowest built structures (i.e., wastewater treatment structures) at ground level on the

LPOE site are at approximately 41 feet and 40.5 feet above the predicted 1- and 0.2-percent annual-chance-event water surface elevations, respectively. Since there is limited risk for flooding of these structures, and proposed actions would not occur in the floodplain, floodplain resources are not considered further in this Final EIS. More information about the analysis, assumptions, and results of the hydrology and hydraulics study are provided in Appendix D.

3.4.2 Environmental Consequences

This section evaluates effects to water resources that may result from implementation of Alternative 1 and the No Action Alternative at the project site and its vicinity. The assessment of effects on water resources in the area of analysis considers how the alternatives would affect the quantity, quality, usage, location, and other characteristics of water resources as applicable. An effect would be considered major if one of the characteristics of the resource were substantially altered or removed.

3.4.2.1 Alternative 1 - Expansion and Modernization in Place

Project activities under Alternative 1 would temporarily disturb approximately 15 acres of land and would result in an additional 4 acres of impervious surfaces.

3.4.2.1.1 Stormwater

The quality of stormwater is affected on construction sites when sediment leaves the site. The CWA Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) program to address water pollution by regulating point sources that discharge pollutants to Waters of the U.S. unless authorized by an NPDES permit. Project activities proposed under Alternative 1 would disturb approximately 15 acres of land and would therefore require an Alaska Construction General Permit to satisfy the NPDES program. Permits include limits on what can be discharged, monitoring and reporting requirements, and other provisions to ensure that the discharge does not harm water quality. Construction-related activities using vehicles and equipment can also pose a risk of accidental spills of contaminants, which could have adverse effects to the downstream environment if not properly managed. Permitting authority under NPDES falls to the Alaska Department of Environmental Conservation (AKDEC).

Permit application for NPDES compliance involves the development of a stormwater pollution prevention plan (SWPPP) to document the BMPs to be used on the construction site to reduce or prevent the discharge of pollutants. These permits and documents must be obtained before land disturbing activities occur. The first phase of project implementation, Site Preparation, would comprise the majority of the land disturbing activity. Formulation of the SWPPP during the design phase and implementation of the plan during project activities would minimize effects of Alternative 1 on recipient surface waters within the area of analysis.

Stormwater BMPs are practices to prevent or mitigate the escape of sediment from a site with disturbed soils and manage or mitigate the risk of spills. Erosion control strategies during the site preparation and construction phases often include temporary seeding, use of silt fencing, installation of gravel construction entrances/exits, installation of temporary sediment basins, and other methods as determined during detailed design. Some examples of BMPs often identified in a SWPPP to prevent spills and mitigate the potential impacts of spills may include the proper maintenance of vehicles and equipment; the proper storage of chemicals away from watercourses or drains; the proper storage of hazardous materials within secondary containment vessels, as necessary; storage of materials in covered areas, off the bare ground; the storage of materials in clearly labeled, original containers and keeping Safety Data Sheets on-site; and the immediate treatment of spill areas with absorbents. During final design, specific BMPs would be identified to mitigate potential discharge of pollutants at the identified discharge points. The SWPPP would document where all BMPs would be installed, the site's discharge points, responsibility for implementing the SWPPP, and training and maintenance records associated with the SWPPP. As such, Alternative 1 would have adverse, direct, local, short-term, minor effects to stormwater during construction-related activities.

Once site preparation and construction are completed, land-disturbing activities would cease, and the site would be stabilized. The quantity and quality of stormwater during LPOE operation would be affected by the extent of impervious (i.e., paved or highly compacted) areas, runoff potential of the soils, site grade, and vegetative cover. Poor vegetative cover or steep slopes could increase erosion, causing sediments to become entrained in stormwater runoff. Impervious cover or poorly draining soils (e.g., clayey soils) would reduce the potential for stormwater to infiltrate into the ground, resulting in the generation of a higher volume of stormwater runoff during operation of the LPOE.

Alternative 1 would include the installation of four additional acres of impervious cover; however, GSA would mitigate these effects and maintain compliance with stormwater runoff requirements under Section 438 of the EISA. This Act states that development or redevelopment projects involving federal facilities with a footprint that exceeds 5,000 sf are required to use site planning, design, construction, and maintenance strategies for the property 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. Stormwater system design during the detailed design phase would involve the installation of properly sized curbs, gutters, and ditches, as applicable, to allow for adequate collection and discharge of runoff. Permanent stormwater BMPs, such as detention ponds, vegetated swales, or level spreaders, would be installed in compliance with local, state, and federal law. These permanent stormwater BMPs would be regularly maintained by mowing, removing debris, and repairing damage to help maintain their long-term efficacy. Thus, Alternative 1 would have adverse, direct, local, long-term, negligible effects to stormwater during LPOE operation.

3.4.2.1.2 Surface Water

Project activities would disturb soils and remove vegetative cover which can cause or exacerbate erosion. Chemicals, fuels, or other substances used in project activities could spill and contaminate downstream receiving waters. Erosion control and spill prevention BMPs would be described in an SWPPP and implemented during the site preparation and construction phases to reduce potential effects from erosion or spills to surface water quality and quantity. Through the implementation of the SWPPP, the impacts of project activities on stormwater runoff would be minor because risk of escape of sediment or other pollutants from the site would be minimal. Thus, project activities would be expected to have only minor effects on water quality measurements (e.g., Total Suspended Solids) or water quality indicators (e.g., pH, dissolved oxygen, and benthic macroinvertebrate presence). These effects would occur during the construction period and would end once project activities are completed. As such, Alternative 1 would have adverse, direct, local, short-term, minor effects to surface waters during construction-related activities.

The existing LPOE site is 55 acres, of which 8 acres comprise impervious cover. The implementation of Alternative 1 would result in an additional 4 acres of impervious area for a total of 12 acres of impervious surfaces. Alternative 1 would add a relatively small amount of impervious area, leaving 78 percent of the LPOE site as pervious area. The footprint of the LPOE would be sited to avoid interrupting natural and existing surface water drainage to the maximum extent practicable, and permanent stormwater BMPs, as described in Section 3.4.2.1.1, would control the volume and rate of stormwater runoff leaving the site in compliance with Section 438 of the EISA. Vehicle processing operations at the LPOE could introduce small amounts of contaminants from leaked oil or fuel to surface waters via stormwater runoff. However, these additional contaminants would be minimal and would not likely noticeably affect water quality within the area of analysis. Alternative 1 would, therefore, have adverse, direct, local, long-term, negligible effects on surface waters during LPOE operation.

3.4.2.2 No Action Alternative

Under the No Action Alternative, no demolition of existing facilities, construction of new and larger facilities, or expansion of the LPOE operations would occur. There would be no changes to impervious area, site grading, or site layout to the existing LPOE site. Therefore, the No Action Alternative would have adverse, direct, local, long-term, negligible effects to water resources in the area of analysis.

3.5 Biological Resources

Biological resources refer to the living components of the environment, including terrestrial and aquatic vegetation and wildlife, and special status species protected under federal and Alaska state law. Special status species include threatened or endangered species protected under the ESA and migratory birds protected under the Migratory Bird Treaty Act (MBTA).

This section discusses the affected environment and environmental consequences that would result under each alternative for biological resources in the project area. The area of analysis comprises the existing LPOE, up to 6.5 acres of Tetlin NWR proposed for a use permit, and the immediate vicinity (an approximately 100 ft buffer around the project perimeter).

There are no ESA-listed threatened or endangered species or designated critical habitat in the project area or vicinity (see Section 1.6.3; USFWS, 2023a), and according to the Alaska Department of Fish and Game (AKDF&G, No Date-a), no state-listed species occur in the project area or vicinity. Therefore, federal and state threatened and endangered species are not analyzed in this section.

3.5.1 Affected Environment

Low mountains, forests, tundra, and wetlands surround the area of analysis, which is located on the Alaska Highway. The Tetlin NWR bounds the area of analysis to the south and west, state-owned land bounds it to the north, and the international border with Canada bounds it to the east (GSA, 2023). The existing LPOE consists of developed and disturbed land with several buildings, impervious surfaces, and disturbed roadside habitats. The up to 6.5 acres of Tetlin NWR land proposed for a use permit is mostly cleared of trees, containing bare ground and a dirt road (as of 2010; Section 3.2 Land Use). The immediate vicinity is primarily forested habitat.

3.5.1.1 Vegetation

The area of analysis lies in the Interior Highlands Level III ecoregion (EPA, 1995). An ecoregion is a geographically-defined area where ecosystems and the quality and quantity of environmental resources within them are generally similar (EPA, 2000). A continental climate; low, rounded mountains; and poorly-drained soils underlain by discontinuous permafrost (see Section 3.3, Geology, Topology, and Soils) characterize this ecoregion (USGS, 1995). While higher elevations are generally barren of vegetation, lower elevations contain needleleaf forests and dwarf scrub (low-growing bushes) communities, and areas of poor soil drainage (i.e., wetlands, discussed in Section 3.5.1.3) support moisture-tolerant (mesic) grasses. Tree species representative of the area include black spruce (*Picea mariana*) and paper birch (*Betula papyrifera*). Willows (*Salix polaris, S. reticulata,* or *S. arctica*) typically dominate the scrublands, often accompanied by or codominated with crowberry (*Empetrum nigrum*), clubmoss mountain-heather

(*Cassiope lycopodioides*), cushion-forming evergreen dwarf shrubs (*Dryas* spp.), berry-bearing shrubs (*Vaccinium* spp.), or marsh Labrador tea (*Ledum decumbens*). Mesic grass communities contain mainly sedge tussocks (*Eriophorum vaginatum* or *Carex bigelowii*), low shrubs like dwarf birch (*Betula nana*), and mosses (USGS, 1995). The Alaska Exotic Plants Information Clearinghouse identifies five invasive species occurring within the area of analysis: white sweetclover (*Melilotus albua*), alsike clover (*Trifolium hybridum*), common dandelion (*Taraxacum officinale*), smooth brome (*Bromys inermis*), and pineappleweed (*Matricaria discoidea*) (AKEPIC, 2022). The area of analysis contains grassy landscaped areas, early successional grassy and low-growing vegetation (including invasive species) in disturbed areas, woodland edge, forests, some wetlands, and a few individual trees or shrubs. Many of the species listed above occur in the area of analysis or vicinity.

3.5.1.2 Wildlife

The area of analysis consists mainly of impervious surfaces, grassy landscaped areas, a dirt road, early-successional disturbed areas, and some forested or wetland habitat, only the last three areas provide quality wildlife habitat. The landscape surrounding the area of analysis consists of suitable, high-quality forested, tundra, and wetland habitat.

The Tetlin NWR and surrounding area provide habitat for at least 42 mammals, including moose (*Alces alces*), caribou (*Rangifer tarandus*), American black bear (*Ursus americanus*), American beaver (*Castor canadensis*), and muskrat (*Ondatra zibethicus*) (AKDF&G, No Date-b). These species are unlikely to occur within the area of analysis outside of incidental foraging or traveling events due to minimal habitat availability, especially aquatic species such as beaver or muskrat, and due to the level of development and daily operational activities at the LPOE.

The Tetlin NWR and surrounding area provide habitat for at least 30 resident migratory and non-migratory bird species, including peregrine falcon (*Falco peregrinus*), black-capped chickadee (*Poecile atricapillus*), gray-headed chickadee (*Poecile cinctus*), McKay's bunting (*Plectrophenax hyperboreus*), and ruffed grouse (*Bonasa umbellus*) (USFWS, No Date-d). These species likely occur at suitable or high-quality sites within or surrounding the area of analysis such as woodland edges, grassy areas, wetlands, and forested habitat, and could occur incidentally within the developed area of analysis.

3.5.1.3 Wetlands

Wetlands are areas where water covers the soil or lies at or near the soil surface either seasonally or year-round (EPA, 2024). Wetland habitats in Alaska are extensive, comprising over 63 percent of the wetland ecosystems in the U.S. (AKDEC, 2024b). Alaska solely regulates wetlands through Section 401 of the CWA, which provides states legal authority to review an application or project that requires a federal license or permit that might result in a discharge into Waters of the U.S.

In this region of Alaska, lowlands with slopes less than two or three percent are likely to have wetland characteristics as they tend to retain hydrology on site. Lowlands surrounding, and in some cases intersecting, the area of analysis are black spruce taiga or muskeg, each of which are commonly indicative of wetland presence (Henneberry Eddy Architects, 2019). According to the National Wetlands Inventory (NWI) Wetlands Mapper[2] (USFWS, No Date-e), the area of analysis overlaps, and is immediately surrounded by, a wetland that is forested with needle-leaf evergreens and scrubs and is seasonably

[2] The NWI mapper is slightly shifted compared to the base map for the LPOE project area, which results in an overlap between the Alternative 1 extent and the NWI wetlands. A future wetland delineation would confirm the actual presence or absence of wetlands onsite.

saturated (**Figure 3.5-1**; USFWS, 2015). A freshwater pond is located approximately 500 ft northwest of the LPOE.

It is not known if any of the NWI-indicated wetlands have surface hydrologic connections, which is required for the classification of Water of the U.S. In the event that a jurisdictional determination indicates that a wetland is considered a Water of the U.S., Section 404 of the CWA would require a permit in order to dredge or fill material within those areas. GSA plans to complete a wetland delineation during the design phase to obtain jurisdictional determinations for the existing LPOE site and the 6.5 acres of Tetlin NWR proposed for a use permit.

3.5.1.4 Migratory Birds

The Tetlin NWR and surrounding area has one of the greatest densities of nesting waterfowl in the state, sometimes hosting tens of thousands of fledglings (AKDF&G, No Date-b). Tetlin NWR documents 96 migratory bird species occurring in the area (USFWS, No Date-d). As such, migratory birds are likely to occur at suitable or high-quality sites within the area of analysis and vicinity such as woodland edges, early successional grassy areas, wetlands, and forests, and could occur incidentally at sites of lower habitat value within the existing LPOE. Common migratory bird species include sandhill crane (*Grus canadensis*), trumpeter swan (*Cygnus buccinator*), whistling tundra swan (*Cygnus columbianus columbianus*), white-fronted goose (*Anser albifrons*), and Canada goose (*Branta canadensis*) (AKDF&G, No Date-b). Birds of Conservation Concern (BCCs) are species that, without additional conservation actions, are likely to become candidates for listing under the ESA. The nesting periods for BCC species analyzed in this section range from May through August, and these species have a higher probability of presence in the areas of analysis and vicinity from early May through July. Two BCCs, lesser yellowlegs (*Tringa flavipes*) and olive-sided flycatcher (*Contopus cooperi*), and bald eagle (*Haliaeetus leucocephalus*) are likely to occur in or near suitable habitat within the area of analysis (USFWS, 2023a). Breeding seasons for the two BCC range from May to August, and these two species have a higher probability of presence in this region of Alaska from May to July (USFWS, 2023a).

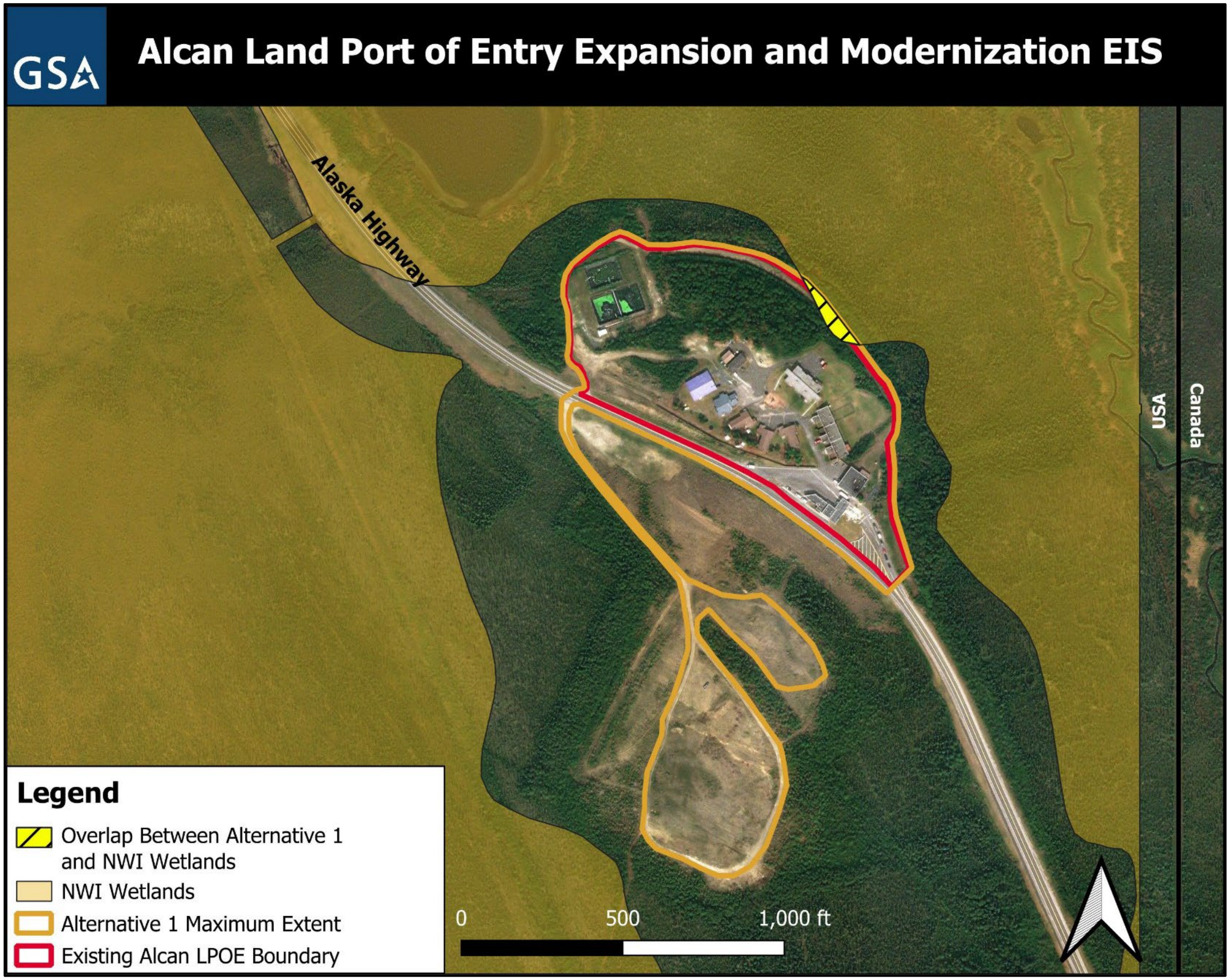
3.5.2 Environmental Consequences

3.5.2.1 Alternative 1 - Expansion and Modernization in Place

Under Alternative 1, adverse effects to biological resources within the area of analysis would be primarily associated with short-term disturbance and displacement during project activities.

3.5.2.1.1 Vegetation

Under Alternative 1, the total construction footprint in the area of analysis is approximately 15 acres, nearly all of which is disturbed, landscaped, or covered with impervious surfaces. Some vegetation in the area of analysis, including nonnative landscaped grasses, native and invasive early successional growth in disturbed areas, and individual trees or shrubs, would be replaced with impervious surfaces, and invasive species could be spread or introduced during construction. Woodland edge vegetation in the periphery of the construction footprint may experience short-term disturbance from project activities.



Sources: Bing Virtual Earth, 2023; USFWS, 2023b

Figure 3.5-1. Wetlands Near the Alcan LPOE

A majority of the construction footprint would be at the previously disturbed existing LPOE site, and activities would remove onsite vegetation in disturbed or landscaped areas and replace it with approximately 4 acres of additional impervious surfaces. Disturbances to the 6.5 acres of Tetlin NWR proposed for a use permit would include clearing, grading, and compacting on approximately 14,400 sf of Airs Hill south of the existing LPOE. The land proposed for a use permit was cleared of forest vegetation by 2010; therefore, the hillside likely contains early successional vegetation. There would be localized vegetation disturbance from foot traffic during site preparation, construction, and demolition activities.

Project activities could introduce or spread invasive plant species to or from the area of analysis. Additionally, project activities may increase the occurrence of disturbed conditions that would be susceptible to the establishment and spread of invasive plant species within the area of analysis. However, BMPs such as equipment washing, and proper disposal of invasive species found during project activities would be implemented to minimize the introduction and establishment of invasive species. Alternative 1 would have adverse, direct, local, short-term, and negligible effects on vegetation due to the destruction and removal of native plant species present in the area of analysis during construction of the new LPOE. However, these species occur widely outside the area of analysis and in the region; therefore, there would not be any long-term effects on plant communities as a whole.

Heavy equipment may cause short-term disturbance to vegetation present in adjacent woodland edges beyond the footprint of construction, including grasses and other low vegetation, shrubs, and trees. However, overall effects to vegetation would be minimized by concentrating the area of disturbance to the smallest area necessary to complete the project. Construction vehicles would use existing roadways to access the project area to avoid excessive disturbance to vegetation. Additionally, disturbed sites in the area of analysis would be replanted with native vegetation when project activities are complete. Native replanting would result in beneficial, direct, local, short- and long-term, negligible effects to vegetation.

Long-term operations of the LPOE would not appreciably affect vegetation relative to existing conditions at the LPOE. Therefore, the operations and routine maintenance of the expanded LPOE would have no effect on vegetation.

3.5.2.1.2 Wildlife

As there is minimal suitable habitat within the area of analysis itself, any wildlife incidentally occurring within the area of analysis at the time of project activities would be displaced to the more suitable surrounding forested habitat. Site preparation, construction, and demolition activities and human presence would cause direct disturbance to wildlife residing in the surrounding forested habitat for the duration of the project, and wildlife residing in the woodland edge would potentially be displaced deeper into the forest. Effects would include mechanical, noise, and visual disturbance due to project activities and human presence in the short-term during project activities and in the long-term during LPOE operation. Disturbances to wildlife would be temporary but recurring over the 6-year project implementation period as buildings and structures are constructed and demolished. Noise can startle individual animals, cause stress, mask communication and other natural sounds, and displace animals from surrounding habitat. The forest habitat surrounding the area of analysis is more suitable than the disturbed or woodland edge habitat within, so any displaced animals would likely use these surrounding habitats and could return to any habitat remaining in the area of analysis upon completion of project activities. Furthermore, any displacement of animals is not likely to increase their energy expenditure or resource competition outside of the range of natural variation. Therefore, adverse effects to wildlife would be direct, local, short-term, and negligible limited to the periphery of and within the area of analysis.

BMPs would be implemented during the construction and operation of the expanded LPOE to further minimize potential adverse effects to wildlife. Construction vehicles would observe maximum speed limits to minimize the possibility for any wildlife-vehicle collisions. Staging and stockpile areas would be located within or immediately adjacent to the construction footprint to reduce the area of habitat disturbance.

Alternative 1 would likely remove some disturbed early-successional and woodland edge habitat and convert it into impervious surfaces such as buildings, roads, or parking lots. Since it is unlikely that wildlife resides in the disturbed habitat due to LPOE development and activity, in combination with the presence of abundant, more suitable forest and wetland habitat surrounding the area of analysis, adverse effects to displaced wildlife would be local, short-term, and negligible.

During operation of the new Alcan LPOE, noise and visual disturbance from traffic passing through the port would continue to have long-term adverse effects on wildlife; however, traffic is not expected to increase as a result of LPOE modernization, and wildlife in the area is likely habituated to noise from existing LPOE operations. Therefore, noise effects on wildlife as a result of traffic would remain the same following project completion, resulting in negligible adverse effects to wildlife. Wildlife would likely continue to stay away from the LPOE due to noise and visual disturbance from traffic, operations, and routine maintenance, especially during periods of higher traffic. No habitat loss or wildlife displacement caused by activities under Alternative 1 would affect the overall local or regional ecosystem condition or function.

3.5.2.1.3 Wetlands

Approximately 0.3 acres of wetland habitat that occurs within the area of analysis (see **Figure 3.5-1**) could potentially be subject to drainage, fill, and eventual elimination to support the new LPOE, permanently destroying wetland habitat and displacing or causing the loss of wetland organisms. Site development would avoid wetland areas to the extent practicable, and GSA would develop and implement compensatory mitigation strategies if the filling of wetlands is deemed necessary for the final design. Effects to these areas would be considered major in magnitude without mitigation, as wetland hydrology, vegetation, and overall functionality could be destroyed. Prior to the finalization of the design phase, GSA would seek a formal jurisdictional determination from the U.S. Army Corps of Engineers [Section 404 permit; Section 401 Water Quality Certification], as applicable, before engaging in dredging or placement of fill within wetlands.

Section 404 of the CWA requires permitting and compensatory mitigation for federal activities taking place in jurisdictional wetlands, defined as Waters of the U.S., and determined through wetland delineation. Proposed activities are regulated through a permit review process; an individual permit is required for potentially major effects, while a general permit would suffice for minimal adverse effects. If there is filling of 0.3 acres of wetlands through non-novel construction methods under Alternative 1, it would likely require a general permit. The applicant would need to apply for and obtain a Certificate of Reasonable Assurance from the AKDEC to conduct a regulated activity (AKDEC, 2024c).

During construction of the expanded LPOE, earthwork activities could lead to increased levels of erosion within the area of analysis, resulting in detachment of soils and transport of freshly disturbed soils via wind and stormwater runoff. This runoff could damage wetlands due to the accelerated sedimentation of wetlands within and outside the area of analysis. However, BMPs such as the installation of a silt fence around the construction site and placement of gravel or rip-rap for heavy vehicle transit would be implemented to minimize erosion and potential effects to wetlands. In addition, a SWPPP would be implemented to minimize erosion and avoid potential effects of project activities to wetlands. Regional wetland habitat would be unaffected. Wildlife occupying wetland habitat destroyed during project activities would be displaced or lost; however, displaced wildlife could instead utilize the abundant wetland habitat surrounding the area of analysis, and the potential mortality of individual wetland organisms would not affect overall regional ecosystem condition or function (or affect the viability of wildlife populations in the region), particularly for the small area of wetlands that may be filled (<1 acre). GSA would communicate any anticipated effects on wetlands with the U.S. Army Corps of Engineers or the State of Alaska as needed and would adhere to their respective permitting processes to mitigate adverse effects to the extent practicable and to maintain compliance with the CWA. Existing LPOE operational activities do not affect wetland location, quality, or extent. Stormwater runoff to wetlands may increase following LPOE expansion due to the expansion of total impervious surface coverage with an additional 4 acres, but this change would not appreciably increase adverse effects on wetlands relative to existing conditions.

Effects to wetlands in the area of analysis under Alternative 1 would be adverse, direct, local, long-term, and minor to moderate (assuming compensatory mitigation by GSA) due to the potential filling of 0.3 acres of wetlands, the destruction of wetland vegetation, and the displacement or loss of wetland organisms.

3.5.2.1.4 Migratory Birds

The MBTA and EO 13186, *Responsibilities of Federal Agencies to Protect Migratory Birds*, require the protection of migratory birds and their habitats. EO 13186 clarifies the responsibilities of federal agencies to consider the effects of agency actions on birds listed under MBTA. Migratory birds are likely to occur in the suitable forest habitat surrounding the area of analysis, but they are unlikely to occur within the area of analysis itself due to its level of disturbance and human activity and the minimal habitat it offers compared to the surrounding area. Project activities could temporarily displace migratory birds in the vicinity while humans or equipment are present, but the disturbance would not increase their energy expenditure or resource competition outside of the range of natural variation, resulting in adverse, direct, local, short-term, and negligible adverse effects to migratory birds.

Long-term effects to migratory birds from operation of the expanded LPOE, traffic, and maintenance would be the same as anticipated effects to wildlife: adverse, direct, local, and negligible. No habitat loss or displacement of birds caused by activities under Alternative 1 would affect the overall local or regional ecosystem condition or function.

To minimize potential effects to migratory birds, GSA could prepare the site, including necessary vegetation or tree removal, outside of nesting season (i.e., during November through April). However, due to the extreme winter weather at Alcan, GSA cannot guarantee that site work would be limited to this timeline. Furthermore, if spring at Alcan were to be warm and snow melted early, breeding season for some or all BCC could start earlier. Therefore, GSA would develop a construction plan that minimizes disturbance to the nesting bird population rather than scheduling construction for a particular season.

3.5.2.2 No Action Alternative

No changes to vegetation, wildlife, or natural communities would be expected under the No Action Alternative. Noise or other disturbances to wildlife present in the existing LPOE site from routine maintenance activities would continue at current levels. Therefore, adverse effects to biological resources under the No Action Alternative would continue to be adverse, direct, local, long-term, and negligible.

3.6 Cultural and Tribal Resources

Cultural resources may include prehistoric or historic districts, sites, buildings, structures, or objects included in, or eligible for inclusion on, the NRHP and archaeological sites. A cultural resource can represent past or present cultures and can be composed of physical remains, intangible traditional use areas, or an entire landscape. Physical remains of cultural resources are usually referred to as archeological sites, while buildings or structures are usually referred to as historic resources.

3.6.1 Affected Environment

The cultural resources area of potential effects (APE) for the project was defined as the existing Alcan LPOE and up to 6.5 acres of Tetlin NWR land proposed for a use permit. This APE is equivalent to the maximum extent of Alternative 1, which is depicted in **Figure 2.1-1**. The APE included sufficient area surrounding the footprint of the alternative to ensure consideration of potential effects to adjacent historic properties that could be adversely affected by the undertaking. These adverse effects could be physical, visual, atmospheric, or auditory.

The Draft APE was sent to Tetlin Village, Northway, Ahtna, Inc., Doyon Limited, the Tanana Chiefs Conference, and the Alaska SHPO in April 2023 for comment. The Alaska SHPO, Tanana Chiefs Conference, and Northway indicated that they wished to consult in the process for GSA action and were consulted for input throughout the NEPA process. GSA and Northway signed an MOU dated December 20, 2023, that details the roles and responsibilities for the lead and cooperating agencies.

Northern Land Use Research Alaska, LLC conducted a literature review (desktop assessment) and a Phase I archaeological survey of the APE (as defined by the Office of History and Archaeology in Historic Preservation Series No. 11, revised in 2003) in July and August of 2023 on behalf of GSA. For the purposes of the literature review, a Study Area was created to encompass all areas within a half-mile buffer of the APE. The results of the literature review are included below.

3.6.1.1 Historic Context

The Alcan LPOE is within the headwaters of the Upper Tanana region between the Tanana and White Rivers, which was relatively undisturbed until the construction of the Alcan Highway in 1942-1943. With the exception of several highway realignment surveys and other cultural resource studies, relatively few archaeological studies have examined this area. Therefore, the prehistoric and historic past land use of the larger area of eastern Alaska and southwest Yukon is summarized below to provide context for potential cultural resources within the APE. The culture history for this larger area can be broken down into two broad sections: the prehistoric and the historic periods.

3.6.1.2 Prehistoric Period

3.6.1.2.1 Beringian Period (pre circa 12,500 B.C.E.)

Humans first migrated into Alaska during the Last Glacial Maximum, approximately 24,000 to 15,000 Before Common Era (B.C.E.). During this time, the large amount of water locked in the world’s glacial ice sheets lowered ocean levels and exposed a land bridge between Asia and Alaska. The area, known as Beringia, was not glaciated and extended from northeastern Siberia across the now submerged Bering Sea floor to central Alaska and the Yukon Territory. The APE lies within Eastern Beringia at the headwaters of the Tanana and White Rivers. The archaeological evidence reflecting human occupation in Eastern Beringia prior to 12,500 B.C.E. is scarce and there is ongoing debate about the timing and route of human migration into Eastern Beringia (Mooney, 2005). One theory is that Paleoarctic peoples passed through Alaska and migrated south through an ice-free corridor to the rest of North America. Another interpretation is that Paleoarctic peoples followed a coastal route along the south side of Beringia into present-day Alaska (NPS, 2022).

In archaeology, the term "tradition" refers to spatially and temporally contiguous groups of populations sharing common subsistence practices, socio-political organization, and material industries. Indicators of tradition are physically recoverable and exclude non-recoverable cultural components such as language and ideology (Peregrine, 2010). Technology from the Paleoarctic tradition during this period included microblades, which were razor sharp, triangular, prismatic blades that were approximately one inch long and may have been set in wood or bone (Mooney, 2005). The Paleoarctic tradition also includes a distinctive hunting technology called an atlatl or throwing board used to propel lightly built spears. The atlatl functioned as an extension of the hunter's arm, imparting greater velocity and range to the projectile. The spear tip was a composite implement built from a combination of hard organic materials, (e.g., ivory, antler, or bone) and flaked stone (AKDNR, 2018). Food sources included bison, elk, caribou, Dall sheep, moose, ptarmigan, hare, marmot, and arctic ground squirrel (AKDNR, 2018). Eastern Beringian campsites generally cover only a few hundred square feet, indicating use by small hunting parties or possibly extended families (AKDNR, 2018).

3.6.1.2.2 American Paleoarctic Tradition Period (circa 12,500 - 7,000 B.C.E.)

Rising sea levels covered the land bridge connecting North America to Asia during this period. Evidence indicates that peoples in central Alaska during this period had cultural continuity with the American Paleoarctic tradition (AKDNR, 2018). The Paleoarctic peoples in interior Alaska are believed to have used similar stone tool technologies as earlier inhabitants but with many small technical differences in manufacturing, artifact styles, and the percentages of tool types found at particular sites (AKDNR, 2018). There is evidence that Paleoarctic peoples placed greater emphasis on transporting tools made of higher quality stone from site to site rather than depending on lower quality local materials. The array of animals used for food during this period is similar to earlier inhabitants with the important exception of salmon. The first physical evidence of salmon consumption by prehistoric Alaskans emerges at 11,500 B.C.E. in the Tanana River basin (AKDNR, 2018).

3.6.1.2.3 Northern Archaic Period (circa 7,000 - 1,500 B.C.E.)

During this period, the Northern Archaic tradition replaced the American Paleoarctic tradition throughout central Alaska. Caribou bone appears in Northern Archaic sites in higher percentages relative to bison, which were likely declining in abundance (AKDNR, 2018). Although commonly associated with interior boreal forest environments, a large proportion of Northern Archaic sites are located in upland and northern tundra settings. This suggests that intercepting migrating caribou herds was an important part of the annual Northern Archaic subsistence strategy.

Northern Archaic stone tool technology is distinctive in its transition from microblades to spear points made of fine-grained stone. Northern Archaic weapon tips tended to have several standardized outlines, thin cross-sections, and faces shaped by removal of small flakes across the entire surface (AKDNR, 2018). Technological hallmarks of the tradition included spear points with notches or fish-tail shaped stems at their bases, presumably to aid in attaching the points to the spear shaft. Some elongated Northern Archaic stone point types (lanceolates) were distinctive from earlier, similar forms in that the attachment or haft area often contracted and had a wider "blade" ahead of the haft (AKDNR, 2018). Another characteristic tool was a large, flaked stone artifact which was thinned and had a "semi-lunate" or irregular outline. These may have functioned as large knives. An alternate use may have been as an easily transported core or preform from which a variety of tools, including spear points, could be manufactured as needed (AKDNR, 2018).

Because large numbers of hide scraping tools are often associated with notched points in Northern Archaic toolkits, archaeologists speculate that the upland hunting groups included both women and men.

This inference depends on early historical records and Alaska Native social narratives that indicate hide processing and sewing clothing were generally female activities (AKDNR, 2018). Similarly, harvests of migrating caribou are known from Alaska Native oral histories to have depended on larger social groups that included children, women, and men. These larger groups drove migrating herds into lakes, rivers, or brush corrals where they could be easily dispatched. The herd behaviors of migrating caribou cause them to be easily diverted along drive lines formed by wooden drift fences, piled stones or turfs set at regular intervals, or simply lines of people who chivvied the animals in the desired direction. Full utilization of this "drive and intercept" tactic required careful prior planning and coordination of timing during the hunt. This further suggests that social organization of the tradition may have spanned several related bands that coalesced during the caribou migrations but traveled and gathered food in smaller groups at other times in the annual subsistence cycle.

3.6.1.2.4 Athabaskan Period (circa 1,500 B.C.E. - 1762 C.E.)

In the Athabaskan Period, ancestors of the Scottie Creek Tanana Athabaskans populated the APE (Mooney, 2005). The late prehistoric Athabaskan tradition marked a sharp technological break with the preceding Northern Archaic tradition. Radiocarbon-dated artifacts found in ice patches in central Alaska and Yukon Territory show that a rapid transition took place from the older atlatl and throwing spear system to the bow and arrow near the beginning of the Athabaskan Tradition (AKDNR, 2018). Projectile point styles also changed. Along with the transition from spears to arrows, stone points became smaller and tended to have stemmed rather than notched shafts. Bone points, especially barbed forms, appear and over time became more abundant than flaked stone types. Other common organic artifact types include sewn basketry and cache pit liners made of birch bark, bone or antler awls, bone hide scraping tools, bone knives, and drinking tubes. Cold hammered copper also appeared in the record, originating from deposits in the Wrangell Mountains. Flaked stone technology is well represented by scraping and graving tools for shaping antler and bone, small wedges, several types of hide scrapers, and expedient flake tools in Athabaskan sites before first contact with Europeans.

Prehistoric Athabaskan subsistence and settlement patterns are also well-represented in the archaeological record. In lowland river valleys, large winter villages occurred at locations where migrating salmon could be captured in large numbers. These sites typically contain several large house pits and many subsurface food storage caches (AKDNR, 2018). The houses were solidly built out of poles and bark and were arranged along elevated river terraces. Short-term villages also developed at some locations on interior lakes and rivers where freshwater fish were seasonally abundant. Intercept hunting for migrating caribou persisted and used extensive drive fences in some areas. Mass caribou hunts resulted in the temporary formation of larger social groups at sites. Along with caribou, moose became increasingly important as a subsistence resource; moose bone occurs at nearly 75 percent of Athabaskan period sites (AKDNR, 2018). Other large game species important during Athabaskan times included Dall sheep and bear. Hare, beaver, and canids served as important small game species. Fish of all kinds occur in 38 percent of Athabaskan sites (AKDNR, 2018).

The late Athabaskan Period also overlaps with the proto-historic period, which can be defined by the appearance of non-Native goods such as drift iron (i.e., iron fragments attached to wood from shipwrecks), other early trade items, and western influences in the central Alaska region, but not the presence of westerners themselves. Non-Native trade items and influences in the region were presumably acquired through trade with other Alaska Native communities. Other indicators of the proto-historic period are evidence of the arrival of western or non-Native diseases and information concerning non-Natives. This period spans the time between the first introduction of non-Native artifacts or influences, and the recording of firsthand or primary written accounts. As such, this period in eastern Alaska is poorly defined and may stretch back to possible contacts or retelling of stories of early Asian or Russian sailors which may have influenced the coastal peoples to the west.

3.6.1.3 Historic Period (1762 C.E. - Present)

The historic period has been broken down into the following sections based on the key economies associated with Russian and American influences: the Russian Fur Trade Period (1762-1867), the American Fur Trade and Gold Rush Period (1867-1900), the American Period of Settlement and Growth (1900-1940), and the Modern Era (1940-Present). A short summary of previous U.S. LPOEs is also provided for historic context.

3.6.1.3.1 Russian Fur Trade Period (1762 - 1867)

Hundreds of Russian private traders began exploration in greater Alaska during the Russian Fur Trade Period, reaching the Commander Islands on the far west end of the Aleutian Islands and Kodiak Island on the far east end of the chain by 1762 (Mooney, 2005). During this early exploration period, the Aleut, Northwest Coast, and other Alaskan Native cultures changed dramatically (Mooney, 2005). European diseases decimated local indigenous populations. Many epidemics swept through during the period, including dysentery, influenza, typhoid, whooping cough, smallpox, and measles (AKDLWD, 2013). As exploration continued, the Russian government continued to assert control across Alaska within a growing field of international interests. In 1792, Shelikhov Company (later renamed the Russian-American Company) built redoubts (i.e., small temporary trading and defensive posts) on some of the islands and coastal harbors (Mooney, 2005). These posts opened Alaska and its rich inland fur resources to the fur trade, particularly the beaver. While the Russians were exploring along the coast and up the major rivers of the Alaskan interior, the British were exploring eastward into what would become Canada's Northwest and Yukon Territories, and interior Alaska. In the 1840s, representatives of the Hudson Bay Company established trading posts within and very near what would become Alaska. The first was at the confluence of the Yukon and Porcupine Rivers where John Bell established Fort Yukon in 1847, approximately 300 miles northwest of the APE.

3.6.1.3.2 American Fur Trade and Gold Rush Period (1867 - 1900)

Throughout the early 1800s, Russian interest in the Alaska region waned due to the lack of available financial resources to support major settlements and military efforts. In 1867, President Andrew Johnson signed the Alaska Treaty, which ended Russian presence in North America (DOS, No Date). American presence in the region expanded through the rise of a single large trading company, the Alaska Commercial Company. However, the number of American and European traders inside Alaska grew slowly as the effort required to operate in the interior of Alaska was very high and very few supplies could be brought into the interior.

The importance of the inland fur industry continued to drive exploration and settlement into the late 1800s, but mining would shift the focus of these efforts to the placer gold found in streams and alluvial deposits. In the 1890s, a substantial number of non-Native peoples rushed to Alaska seeking gold. The influx of miners during the gold boom led to a near doubling of the total population from 1890 to 1900 (AKDLWD, 2013). The effects of mining spread rapidly across the state and caused drastic changes to settlement patterns. Many non-Native settlements in remote areas of interior Alaska were established during this period, such as Fairbanks. Mineral prospecting and mining efforts in the second half of the nineteenth century were effectively dependent on the existing infrastructure of fur trading and missionary activity.

3.6.1.3.3 The American Period of Settlement and Growth (1900 - 1940)

To improve transportation to the area and Fort Egbert in Eagle, Alaska, the U.S. War Department built the Trans-Alaska Military Road (better known as the Valdez-Eagle Trail), which was completed in 1900. This rough trail was not suitable for wagons but provided basic connective services within the state. This trail aided communication with the newly completed Fort Egbert and was later followed by the construction of part of the Washington-Alaska Military Cable and Telegraph System (Mooney, 2005). The construction of Fort Egbert and the Valdez-Eagle Trail added greatly to the riverside community, and in 1901, Eagle was the first city in the Alaskan interior to incorporate. However, following the Nome gold rush, the population of Eagle and the surrounding Yukon River area declined dramatically, and the U.S. War Department closed Fort Egbert in 1911.

During the turn of the twentieth century, the Native peoples of the Upper Tanana region traveled and traded for supplies and were affected by the changing way of life, but overall remained isolated. Westerners made primary contact with the Upper Tanana residents in the APE during the international boundary survey from 1907 to 1913. A survey team arrived in the area in 1910 and cleared a roughly 20-foot-wide cutline directly through a traditional Upper Tanana fish camp called Ts'oogot Gaay at Little Scottie Creek. This was very near the current border station (The Tyee, 2018). Native Alaska residents of the village negotiated for the right to continue using traditional hunting and fishing grounds on both sides of the border, but this right was never officially ratified by Canada (The Tyee, 2018). Tribal members located in the U.S. today still have limited cross-border mobility. Other westerners had an effect in the APE in approximately 1913 with a gold strike in the Chisana River area southwest of the current LPOE.

3.6.1.3.4 The Modern Era (1940 - Present)

In February 1942, the U.S. War Department issued the directive to begin the construction of a road to link Alaska to the contiguous U.S. Greater attention was given to the construction of this highway in June 1942 when the Japanese bombed Dutch Harbor and then invaded Adak, Kiska, and Attu in the far western Aleutian Islands (Mooney, 2005). These actions motivated the construction of approximately 1,520 miles of new road through British Columbia and the Yukon Territory. This highway, the Alaska-Canada Highway (or Alcan), was completed in the short span of eight months and 12 days and officially opened on November 20, 1942. To provide Alaska with a secure source of oil during the war effort, the U.S. Army constructed a pipeline and a 286-mile (460-kilometer) service road to carry crude oil from Norman Wells in Canada’s Northwest Territories to Johnson’s Crossing on the Alcan Highway and then to a refinery in Whitehorse. From there, refined gasoline was used to supply the construction effort up and down the Alcan Highway.

The community areas of Northway and Beaver Creek were both established during the construction of the Alcan Highway. These locations were previously used by Native Alaskans and served as logistical centers during the highway construction. In most cases, construction of the Alcan followed many traditional trails that linked small communities together and drastically altered Native Alaskan life in the area. As this area was very isolated prior to the 1940s, the Native residents retained a very traditional way of life during the construction period, although their use of western goods and services was slowly increasing. During most of the 1940s, the local economy was focused on the war effort and the construction and maintenance of the Alcan Highway. Through the 1950s and 1960s, local government and highway maintenance continued to play a major role in the economy. Other industries in the area included those relating to the fluctuating importance of tourism and mining. After the completion of the Alcan Highway, temporary U.S. Customs operated near the border until 1948 when they were relocated to Tok. These services remained in Tok until the current LPOE was completed in 1971.

3.6.1.4 Cultural Resources

In 2023, a desktop assessment and an archaeological survey of the APE were conducted for this Final EIS. The 2023 desktop assessment conducted for this Final EIS reviewed the Alaska Heritage Resources Survey Integrated Business Suite and identified three previously recorded cultural resources within one-half mile of the APE (NLURA, 2023a). Two of the three resources identified by the desktop assessment have been determined not eligible for the NRHP. The first resource is a segment of the original 1942 Alaska Highway, which was determined not eligible for the NRHP in 2008 (NLURA, 2023a). The second resource is a 40-mile segment of a military fuel pipeline that was constructed in 1955 and was determined not eligible for the NRHP in 2021 (NLURA, 2023a). The third resource, the Alaska Military Highway Telephone and Telegraph Line, was determined eligible for listing on the NRHP in 2008. It was constructed during World War II to establish a land-based communications system connecting Alaska to the rest of the contiguous states and provide support to airfields along the Northwest Staging Route. The telephone line was constructed concurrently with the Alcan Highway to Alaska. When completed in 1943, the Alaska Military Highway Telephone and Telegraph Line provided a land-based communication connection from Edmonton, Alberta, to Fairbanks (NLURA, 2023a).

In 2020 GSA determined that the Alcan LPOE, which was originally constructed between 1970 and 1972, was not eligible for the NRHP, and the AK SHPO concurred with this determination (Hennebery Eddy Architects, 2020; AKDNR, 2020). The evaluation determined that the integrity of the complex, and specifically the Main LPOE Building, was significantly compromised by development within the complex boundary; by changes to the scale, arrangement, and architectural style of the temporary housing units over time; and by the 2012 upgrade of the main LPOE building exterior.

The 2023 archaeological survey included subsurface testing and visual surveys within the study area illustrated in Appendix E, Figure 2. No archaeological sites, features, or artifacts were identified during either the surface or subsurface investigation conducted during the 2023 survey. A designated tribal representative from Northway participated in the 2023 cultural resources survey and did not identify any additional tribal resources within the APE. No further surveys were recommended for this area (NLURA, 2023b). A prior study in 2005 concluded that there was a low probability that any significant prehistoric cultural resources remained within the LPOE boundaries (Mooney, 2005). The results of the Phase I Archaeological Survey and the Inadvertent Discovery of Cultural Resources Plan have been submitted to the SHPO and consulting parties for concurrence.

After completion of the 2023 archeological survey, GSA determined that the Airs Hill Trailhead parking area should be considered as a potential location for the proposed helicopter landing zone. This area of the hillside was not included in the 2023 archaeological survey, so GSA consulted with the Tanana Chiefs Conference to determine if an additional archaeological survey was needed. Representatives of the Tanana Chiefs Conference and Northway conducted a pedestrian survey of the Trailhead parking area in June 2024 and determined, based on the heavy level of disturbance in the area, that additional cultural resource investigation was not warranted (TCC, 2024).

3.6.1.5 Alaska Native Subsistence Hunting, Gathering, and Fishing

As described above in Section 3.6.1.3.3, the Alcan LPOE is within the traditional territory of Alaska Native peoples where they traditionally and currently hunt, gather, and fish for subsistence purposes. Correspondence with Northway tribal members indicated that a former Native village and cemetery are located to the northeast of the current LPOE (TCC, 2023). Other traditional and current land uses are located in the vicinity of the APE. There is a traditional fishing camp on Little Scottie Creek that is located immediately to the north of the LPOE on the American side of the international border. However, development of the LPOE restricted the access of Native Alaskans to this traditional fishing camp (TCC, 2023). A member of the community continues to express interest in this fishing camp and previously submitted an application to the Bureau of Indian Affairs to claim use and occupancy of the camp as a Native allotment parcel, but the application was denied by the Bureau of Indian Affairs (TCC, 2023). A modern fish camp is located along Little Scottie Creek to the northwest of the LPOE. Little Scottie Creek is a productive whitefish harvesting zone, which is one of the most important subsistence resources for the Upper Tanana people (TCC, 2023).

3.6.2 Environmental Consequences

The analysis and conclusions presented in this subsection are based on the July 2023 literature review of the APE and ongoing Section 106 Consultation efforts. GSA initiated outreach to Tetlin Village, Northway, Ahtna, Inc., Doyon Limited, the Tanana Chiefs Conference, and the Alaska SHPO in December of 2022 through April 2023 pursuant to Section 106 of the NHPA. In February of 2024, the determination of No Adverse Effect on historic resources and the Inadvertent Discovery of Cultural Resources Plan was shared with Northway, the Tanana Chiefs Conference, and the Alaska SHPO for concurrence. The Phase I Cultural Resources Report (see Appendix E) was shared with all parties, and all comments received during consultation efforts were incorporated into the final report and into the Final EIS.

3.6.2.1 Alternative 1 - Expansion and Modernization in Place

3.6.2.1.1 Cultural Resources

Cultural resources may include prehistoric or historic districts, sites, buildings, structures, or objects included in, or eligible for inclusion on, the NRHP and archaeological sites. Alternative 1 could have direct and indirect (e.g., visual and audible) effects on the Alaska Military Highway Telephone and Telegraph Line. However, this resource is a long linear feature, and the local, minor effects caused by the undertaking are unlikely to rise to the level of an adverse effect. Additionally, project activities would avoid the Alaska Military Highway Telephone and Telegraph Line to the maximum extent feasible. GSA requested concurrence, but no response was received from the Alaska SHPO within 30 days; as such, GSA assumes concurrence.

No archaeological sites, features, or artifacts were identified during the surface and subsurface investigation conducted during the 2023 survey. There is always the possibility that unidentified tribal archaeological resources exist in the area. In conjunction with Northway and the Tanana Chiefs Conference, GSA has developed an Inadvertent Discovery of Cultural Resources Plan (GSA, 2024b). In the unlikely event of an unanticipated discovery of cultural resources, work would halt in the immediate vicinity of the suspected cultural resources, and GSA would avoid project activities that may affect remains and artifacts until coordination has been completed. After discovery, the area containing the resource and a buffer area would be marked and protected. Work would not continue in the area of the discovery until a qualified archeologist inspects the find. Within six business days of the discovery, GSA would notify the SHPO, Northway, and the Tanana Chiefs Conference by phone or email of the discovery. Adverse or beneficial, long-term, major effects could occur if a cultural resource is discovered during ground-disturbing activities. Adverse, long-term effects would occur if the cultural resource is damaged during discovery and would depend on the level of damage; major effects would occur in the unlikely event that a resource is severely damaged or destroyed during discovery. Beneficial, long-term effects would occur if the cultural resource is discovered and preserved; major effects would occur if that discovery led to the identification of a culturally significant resource. However, the level of past ground disturbance observed during the survey makes it unlikely that archaeological resources encountered would be in their original context. As such, direct, local, short-term, negligible effects would likely occur in the APE.

3.6.2.1.2 Alaska Native Subsistence Hunting, Gathering, and Fishing

In the short term, noise and visual intrusions associated with demolition would also likely have adverse, direct, local, and minor effects on any potential subsistence activities that occur outside of but near the APE. Subsistence hunting activities may move further away from the APE due to increased levels of disturbance. In the long term, the presence of the Alcan LPOE at its current site would continue to restrict access to a traditional fishing camp (TCC, 2023). Continued access restrictions would have adverse, direct, local, long-term, and moderate effects. An ANILCA Section 810 analysis was prepared to evaluate the effects of the Proposed Action on subsistence and determined that the proposed expansion and modernization of the Alcan LPOE would not result in a significant restriction of subsistence uses and needs on federal lands (see Appendix F).

3.6.2.2 No Action Alternative

Under the No Action Alternative, no site preparation, construction, or demolition activities would occur at the existing Alcan LPOE. There would be routine maintenance at the existing port, but no substantial ground disturbances would occur under this alternative. As such, no adverse effects would occur to any buried cultural resources that may exist in the APE. In the short and long term, the presence of the Alcan LPOE at its current site would continue to restrict access to a traditional fishing camp (TCC, 2023). Continued access restrictions would have adverse, direct, local, long-term, and moderate effects.

3.7 Environmental Justice

The EPA defines environmental justice (EJ) as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies." The goal of "fair treatment" is not to shift risks among populations, but to identify potential disproportionately high and adverse effects on minority communities and low-income communities and identify alternatives that may mitigate these effects (EPA, 1998).

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, and EO 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All*, require that federal agencies consider as a part of their action any disproportionately high and adverse human health or environmental effects to minority populations and low-income populations. Federal agencies are required to ensure that these potential effects are identified and addressed. EO 14030, *Climate Related Financial Risks,* requires federal investments to account for climate-related financial risks and address any disparate effects on disadvantaged communities and communities of color. EO 14008, *Tackling the Climate Crisis at Home and Abroad*, requires agencies to consider measures to address and prevent disproportionate and adverse environmental and health effects on communities, including the cumulative effects of pollution and other burdens like climate change. EO 14008 established the Climate and Economic Justice Screening Tool, which allows agencies to identify disadvantaged communities that are marginalized, underserved, and overburdened by pollution. EO 13045, *Protection of Children from Environmental Health Risks and Safety Risks*, requires federal agencies to identify and address environmental health and safety risks that may disproportionately affect children. The EO recognizes that children are more sensitive to adverse health and safety risks than adults and 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.

Since potential effects with the greatest intensity and duration would occur in the Southeast Fairbanks Census Area, the Southeast Fairbanks Census Area is defined as the region of influence (ROI) for any direct and indirect effects that may be associated with the implementation of the action alternative. For purposes of comparison, the State of Alaska is defined as the region of comparison (ROC), or the "general population" as it corresponds to the CEQ definition. As such, demographic and income data for the Southeast Fairbanks Census Area are compared to demographic and income data for the State of Alaska in Sections 3.7.1.1 and 3.7.1.2. Due to the site-specific nature of the action alternative, census tract (CT) data are then used to identify high concentration "pockets" of populations with EJ concerns near the Alcan LPOE. CTs are small, relatively permanent units of a county or equivalent entity, generally with a population size between 1,200 and 8,000 people. The primary purpose of CTs is to divide counties into smaller units for the collection and presentation of population data (USCB, No Date).

Data from CEQ's Climate and Economic Justice Screening Tool were used to make inferences about the project area, which consists of the existing Alcan LPOE site and its immediate surroundings. Census block data from the EPA's Environmental Justice Screening and Mapping Tool are used to identify critical service gaps. Data from CEQ's Climate and Economic Justice Screening Tool and from the EPA's Environmental Justice Screening and Mapping Tool are presented in Section 3.7.1.3.

3.7.1 Affected Environment

In this section, race and income data for the Southeast Fairbanks Census Area (the ROI) are compared to race and income data for the State of Alaska (the ROC). Instead of counties, the state of Alaska uses the term "boroughs." There are 19 organized boroughs in the state; the remaining area of the state is referred to as the "unorganized borough." The Southeast Fairbanks Census Area is a subdivision of the unorganized borough and is comparable to a county for the purposes of this analysis. All figures and calculations are based on the U.S. Census Bureau 2017 - 2021 American Community Survey datasets.

3.7.1.1 Minority Populations

The CEQ defines "minority" as including the following population groups: American Indian or Alaskan Native; Asian or Pacific Islander; Black, not of Hispanic Origin; or Hispanic (CEQ, 1997). The CEQ defines a minority population in the following ways:

- "…If the percentage of minorities exceeds 50 percent... (CEQ, 1997)." As this definition applies to the project, if more than 50 percent of the Southeast Fairbanks Census Area population consists of minorities, this would qualify as a population with EJ concerns.
- "… [If the percentage of minorities] is substantially higher than the percentage of minorities in the general population or other appropriate unit of geographic analysis (CEQ, 1997)." For purposes of this analysis, a discrepancy of 10 percent or more between minorities (the sum of all minority groups) in the Southeast Fairbanks Census Area and the State of Alaska would be considered meaningfully higher and would categorize the Southeast Fairbanks Census Area as constituting a population with EJ concerns. This approach also applies to individual minority groups. A discrepancy of 10 percent or more between individual minority groups (American Indian or Alaska Native; Asian or Pacific Islander; Black, not of Hispanic Origin; or Hispanic) in the Southeast Fairbanks Census Area and the percentage of individual minority groups in the State of Alaska would be considered meaningfully higher and would categorize the ROI as constituting a population with EJ concerns.

Table 3.7-1 presents census data for the ROI, the ROC, and the CT containing the area of analysis (see **Figure 3.7-1**). Due to the site-specific nature of the action alternative, in addition to describing minority populations on the borough level, CT data are used to identify any high concentration "pockets" of minority populations and describe the distribution of minorities in the vicinity of the Alcan LPOE (EPA, 1998). It should be noted that although the table includes census data for a geographic area within the

ROI, the ROI does not change and is still defined as the Southeast Fairbanks Census Area. As **Table 3.7-1** indicates, minorities do not represent more than 50 percent of the ROI's total population, nor are they meaningfully higher in number than the corresponding values for the ROC (USCB, 2021a). Therefore, the ROI does not constitute a population with EJ concerns on this basis.

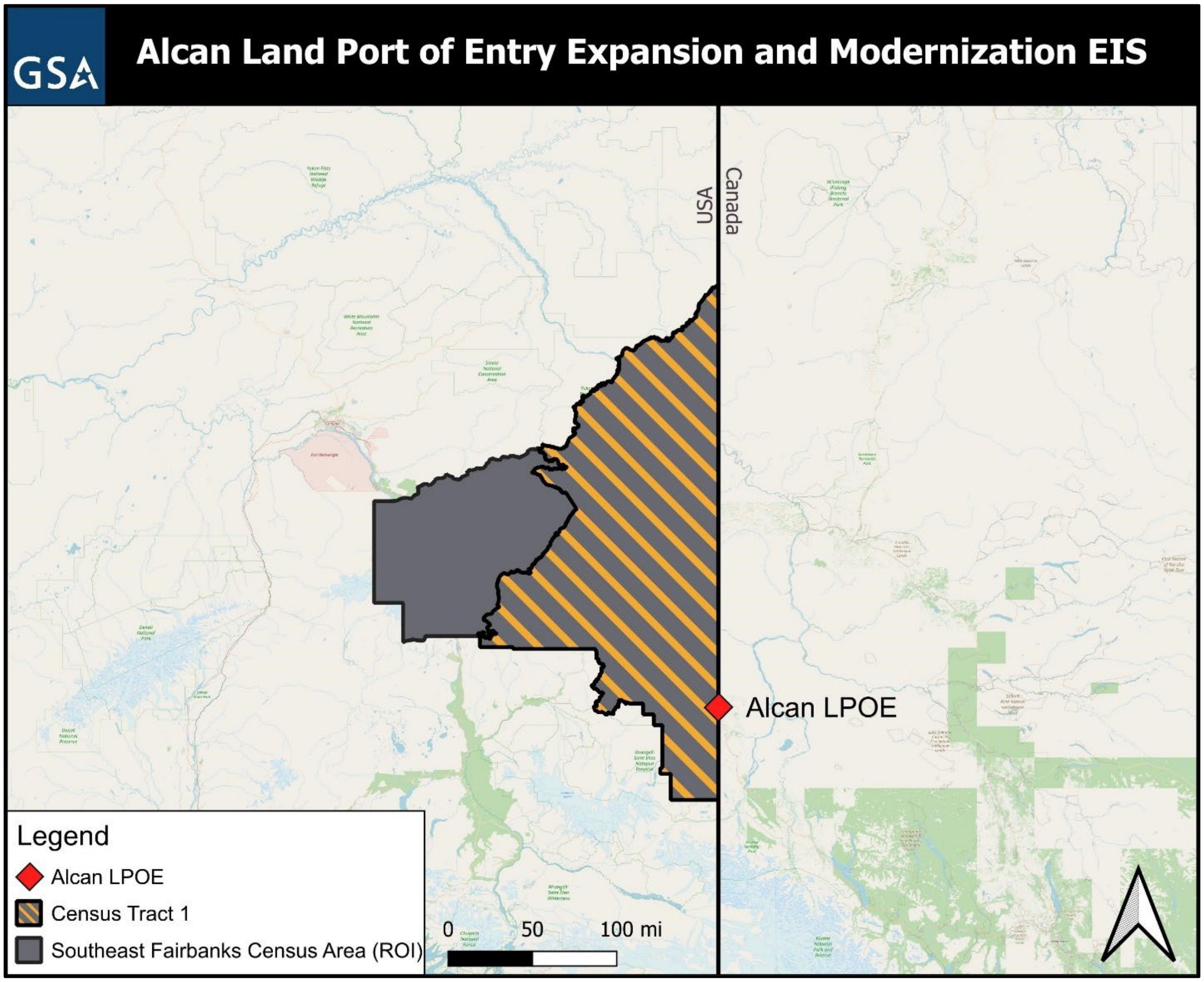
Beneficial and adverse effects would be felt most by the populations located in CT 1, which contains the Alcan LPOE and the closest U.S. city, Tok. The percentage of minority populations in CT 1 and the Southeast Fairbanks Census Area is 41.8 percent and 25.3 percent, respectively. Additionally, people who identify as American Indian and Alaska Native represent 33.0 percent of the total population in CT 1 compared to 13.8 percent in Southeast Fairbanks Census Area. The differences in both categories are considered "substantially" higher because the discrepancies in the minority populations are greater than 10 percent (see **Table 3.7-1**). Therefore, CT 1 constitutes a population with EJ concern on this basis.

Table 3.7-1. Summary of Minorities in the ROI and ROC in 2017 - 2021

Location	Total Population	Minority (%)	American Indian and Alaska Native (%)	Black or African American (%)	Asian (%)	Native Hawaiian and Other Pacific Islander (%)	Other Races (%)	Hispanic or Latino (%)
CT 1	2,567	41.8	33.0	0.3	5.6	0.0	2.9	0.7
Southeast Fairbanks Census Area	6,849	25.3	13.8	1.1	3.0	0.3	7.2	7.1
State of Alaska	735,951	37.7	14.6	3.2	6.4	1.5	11.9	7.3

Sources: USCB, 2021a

Note that the sum of values for individual races and ethnicities may not add up to the total value shown in the "Minority (%)" column for some rows due to ± 0.2 percent margin of error in the dataset.



Sources: AKDLWD, 2020; Open Street Map, 2023

Figure 3.7-1. Census Tract Containing the Area of Analysis

3.7.1.2 Low-Income Populations

Because CEQ guidance does not specify a threshold for identifying low-income populations, the same approach used to identify environmental justice minority populations is applied to low-income populations. The Southeast Fairbanks Census Area would be defined as a low-income population or a population with EJ concerns if:

- More than 50 percent of the Southeast Fairbanks Census Area consists of families or persons below the poverty threshold; or
- The percentage of low-income families or persons in the Southeast Fairbanks Census Area is substantially higher than the percentage in the State of Alaska. A discrepancy of 10 percent or more between the Southeast Fairbanks Census Area and the State of Alaska would be considered meaningfully higher and would categorize the Southeast Fairbanks Census Area (ROI) as constituting a low-income population.

Table 3.7-2 presents census data for the ROI, the ROC, and the CT containing the area of analysis. As with minority populations, CT data are used to identify high concentration "pockets" of low-income populations and describe the distribution of low-income populations in the vicinity of the Alcan LPOE (EPA, 1998). It should be noted that although the table includes census data for a geographic area within the ROI, the ROI does not change and is still defined as the Southeast Fairbanks Census Area. As **Table 3.7-2** indicates, the percentages of all people and all families below the poverty threshold in the ROI, the Southeast Fairbanks Census Area, neither exceed the 50 percent threshold, nor are they meaningfully higher than the corresponding values for the State of Alaska (USCB, 2021b; USCB, 2021c). As such, the ROI does not constitute a population with EJ concern on this basis.

In CT 1, low-income populations represent 16.5 percent of the total population. The percentage of low-income populations in the immediate vicinity does not exceed 50 percent of the population and the difference in low-income populations between CT 1 and the Southeast Fairbanks Census Area is not greater than 10 percent for either category. Therefore, CT 1 does not constitute a population with EJ concern on either basis.

Table 3.7-2. Summary of Income and Poverty Statistics in the ROI and ROC in 2017 - 2021

Location	People Below the Poverty Threshold (%)	Families Below the Poverty Threshold (%)
CT 1	16.5	16.7
Southeast Fairbanks Census Area	11.4	9.7
State of Alaska	10.4	7.1

Sources: USCB, 2021b; USCB, 2021c

3.7.1.3 Disadvantaged and Medically Underserved Areas

This analysis incorporates data from CEQ's Climate and Economic Justice Screening Tool and EPA's Environmental Justice Screening and Mapping Tool to fully characterize the ROI. The tool provides socioeconomic, environmental, and climate information to inform decisions that may affect disadvantaged communities (CEQ, 2023). EPA's Environmental Justice Screening and Mapping Tool provides environmental and demographic data that agencies use to identify potential EJ communities.

Data from CEQ's Climate and Economic Justice Screening Tool indicates that the CT containing the project area is considered a disadvantaged community because it surpasses the burden threshold for unemployment and surpasses the associated socioeconomic threshold for high school education. (CEQ, 2023). The CT is in the 95th percentile for unemployment, which is above the threshold set at the 90th percentile. Additionally, 12 percent of people aged 25 years or older in the CT do not possess a high school diploma, which is above the 10 percent threshold (CEQ, 2023). Northway and Tetlin Native Village are also considered to be disadvantaged communities.

The Climate and Economic Justice Screening Tool also assesses climate risk via five measures – expected agriculture loss rate from natural hazards, expected building loss rate from natural hazards, expected population loss rate due to fatalities or injuries resulting from natural hazards, projected flood risk, and projected wildfire risk. The Screening Tool indicates that CT 1 is in the 96th percentile for expected population loss due to fatalities or injuries resulting from natural hazards, and 94th percentile in projected flood risk. Data is unavailable for CT 1 for agricultural loss rate and projected wildfire risk, and CT 1 is in the 0 percentile for expected building loss rate (CEQ, 2023).

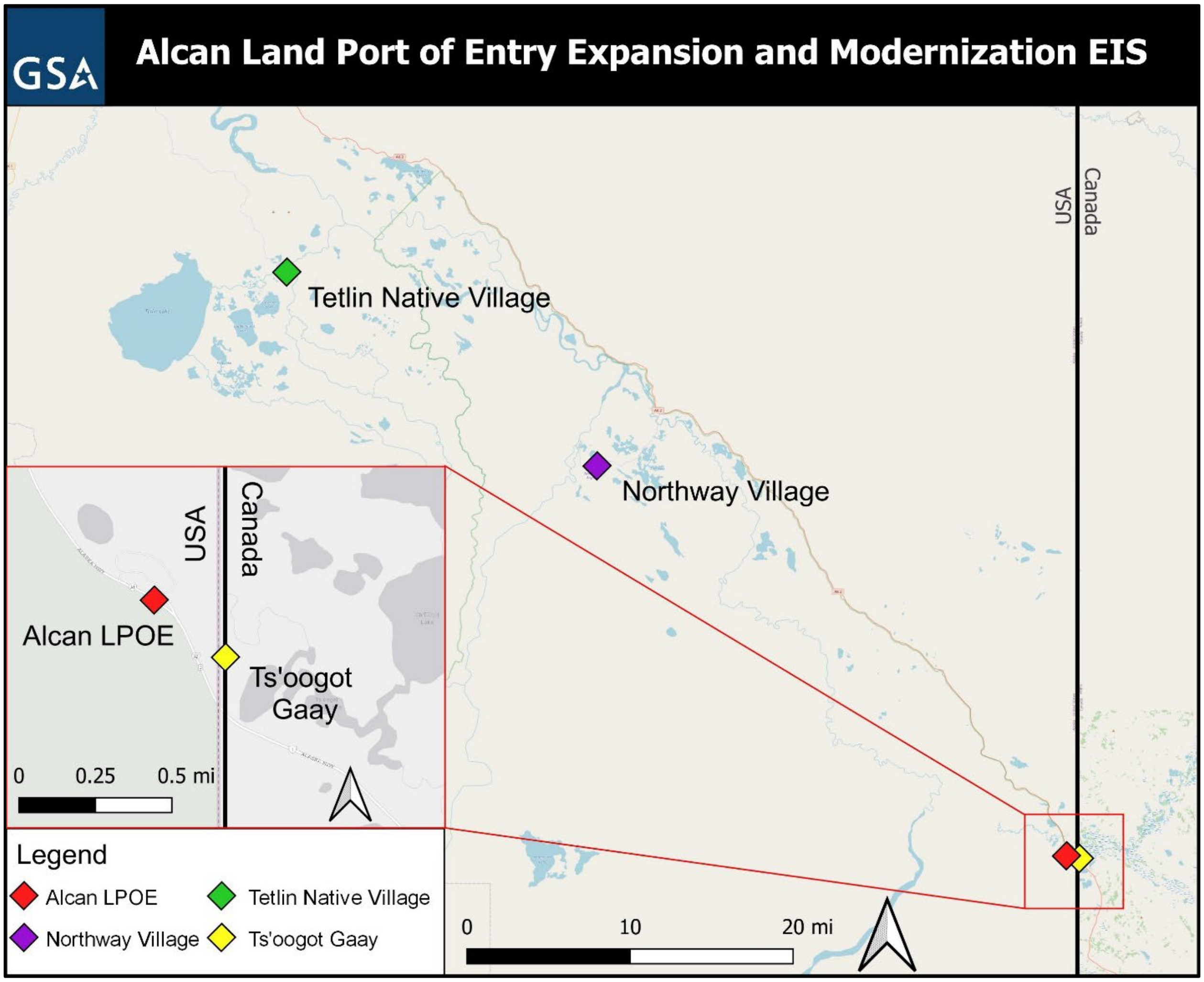
Data from the EPA's Environmental Justice Screening and Mapping Tool indicates that CT 1 has several critical service gaps (EPA, 2023a). The CT is in the 90th percentile for households with limited broadband internet, is designated as a food desert[3], and is defined by the U.S. Department of Health and Human Services (DHHS) as a medically underserved area[4] (DHHS, 2023).

3.7.1.4 Alaska Native Villages and Alaska Native Corporations

There are multiple Alaska Native Villages and Alaska Native Corporations with interests in the project area that include traditional and modern fish camps located in the vicinity of the LPOE along Little Scottie Creek (TCC, 2023). In accordance with Section 106 of the NHPA, GSA sent letters to Northway, Tetlin Native Village, Tanana Chiefs Conference, and Ahtna, Inc. to request input on potential areas of tribal interest. The Tanana Chiefs Conference and Northway have indicated interest in consulting on a government-to-government basis throughout the project. The Tanana Chiefs Conference stated that Northway was interested in becoming a cooperating agency (TCC, 2023). Section 3.6 Cultural and Tribal Resources further describes Northway as well as ongoing consultation under Section 106 of the NHPA.

The current Alcan LPOE is located near a former Upper Tanana *Dineh* village named Ts'oogot Gaay, which was located on the international border with Canada at Little Scottie Creek (Easton, 2021). In 1910, the Alaska-Yukon International Boundary Commission Survey arrived at the village of Ts'oogot Gaay and attempted to divide the village along the international boundary (Easton, 2021; The Tyee, 2018). Upper Tanana residents of the village rejected the imposed restrictions to their traditional hunting and fishing grounds and negotiated for the right to continue using traditional hunting and fishing grounds on both sides of the border, but this right was never officially ratified by Canada (Easton, 2021; The Tyee, 2018). Tribal members located in the U.S. today still have limited cross-border mobility and are barred from hunting in traditional territories in Canada (The Tyee, 2018). Additionally, the construction of the original Alcan Highway resulted in the increased spread of western diseases among Native Alaskan populations and the severe depletion of Native subsistence resources along the highway corridor, which often followed traditional trail systems (Easton, 2021). See **Figure 3.7-2** for a display of Ts'oogot Gaay, Northway, and Tetlin Native Village.

[3] Food deserts are areas where people have limited access to a variety of healthy and affordable food, and often feature large proportions of households with low incomes, inadequate access to transportation, and a limited number of affordable food retailers providing fresh produce and healthy groceries (USDA, 2012).
[4] Medically underserved areas or populations are designated by the DHHS as having too few primary care providers, high infant mortality, high poverty, or a high elderly population (EPA, 2023a).



Sources: Open Street Map, 2023; The Tyee, 2018

Figure 3.7-2. Alaska Native Villages in Relation to the Alcan LPOE

3.7.1.4.1 Northway

Northway is located on the east bank of Nabesna Slough, approximately 50 miles northwest of the Alcan LPOE. It lies off the Alaska Highway on a 9-mile spur road, adjacent to the Northway airport. Northway presently consists of three dispersed settlements: Northway Junction, Northway (the airport), and Northway Village (Anchorage Daily News, 2016). Northway is also a corporation under the name of Northway Natives Incorporated. The area around Northway was first utilized by semi-nomadic Athabascans who pursued seasonal subsistence activities in the vicinity of Scottie and Gardiner Creeks, and the Chisana, Nabesna, and Tanana Rivers (Anchorage Daily News, 2016).

Northway residents take part in subsistence fishing, hunting, harvesting, and trapping of whitefish, big game, wild berries, and small mammals (Northway Village Council, 2021). Many Alaska Native villages, including Northway, rely on subsistence hunting and fishing for food and nutrition (ANTHC, No Date). Alaska Native communities, including Northway, use the Alaska Highway and surrounding areas for subsistence hunting and fishing from the international border with Canada to Tok, AK (Neufeld et. al, 2019). Multiple fishing camps are in the vicinity of the Alcan LPOE, including one modern camp along Little Scottie Creek that may currently be in use (TCC, 2023). Little Scottie Creek is known as a productive whitefish harvesting zone, which is one of the most important wild food resources among Upper Tanana people (TCC, 2023).

3.7.1.4.2 Tetlin Native Village

The Village of Tetlin is located within the Tetlin NWR approximately 70 miles northwest of the Alcan LPOE. The village is connected to the Alaska Highway via a small dirt road. The Tetlin tribe are Upper Tanana Athabascans who pursue traditional subsistence activities including hunting, fishing, and harvesting (Tetlin Native Corporation, 2020).

3.7.1.4.3 Tanana Chiefs Conference

The Tanana Chiefs Conference is an Alaska Native non-profit corporation that represents a wide consortium of Alaska Native tribes. The Tanana Chiefs Conference includes 39 Native Alaska villages and 37 federally recognized tribes, including Northway and Tetlin Villages (TCC, No Date). This consortium provides many services to its member tribes, including, but not limited to, health services, food resources, and forestry programs.

3.7.1.4.4 Ahtna, Inc.

Ahtna, Inc. is one of the thirteen Alaska Native Regional Corporations that was created under the Alaska Native Claims Settlement Act. Shareholders are mainly composed of the Ahtna Athabascan people of the Copper River and Cantwell regions in Southcentral AK (Ahtna, No Date). Ahtna, Inc. operates mostly in the Copper River Census Area, which is located south of the project area (DOLWD, 2012). Ahtna, Inc. provides services ranging from logistics to construction to environmental support (Ahtna, No Date). Ahtna, Inc. offers preferential employment to qualified Ahtna Native Corporation shareholders, descendants, and spouses in all phases of employment.

3.7.1.5 Protection of Children

Children are more sensitive than adults to adverse environmental health and safety risks because they are still undergoing physiological growth and development. EO 13045 defines "environmental health risks and safety risks [to] mean risks to health or to safety that are attributable to products or substances that the child is likely to come in contact with or ingest (such as the air we breathe, the food we eat, the water we drink or use for recreation, the soil we live on, and the products we use or are exposed to)." Children are more susceptible to exposure to mobile source air pollution, such as particulate matter from construction or diesel emissions (EPA, 2012). Children also exhibit behaviors such as spending extensive amounts of time in contact with the ground and frequently putting their hands and objects in their mouths that can lead to much higher exposure levels to environmental contaminants.

3.7.1.5.1 Youth Populations

As shown in **Table 3.7-3**, the population of the Southeast Fairbanks Census Area is slightly younger than that of the State of Alaska. Approximately 7.5 percent of the Southeast Fairbanks Census Area's population are children under the age of five, as compared to 6.9 percent in Alaska overall. Children between five to nine years old make up approximately 7.2 percent of the population in both Alaska and the Southeast Fairbanks Census Area. The CT containing the Alcan LPOE, CT 1, has a slightly higher percentage of children under five years old. However, there is a smaller percentage of children aged five to nine in CT 1 as compared to the Southeast Fairbanks Census Area (USCB, 2021a).

Table 3.7-3. Youth Populations in the ROI and ROC

Location	Total Population	Percent of Children Under 5 Years	Percent of Children 5 to 9 Years
CT 1	2,567	7.8%	4.2%
Southeast Fairbanks Census Area	6,849	7.5%	7.2%
State of Alaska	735,951	6.9%	7.2%

Sources: USCB, 2021a

3.7.2 Environmental Consequences

The effects section below is organized by effect type (rather than the EJ populations identified in Section 3.7.1) as the effects discussed below would be expected to similarly affect the EJ populations identified in Section 3.7.1 unless otherwise noted.

The potential effect on the employment, ability to access health care, food, or other basic resources, and on general physical health and well-being of disadvantaged communities or populations with EJ concerns identified above is assessed. In general, the types of potential effects on disadvantaged communities and populations with EJ concerns could include:

- Social and economic benefits from the creation of jobs;
- Health and safety risks (primarily to women) from an influx of a (presumably) majority-male construction crew;
- Noise disturbances;
- Restricted access to important cultural or subsistence resources; and
- Restricted or delayed access to schools, food, residential areas, or hospital and health care facilities due to traffic and time delays.

3.7.2.1 Alternative 1 - Expansion and Modernization in Place

3.7.2.1.1 Job Opportunities

Alternative 1 would create short-term construction jobs, which are discussed further in Section 3.8 (Socioeconomics). Construction workers may be hired from the local community or from areas with larger population centers, such as Fairbanks. The exact number of workers that would be hired from the local community and the quantity of materials that would be purchased locally during the construction phase is not known. Data from CEQ's Climate and Economic Justice Screening Tool indicates that the CT containing the project area is considered a disadvantaged community and is in the 95th percentile for unemployment (CEQ, 2023; EPA, 2023a). Depending on the number of local workers hired, the Per Capita Personal Income (PCPI) and compensation of employees in the Southeast Fairbanks Census Area could increase during the construction period; and the unemployment rate in the Southeast Fairbanks Census Area could decrease slightly. In 2021, the PCPI in the Southeast Fairbanks Census Area was $58,988 and the unemployment rate was 6.6 percent (BEA, 2021b; BLS, 2022a). Potential economic and health benefits associated with jobs could disproportionately benefit minority and low-income communities in the area that are in search of work. Jobs and income are strongly associated with several beneficial health outcomes such as an increase in life expectancy, improved child health status, improved mental health, and reduced rates of chronic and acute disease morbidity and mortality (HDA, 2004; Cox et al., 2004).

Alternative 1 would create beneficial, direct, regional, short-term, and minor to moderate effects, but the intensity of effects would depend on the number of workers hired locally.

Jobs could be created indirectly if the design/build firm purchases raw construction materials, such as lumber or stone, from local vendors. The intensity of these effects depends on the quantity of materials purchased locally, but it is assumed for the purposes of this analysis that at least a portion of materials would be purchased from local vendors. The total estimated project cost is approximately $170 million – $190 million, which includes labor, material, overhead, profit, and design fees (GSA, 2023). For comparison, employee compensation in the Southeast Fairbanks Census Area for 2021 was approximately $303 million (BEA, 2021c). Due to the relatively low amount of economic activity in this remote area, the purchase of raw materials for construction would represent a substantial investment for the local economy. Additionally, businesses and shops in the area could receive economic benefits as a portion of salaries would be expected to be spent locally within the Southeast Fairbanks Census Area. Alternative 1 would create beneficial, indirect, regional, short-term, and minor to moderate economic effects, but the intensity of effects would depend on the amount of materials purchased from local vendors.

3.7.2.1.2 Health Risks

The CT containing the project is at a high risk for flooding and fatalities or injuries resulting from natural hazards. Alternative 1 would not expose EJ communities to higher risk from flooding or natural hazards and therefore would have no effects on the current conditions.

The remote nature of the project area would likely require the creation of a construction work camp to house the construction workers needed for the project. A construction work camp consists of temporary workforce housing that accommodates a large influx of transient workers. The temporary construction work camp would most likely be located on private land near the Alcan LPOE. Work camps, most notably those in extractive industries, have been shown to correlate strongly with an increase in sexual assault, domestic violence, and sex trafficking, especially when sited near Native American reservations or Alaska Native villages (Condes, 2021). While construction of a LPOE is not directly comparable to extractive industries, the project area contains several factors that increase the risk of gender-based and sexual violence. The project would bring in large groups of (likely mostly male) workers, the project is in a rural, remote community, and the project area is in the vicinity of historically vulnerable populations (Sweet, 2014). However, all contractors employed by GSA would be subject to a background check and only passing candidates would be allowed to work on the project. The closest vulnerable Alaska Native community, Northway, is located approximately 50 miles northwest of the project area. Thus, there is a very low likelihood that the construction work camp would affect members of EJ communities. As such, the construction work camp under Alternative 1 would have adverse, direct, regional, short-term, negligible effects to EJ communities.

3.7.2.1.3 Subsistence Resources

Site preparation, construction, and demolition activities would result in additional sources of noise and visual disturbances that could adversely affect subsistence hunting activities in the vicinity of the project area. Subsistence hunting activities would likely move further away from the project area during the project activities due to increased noise and disturbance levels. As discussed in Section 3.5 Biological Resources, soil erosion and runoff from project activities are not likely to affect fish populations and available fish for subsistence purposes. During project activities there would be adverse, local, short-term, and minor to moderate effects on subsistence hunting due to increased noise and construction traffic. However, expansion and improvement of the LPOE would not increase the volume of traffic passing through the port. As a result, no additional long-term effects to subsistence hunting would be expected once project activities are complete.

In a letter on July 20, 2023, the Tanana Chiefs Conference noted that a traditional fishing camp for whitefish is located north of the existing LPOE and a modern fishing camp is located along Little Scottie Creek (TCC, 2023). The continued presence of a LPOE would restrict Native Alaskans from accessing this traditional fishing camp (TCC, 2023). Access to modern fishing camps in the region, especially one located to the northwest, may be affected by the development of the expanded LPOE. Many Alaska Native villages, including Northway, rely on subsistence hunting and fishing for food and nutrition. Whitefish is a particularly important subsistence resource for Native Alaskans in the region (TCC, 2023). There would be adverse, direct, local, short- and long-term, and moderate effects to subsistence fishing if access to traditional and modern fishing camps was restricted. GSA would continue to consult with Alaska Native Villages and Alaska Native Corporations with interests in the project area regarding potential changes that could affect access to nearby fishing camps.

GSA analyzed the effects of the proposed use of up to 6.5 acres of Tetlin NWR land on subsistence uses and needs, in accordance with ANILCA Section 810. In determining whether to permit the use of public lands, ANILCA requires an evaluation of the following:

1. The effect of such use, occupancy, or disposition on subsistence uses and needs;
2. The availability of other lands for the purposes sought to be achieved; and
3. Other alternatives that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes.

GSA's evaluation concluded that the proposed action would not result in a significant restriction of subsistence uses and needs on federal lands. GSA submitted the ANILCA Section 810 Analysis via email to the USFWS and to the Alaska Department of Natural Resources and appended the analysis to this Final EIS (Appendix F).

3.7.2.1.4 Restricted or Delayed Access to Critical Facilities

The Alcan LPOE would remain open and operational for the entire duration of project activities. However, project activities may cause short delays to traffic entering and exiting the LPOE. There are no schools or medical facilities within the immediate vicinity of the LPOE. The closest healthcare facility, grocery store, and school are in Northway, which is approximately 50 miles to the northwest of the current LPOE. There are also convenience stores with some food options located roughly 20 miles east in Beaver Creek, Canada. Therefore, any potential congestion from project activities would not be likely to cause access issues for communities with EJ concerns due to the lack of critical facilities in the vicinity of the LPOE. Thus, the project is anticipated to have no effect on access to critical facilities over the short and long term.

3.7.2.1.5 Legacy Environmental Justice Effects

Under Alternative 1, the existing Alcan LPOE would remain in its current location near the international border. The establishment of the international border and the placement of the original Alcan LPOE had substantial, lasting effects to EJ communities, including the former village of Ts'oogot Gaay and the people of the Upper Tanana *Dineh.* Many of these effects continue to this day because the continued presence of the international border divides the land and people of the Upper Tanana *Dineh* between the U.S. and Canada (Easton, 2021). Members of the Upper Tanana *Dineh* continue to experience challenges and restrictions when attempting to visit friends, family, and other members of the community across the international border in Canada. Tribal members have been denied entrance to Canada due to minor criminal charges from decades prior (The Tyee, 2018). Native Alaskans with U.S. citizenship are barred from subsistence hunting in traditional territories across the international border in Canada. Considerable contemporary attachment to the land remains among the Upper Tanana *Dineh*, but the international border, in conjunction with a wide variety of other factors, has contributed to a serious erosion of contemporary knowledge of the area's history, use, and potential among younger *Dineh* tribal members (Easton, 2021). The effects from the border disproportionately affect Tribal EJ communities. Therefore, there would be adverse, indirect, regional, and moderate effects on EJ communities over the long term.

3.7.2.1.6 Protection of Children

Due to the remote nature of the Alcan LPOE, there are no schools, daycare centers, or other places where children congregate in the vicinity of the project site. The only children that would likely be present in the vicinity of the Alcan LPOE regularly would be family members of CBP officers. Heavy equipment, construction vehicles, and haul trucks would generate noise and emissions during project activities. The most substantial noise levels during the project activities would occur because of blasting actions. However, GSA and CBP would minimize personnel on site during blasting operations and time active blasting activities to minimize effects of these blasting activities. CBP officers' families would be temporarily relocated to minimize their presence onsite during project activities. Because any children could only be present on project site for a small portion of project activities, Alternative 1 would have adverse, direct, local, short-term, and minor effects on the health and safety of children. Operations of the Alcan LPOE over the long term would not be anticipated to cause any noticeable effects on the health and safety of children.

3.7.2.2 No Action Alternative

Under the No Action Alternative, communities with EJ concerns would not experience any social or economic benefits because no construction jobs or full-time positions would be created. Similarly, communities with EJ concerns would not experience health risks as construction and structural improvement activities would not occur. No substantial increases in traffic would be expected to occur, and traffic would continue to remain low with no substantial congestion problems.

The continued presence of a LPOE at the existing site would restrict access to traditional and modern fishing camps directly to the north of the existing LPOE (TCC, 2023). As such, effects to tribal subsistence activities would be adverse, direct, local, long-term, and moderate.

The presence of the international border would continue to have disproportionate adverse effects on Native Alaskans that are separated from friends, family, and traditional places on the Canadian side of the border. Current conditions would continue from the presence of the international border, and there would be adverse, indirect, regional, and moderate effects on EJ communities over the long term.

Under the No Action Alternative, there would be no changes to current conditions and thus no effects to the health and safety of children.

3.8 SOCIOECONOMICS

The analysis of socioeconomic resources identifies those aspects of the social and economic environment that are sensitive to changes and that may be affected by actions associated with the project alternative. Socioeconomic factors describe the local demographics, income characteristics, and employment of the ROI that could be potentially affected by the proposed project.

The Southeast Fairbanks Census Area is the ROI, or the area analyzed for direct and indirect socioeconomic effects that may be associated with the implementation of the action alternative. For purposes of comparison, the State of Alaska is defined as the ROC, or the "general population" as it corresponds to the CEQ's definition. While social effects are discussed in this section, effects that could disproportionately affect minority and low-income populations are discussed in Section 3.7 Environmental Justice.

3.8.1 Affected Environment

Demographic data for the Southeast Fairbanks Census Area are presented and compared to the State of Alaska overall. Economic data presented in this section focus on the Southeast Fairbanks Census Area.

3.8.1.1 Population and Housing

3.8.1.1.1 Population

Table 3.8-1 shows past and current population data for the Southeast Fairbanks Census Area and Alaska overall. The population of the Southeast Fairbanks Census Area increased from 2010 to 2015 and then decreased until 2021. Meanwhile, Alaska increased in population from 2010 until 2021. The overall population in the Southeast Fairbanks Census Area decreased by 1.24 percent over the 11-year period from 2010 to 2021. During the same period, the total population in the State of Alaska increased by 6.48 percent.

Table 3.8-1. Population Changes in the Southeast Fairbanks Census Area and the State of Alaska from 2010 to 2021

Location	2010	2015	2020	2021	Population Percent Change (2010 – 2021)
Southeast Fairbanks Census Area	6,935	7,029	6,911	6,849	-1.24%
State of Alaska	691,189	733,375	736,990	735,951	6.48%

Sources: USCB, 2010; USCB, 2015; USCB, 2020a; USCB, 2021a

3.8.1.1.2 Housing

A housing unit refers to a house, an apartment, a mobile home or trailer, a group of rooms, or a single room occupied as separate living quarters, or if vacant, intended for occupancy as separate living quarters (USCB, No Date). Both occupied and vacant housing units are included in the total housing unit inventory. A housing unit is classified as occupied if it is the usual place of residence of a person or group of people; conversely, a housing unit is classified as vacant if it is not the usual place of residence of a person or group of people.

Table 3.8-2 shows the total housing units and occupied housing units in the Southeast Fairbanks Census Area and Alaska. In the Southeast Fairbanks Census Area, there are a total of 3,513 housing units, of which 69.6 percent are occupied. This occupancy rate is lower than the overall rate for the State of Alaska, where 82.5 percent of housing units are occupied (USCB, 2020b).

Table 3.8-2. Housing Characteristics in the Southeast Fairbanks Census Area and the State of Alaska in 2020

Location	Total Housing Units	Occupied Housing Units	Housing Unit Occupancy Rate
Southeast Fairbanks Census Area	3,513	2,445	69.6%
State of Alaska	326,200	269,148	82.5%

Source: USCB, 2020b

3.8.1.2 Labor

Socioeconomic effects could potentially include the addition of direct, indirect, or induced jobs. Direct jobs are those created and paid for through project funds, such as the wages paid to construction workers. Indirect jobs include secondary effects caused by the purchase of materials, such as a private firm hiring new workers to supply raw materials for construction. Induced jobs are those supported or created indirectly through a general increase in economic activity due to project activities. An example would be a local diner that hires more waitstaff due to a higher number of customers. Therefore, labor force and employment statistics are presented for the Southeast Fairbanks Census Area.

GSA is subject to requirements from the U.S. Small Business Administration (SBA), including the SBA’s Historically Underutilized Business Zone (HUBZone) Program during the procurement process. The U.S. SBA works to make sure that small businesses receive at least 23 percent of all federal contracting dollars (SBA, No Date). For some large contracts that can’t be awarded directly to small businesses, the government requires the award to include a small business subcontracting plan, which explains how the prime contractor will subcontract out parts of the award to small businesses. This project may require a subcontracting plan if this project meets both of the conditions:

- The contract is expected to exceed $750,000 ($1.5 million for construction); and
- Subcontracting possibilities exist (i.e. there are capable small businesses who could do subcontract work at a fair market value without significantly disrupting performance.)

The HUBZone program helps to fuel the growth of small businesses in HUB zones by providing certification for preferential access to federal government contracts. The Southeast Fairbanks Census Area is a qualified HUBZone (SBA, 2024a). Three percent of all federal procurement opportunities are reserved for small businesses in undercapitalized communities (SBA, 2024b). To be eligible, a firm must be a small business based on SBA's size standards, which vary based on industry (SBA, 2023). Additionally, the firm must have its principal office located in a HUBZone, 35 percent of its employees must live in a HUBZone, and at least 51 percent of the firm needs to be owned and controlled by U.S. citizens, a Community Development Corporation, an agricultural cooperative, an Alaska Native corporation, a Native Hawaiian organization, or an Indian tribe (SBA, 2024b).

3.8.1.2.1 Labor Force

The size of a borough’s civilian labor force is measured as the sum of those currently employed and unemployed. All people 16 years and older are classified as unemployed if they do not have a job, have actively looked for work in the prior four weeks, and are currently available for work. Also included as unemployed are civilians who did not work at all during the reference week, were waiting to be called back to a job from which they had been laid off and were available for work except for temporary illness (USCB, No Date). As shown in **Table 3.8-3**, from 2010 to 2021 the labor force in both Alaska and the Southeast Fairbanks Census Area has fluctuated. The labor force in both areas declined in 2020, likely due to the ongoing COVID-19 pandemic. The labor force in the Southeast Fairbanks Census Area grew at a higher rate and is now 0.63 percent higher in 2021 than 2010. The State of Alaska lost approximately 8,000 people from its labor force from 2010 to 2021, a 2.34 percent decrease (BLS, 2022a; BLS, 2022b).

Table 3.8-3. Civilian Labor Force, 2010-2021

Location	2010	2015	2020	2021	Labor Force Percent Change (2010-2021)
Southeast Fairbanks Census Area	3,200	2,997	2,949	3,220	0.63%
Alaska	361,629	362,329	346,980	353,184	-2.34%

Sources: BLS, 2022a; BLS, 2022b

3.8.1.2.2 Unemployment

The unemployment rate is calculated based on the number of unemployed persons divided by the labor force, where the labor force is the number of unemployed persons plus the number of employed persons. Unemployment rates in the Southeast Fairbanks Census Area were consistently higher than in the State of Alaska in 2010 and 2015, but unemployment rates were similar between the two areas in 2020 and 2021. From 2010 to 2021, unemployment in the Southeast Fairbanks Census Area and Alaska generally decreased – by 5.7 and 1.7 percent, respectively. In 2021, unemployment rates were 6.6 and 6.4 in the Southeast Fairbanks Census Area and Alaska, respectively. The sharp decrease between 2010 and 2021 could be attributed to inflated unemployment rates in 2010 due to the aftermath of the 2008 economic crisis, which was part of the global financial downturn. **Table 3.8-4** shows the annual unemployment levels in the Southeast Fairbanks Census Area and Alaska in 2010, 2015, 2020, and 2021.

Table 3.8-4. Unemployment Rates in Southeast Fairbanks Census Area and Alaska, 2010-2021

Location	2010	2015	2020	2021	Unemployment Rate Change (2010-2021)
Southeast Fairbanks Census Area	12.3%	10.3%	7.8%	6.6%	-5.7%
Alaska	8.1%	6.3%	8.3%	6.4%	-1.7%

Sources: BLS, 2022a; BLS, 2022b

3.8.1.2.3 Employment by Industry

Table 3.8-5 shows the employment by industry in the Southeast Fairbanks Census Area. The leading industries in the Southeast Fairbanks Census Area are government; mining, quarrying, and oil and gas extraction; and retail trade. These three industries account for a little over half of total employment in the Southeast Fairbanks Census Area (BEA, 2021a).

Table 3.8-5. Employment by Industry in the Southeast Fairbanks Census Area, 2021

Industry	Employment	Percent of Total Employment
Government	917	24.3%
Mining, quarrying, and oil and gas extraction	751	19.9%
Retail trade	334	8.9%
Professional, scientific, and technical services	206	5.5%
Construction	164	4.4%
Transportation and warehousing	152	4.0%
Other Services	126	3.3%
Real estate and rental and leasing	107	2.8%
Manufacturing	70	1.9%
Finance and insurance	42	1.1%
Information	26	0.7%
Total	**3,767***	**100%**

Source: BEA, 2021a

*The values in the employment column do not equal the listed total and do not add up to 100%. Some industries do not have available borough-level data to avoid disclosure of confidential information.

3.8.1.3 Earnings

In this section, PCPI and compensation by industry are used to describe earnings.

3.8.1.3.1 Per Capita Personal Income

Personal income data are measured and reported for the borough of residence. PCPI, then, is the personal income for borough residents divided by the borough's total population. **Table 3.8-6** contains 2010, 2015, 2020, and 2021 annual PCPI for the Southeast Fairbanks Census Area and the State of Alaska. All dollar estimates are in current dollars (not adjusted for inflation). The Southeast Fairbanks Census Area's PCPI was less than the State of Alaska's from 2010 to 2021. However, the Southeast Fairbanks Census Area's PCPI grew faster than the State of Alaska's throughout the same period (BEA, 2021b; BEA, 2022).

Table 3.8-6. Annual Per Capita Personal Income in the Southeast Fairbanks Census Area and Alaska (in dollars)

Location	2010	2015	2020	2021	Percent Change 2010-2021
Southeast Fairbanks Census Area	$40,722	$48,304	$54,513	$58,988	44.9%
Alaska	$49,652	$57,575	$62,715	$65,677	32.3%

Sources: BEA, 2021b; BEA, 2022

Note: All dollar estimates are in current dollars (not adjusted for inflation).

3.8.1.3.2 Industry Compensation

Compensation data are measured and reported for the borough of work location and are typically reported on a per job basis. Compensation data indicate the wages and salaries for work done in a particular place, such as a borough, but if the worker does not live in the borough where the work occurred (for example, a person from a neighboring borough may cross borough lines to go to work) then a sizeable portion would be spent elsewhere. These expenditures would not contribute to that borough's economy. Total compensation includes wages and salaries as well as employer contribution for employee retirement funds, social security, health insurance, and life insurance. The term "Total Industry Compensation" is often used in economic data, but it is somewhat of a misnomer in that a portion of the "industry earnings" stems from government-related activity. Nevertheless, total industry compensation provides a good picture of the relative sizes of market-related economic activity, or business activity, performed in the Southeast Fairbanks Census Area.

As shown in **Table 3.8-7,** income is generated by economic activity in the Southeast Fairbanks Census Area through a variety of sectors, including various types of business as well as government. The mining, quarrying, and oil and gas extraction industries and government and government enterprise accounted for approximately 70 percent of the approximately $303 million compensated to employees working in the Southeast Fairbanks Census Area in 2021 (BEA, 2021c).

Table 3.8-7. Compensation of Employees by Industry in the Southeast Fairbanks Census Area, 2021

Industry Description	Compensation ($000)	Percent[a]
Mining, quarrying, and oil and gas extraction	118,774	39.2
Government and Government Enterprises	95,408	31.5
Professional, Scientific, and Technical Services	12,143	4.0
Transportation and Warehousing	11,989	4.0
Retail Trade	9,501	3.1
Construction	6,912	2.3
Other Services Except Government and Government Enterprises	2,257	0.7
Manufacturing	1,412	0.5
Information	1,399	0.5
Finance & Insurance	1,160	0.4
Real Estate and Rental and Leasing	409	0.1
Total Compensation of Employees	**302,894**	**86.3**

Source: BEA, 2021c

[a] Numbers do not add up to exactly 100 percent. Some industries are not reported at the census area scale to avoid the disclosure of confidential information.

3.8.1.3.3 Trade

The Alcan LPOE is an important contributor to economic activity in the central Alaska region. Alcan is the only full service LPOE in Alaska that is open throughout the entire year. From 2013 to 2023, the Alcan LPOE processed approximately 11 percent of Alaska's total trade, which made it the fourth most active trade port in Alaska (DOT, 2023). During this period, trade activities passing through the port were estimated to be worth $1.1 billion (DOT, 2023). Current traffic levels at the LPOE result in acceptable vehicle processing times (Hennebery Eddy Architects, 2019).

3.8.2 Environmental Consequences

The effects analysis considers aspects of the social and economic environment that are sensitive to changes and that may be adversely or beneficially affected by activities associated with the action alternative. Any short-term effects would last approximately 6 years during project activities.

3.8.2.1 Alternative 1 - Expansion and Modernization in Place

3.8.2.1.1 Population and Housing

Most of the construction workers would be in temporary housing due to the remote location of the site and the limited housing options in the nearest city, Tok (Hennebery Eddy Architects, 2019). The design phase would identify where temporary housing would be located, near the Border City Lodge or elsewhere (MP 1225.5 Alaskan Highway, Tok, AK 99780, USA). Where practicable, construction workers would be hired locally from communities in the Southeast Fairbanks Census Area, such as Tok. However, temporary housing would still be established due to the remote nature of the site; Tok is an approximately two-hour drive from the LPOE. As such, the population in the vicinity of the LPOE is expected to grow slightly, but the overall demand on local housing is not expected to increase during project activities due to the temporary housing for construction workers. Thus, effects on population and housing would be adverse, direct, regional, short-term, and negligible.

In the long term, once the larger LPOE is completed, CBP is expected to hire additional personnel to operate the Alcan LPOE. It is unknown what proportion of new CBP personnel would be hired locally or how many would be hired from outside the region. Workers relocating to the area would live in LPOE housing and would not affect the public housing market. The addition of a small number of personnel at the LPOE would not result in noticeable effects on the overall population of the Southeast Fairbanks Census Area. Thus, under Alternative 1 there would be no effects anticipated on population and housing over the long term.

3.8.2.1.2 Labor and Earnings

Alternative 1 would create direct, short-term construction jobs throughout the approximately 6-year period of project activities. Construction workers would be hired locally from the Southeast Fairbanks Census Area where practicable, but workers may be hired from larger population centers, such as Fairbanks, due to the remote nature of the area. Regardless of their origin, workers would stay in local temporary housing and thus at least a portion of their expenditures, such as groceries and gas, would contribute to the local economy for the duration of their employment as it relates to Alternative 1.

Depending on the number of workers that are hired locally, the PCPI and compensation of employees in the construction sector in the Southeast Fairbanks Census Area could increase slightly during the approximately 6-year period of project activities. During this time, the unemployment rate in the Southeast Fairbanks Census Area could also decrease slightly. Direct economic benefits from these slight increases in PCPI and industry compensation and slight decrease in unemployment would be negligible to minor overall in the short term. Direct economic benefits to labor and earnings would likely be centered in the Southeast Fairbanks Census Area but would likely extend to neighboring boroughs as the design and build firm selected for the project would likely be located outside of the Southeast Fairbanks Census Area. Workers may be hired from larger population centers outside of the region, such as Fairbanks. Thus, socioeconomics effects under Alternative 1 would occur in a regional geographic context.

Indirect socioeconomic effects would result from directly affected industries purchasing supplies and materials from other industries. For the purposes of this analysis, it is assumed that at least a portion of materials and equipment would be purchased from local vendors. The estimated project cost is $170 million to $190 million, which includes labor, material, overhead, profit, and design fees (GSA, 2023). For comparison, employee compensation in the Southeast Fairbanks Census Area for 2021 was approximately $303 million (BEA, 2021c). Due to the relatively low amount of economic activity in this remote area, the purchase of raw materials for construction would represent a substantial investment for the local economy. Indirect jobs could be created when the design and build firm purchases construction materials from local vendors. Induced effects would occur when employees of the directly and indirectly affected industries spend the wages they receive. The types of indirect and induced jobs that would be created during the period of project activities would likely be relatively low-wage jobs, such as restaurant workers and convenience store clerks. Depending on the quantity of materials that would be sourced locally, effects would be beneficial, indirect, regional, short-term, and minor to moderate.

The unemployment rate in the Southeast Fairbanks Census Area was 6.6 percent in 2021, so it is likely that any indirect or induced jobs created because of this alternative would be filled by people in search of work in the Southeast Fairbanks Census Area. Due to the remote nature of the area, new jobs would likely be focused on pre-existing businesses in the Southeast Fairbanks Census Area, especially in Tok. It is not anticipated that any new businesses would be established because of indirect or induced project effects. Unemployment rates would likely decrease slightly during the period of project activities, and compensation of employees in the area would likely increase, which would create beneficial, indirect, regional, short-term, and minor effects. Under Alternative 1, there would be no anticipated effects on compensation or unemployment rates over the long term.

3.8.2.1.3 Trade

The Alcan LPOE would remain open and would operate at its current capacity for the entire duration of project activities. Project activities may cause minor delays to traffic along the Alaska Highway should any lane closures be required, but these delays would likely be in the range of several minutes in duration and no effects to trade would be anticipated. Future traffic growth through the LPOE would not be anticipated to cause substantial effects to traffic or vehicle processing times (Hennebery Eddy Architects, 2019). However, the new Alcan LPOE would have improved vehicle processing capabilities, which would result in a slightly more efficient flow of traffic. Therefore, Alternative 1 would have beneficial, direct, regional, long-term, and negligible effects on trade.

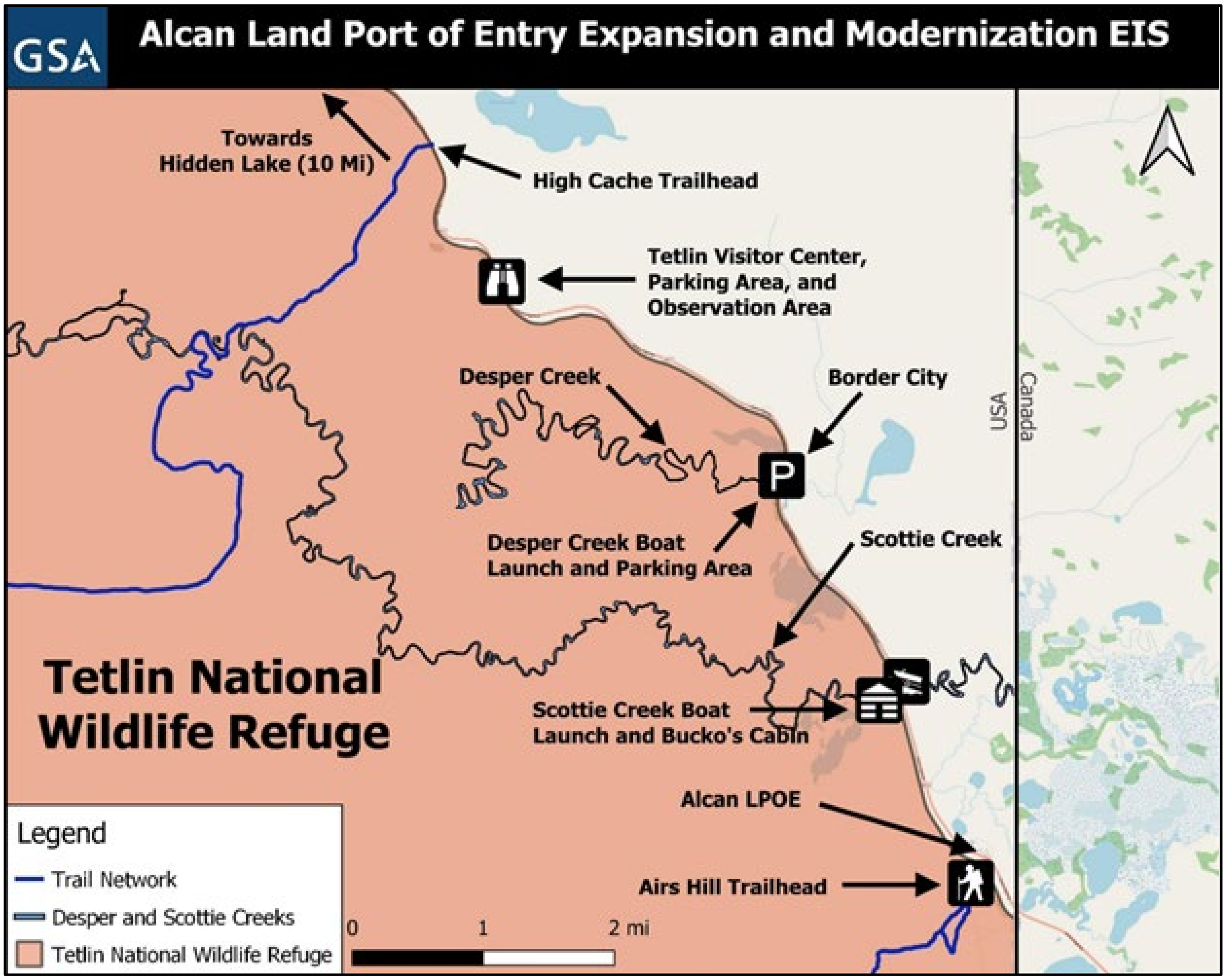
3.8.2.2 No Action Alternative

Under the No Action Alternative, no site preparation, construction, or demolition activities would occur and socioeconomic conditions in the ROI would remain the same. New housing would not be constructed at the Alcan LPOE and CBP personnel would be limited to the existing housing already present onsite. With onsite housing near capacity, newly hired officers could encounter difficulties securing a viable residence. Effects on population and housing would be adverse, indirect, local, long-term, and negligible. Potential social and economic benefits from direct, indirect, and induced jobs would not occur in the short or long term. Over the long term, future traffic growth through the LPOE would not be anticipated to cause substantial effects to traffic or vehicle processing times (Hennebery Eddy Architects, 2019). Therefore, there would be no effects on trade activities.

3.9 RECREATION

The analysis of recreational resources identifies recreational resources, visitation trends, revenue, and the overall recreational experience that may be affected by the alternatives.

This section describes recreational resources near the existing LPOE site. The section of the Alaska Highway from the U.S.-Canada border to High Cache Trail (as seen in **Figure 3.9-1**), which encompasses the existing LPOE site, is defined as the area of analysis for recreational resources. The analysis of recreational resources identifies recreational resources, visitation trends, revenue, and the overall recreational experience that may be affected by each alternative.



Sources: QGIS, 2023; USFWS, 2023c; USFWS, No Date-c;

Figure 3.9-1. Existing LPOE Site and Several Tetlin NWR Recreational Access Points Along the Alaska Highway

3.9.1 Affected Environment

The area of analysis has no publicly available recreation resources onsite. The main recreational resource in the area is Tetlin NWR, which encompasses over 900,000 acres and is located to the south and the west of the existing LPOE. The stretch of the Alaska Highway from the U.S-Canada border spanning northwest along the highway to High Cache Trail provides points of access for recreationalists to enjoy the refuge. Therefore, the following section discusses the recreational activities, areas, and facilities located at Tetlin NWR, as accessible from the Alaska Highway.

3.9.1.1 Tetlin NWR

The Tetlin NWR was established in 1980 under the Alaska National Interest Lands Conservation Act. The refuge serves as a space to conserve fish and wildlife populations and habitats in their natural diversity, to provide interpretation and environmental education to the public, and to provide subsistence hunting opportunities to rural inhabitants. The boundaries of Tetlin NWR encompass 932,000 acres. Some of this land is owned by the state of Alaska or private citizens, but over 680,000 acres are managed by Tetlin

NWR and include snowcapped mountains and glacier-fed rivers, forests, treeless tundra, and an abundance of wetlands (USFWS, No Date-a).

The northern boundary of Tetlin NWR spans the Alaska Highway from the U.S.-Canada border to Tetlin, Alaska. Most access points, facilities, and amenities in the Tetlin NWR are located along the Alaska Highway at trailheads or on trails, as seen in **Figure 3.9-1**. These include parking areas, pavilions, bathrooms, cabins, benches, observation platforms, and elevated boardwalks. There are several trails that range from a tenth of a mile to almost 11 miles long. There are also opportunities for backcountry hiking for experienced hikers with wilderness survival skills (USFWS, No Date-b). Small boat and canoe access is available at different access points and boat ramps along the Alaska Highway for recreationists to enjoy the creeks, rivers, and lakes throughout Tetlin NWR. There are two public campgrounds along the Alaska Highway that are operated and maintained by Tetlin NWR.

Wildlife viewing is a popular recreational activity; the Alaskan wilderness boasts large mammals such as elk, moose, bears, and caribou. Birding is another popular activity that occurs mostly during spring and fall, as a diverse mix of raptors, waterfowl, songbirds, and other birds can be seen throughout the Alaskan wilderness (AKDF&G, No Date-c). Northern pike, burbot, and grayling are popular sport fish in the Tetlin NWR. Lands managed by Tetlin NWR are open to hunting in accordance with state and federal regulations, and the NWR offers several subsistence opportunities for residents, including winter moose and caribou hunts, a spring waterfowl hunt, and fishing opportunities throughout the year (USFWS, No Date-b). Two of the six known humpback whitefish spawning areas in the Yukon River drainage are located within the refuge, which are important subsistence resources for area residents (USFWS, 2013).

There are a few recreational areas and attractions that are near the area of analysis that are accessible from the Alaska Highway as seen in **Figure 3.9-1**. Airs Hill Trailhead is located directly south of the existing LPOE site off the Alaska Highway. It is about an approximately 11-mile trail used primarily by hikers that heads southwest into Tetlin NWR. North of Airs Hill Trail and the existing LPOE site is Scottie Creek (USFWS, No Date-c). Bucko's Cabin is a recently renovated cabin located approximately 0.25 miles downstream on the north side of Scottie Creek, that supports administrative and public use (USFWS, 2023d). About two miles north of Scottie Creek along the Alaska Highway is Desper Creek, which includes a boat launch and public parking area for visitors to access the creek. Border City is also located in this area; it is adjacent to Desper Creek along its western boundary next to the Alaska Highway. Border City includes an RV lodge park, that while it is not part of the Tetlin NWR, it is an area for visitors and travelers to use while visiting Tetlin NWR. Roughly 6.5 miles north of the existing LPOE site along the Alaska Highway is the Tetlin Visitor Center. The visitor center is an important recreational resource because it provides a variety of amenities for visitors, including an information kiosk, interpretive hiking trail, observation deck and platform, bathroom facilities, and public parking areas. About a mile north from the Tetlin Visitor Center along the Alaska Highway is the trailhead for the High Cache Trail, one of the longest trails in the Tetlin NWR at almost 11 miles long (USFWS, No Date-c).

3.9.1.1.1 Visitation

The public lands and waters of Tetlin offer year-round outdoor opportunities for all visitors who travel to Alaska via the Alaska Highway. **Table 3.9-1** shows the recreation visits based on activity for Tetlin NWR in 2011; this reflects the best available data for visitation frequency. The Refuge had 90,624 visits in 2011. Non-consumptive activities refer to recreational activities such as hiking, biking, boating, and photography. Consumptive activities include hunting (e.g., big game, small game, and migratory birds) and fishing (e.g., freshwater and saltwater). Non-consumptive recreation accounted for 86,403 visits with residents comprising 53 percent of Refuge visitation (USFWS, 2013).

Table 3.9-1 Tetlin NWR Recreation Visits in 2011

Activity	Residents	Non-Residents	Total
Non-Consumptive	43,987	42,416	86,403
Hunting	3,000	6	3,006
Fishing	1,215	0	1,215
Total Visitation	**48,202**	**42,422**	**90,624**

Source: USFWS, 2013

3.9.1.1.2 Visitor Expenditures and Local Economic Effects

Valdez-Cordova and Anchorage, Alaska were considered the economic areas for the Tetlin NWR because the Refuge is in southeastern Alaska. Visitor expenditures were assumed to have occurred primarily within these areas. Visitor recreation expenditures for 2011 are shown in **Table 3.9-2**. Total expenditures were about $6.3 million with non-residents accounting for about $5.5 million or 88 percent of total expenditures. Expenditures on non-consumptive activities accounted for 97 percent of all expenditures. Local economic effects associated with recreation visits are shown in **Table 3.9-3**. Final demand, or the total spending by final consumers in the region attributable to refuge visitation, totaled about $10 million with associated employment of 66 jobs, $3 million in employment income, and $1.3 million in total tax revenue. The tourist season from June to August is the primary economic activity on the Tetlin NWR for Tok, Alaska (USFWS, 2013).

Table 3.9-2 Tetlin NWR Visitor Recreation Expenditures in 2011 ($,000)

Activity	Residents	Non-Residents	Total
Non-Consumptive	$567.3	$5,485.8	$6,053.1
Hunting	$140.4	$2.7	$143.1
Fishing	$71.2	$0	$71.2
Total Expenditures	**$778.9**	**$5,488.5**	**$6,267.4**

Source: USFWS, 2013

Table 3.9-3 Tetlin NWR Local Economic Effects Associated with Recreation Visits in 2011 ($,000)

Category	Residents	Non-Residents	Total
Final Demand	$1,223.2	$8,750.7	$9,973.8
Jobs	8	58	66
Job Income	$370.7	$2,628.8	$2,999.5
Total Tax Revenue	**$173.6**	**$1,149.6**	**$1,323.2**

Source: USFWS, 2013

3.9.2 Environmental Consequences

The assessment of effects on recreational resources in the area of analysis considers how the alternatives would affect the accessibility and quality of the recreational areas and the recreational experience for visitors. An effect would be considered major if the accessibility or quality of a recreational resource were substantially altered or removed.

3.9.2.1 Alternative 1 - Expansion and Modernization in Place

The presence of construction vehicles and equipment, along with ongoing project-related activities, could affect the accessibility and quality of recreational resources near the LPOE site. Construction vehicles and equipment would need to be transported into the area and would likely be stationed throughout the project area on roadways, shoulders, or other open, previously disturbed spaces. Project activities may cause minor delays to traffic along the Alaska Highway should any lane closure occur; however, these delays would only be expected to last several minutes and would not inhibit access to recreational resources in the area, such as Airs Hill Trailhead. Given the proximity of the construction area to the trail, visitors and hikers would likely be able to hear project activity noise from the trailhead, which could also disturb the wildlife that visitors came to observe. These effects would likely decrease the further the hikers traveled down the trail and into the Tetlin NWR. These effects would only last the duration of project activities, which would be limited to only a few months out of the year due to the seasonal constraints of construction work in Alaska; however, this period includes the summer months when the highest concentration of outdoor recreational activities occur. Wildlife that vacated the area during project-related activities would likely return once these activities ended (see Section 3.5 Biological Resources). These effects would be considered minimal because the project-related activities would be limited to a few recreational resources, such as Airs Hill Trail, Scottie Creek boat launch, and Desper Creek boat launch. However, these areas are in remote locations, and they are not considered heavily trafficked or popular tourist destinations. Therefore, effects to recreational resources during project-related activities would be adverse, direct, local, short-term, and minor.

Once construction of the new LPOE is completed, project-related activities would cease and the associated camps, vehicles, and equipment would exit the area. This would eliminate any further effects to Desper Creek and Scottie Creek boat launches. The modernization of the LPOE would include site expansion and newly constructed or renovated facilities. This would include the 6.5 acres of Tetlin NWR land proposed for a use permit. The new facilities would not block the Airs Hill Trailhead and accessibility to the trailhead would be maintained. The indoor firing range may create noise pollution as firearms are discharged within the facility; however, the facility's design would be expected to reduce sound and minimize any noise being emitted from the building. The helicopter landing zone would create noise and could disrupt wildlife during takeoffs and landings, but this would likely be limited to when the helicopter is used or dispatched throughout the area. That said, Airs Hill Trail is in a remote location, it is not considered heavily trafficked, and it represents a small fraction of the 900,000-acre Tetlin NWR. Therefore, effects to recreational resources from the operation of the LPOE would be adverse, direct, local, long-term, and negligible.

The existing dirt road that provides access to the Airs Hill Trailhead would be improved as a compacted dirt road, and guardrails would be added along the steep sections of the roadway. The improved road would increase the accessibility of the Airs Hill Trailhead, which is currently only accessible to 4x4 vehicles. Thus, there would also be beneficial, direct, local, long-term, and minor effects on recreational resources.

3.9.2.2 No Action Alternative

Under the No Action Alternative, the accessibility and quality of recreational resources would continue as described in the Affected Environment. Visitors would continue to enjoy hiking trails, recreational water activities, birding and wildlife observing, hunting, camping, and other outdoor recreational activities. Traffic flows through the existing LPOE would be expected to continue under current conditions. Traffic, along with helicopter operations, would continue to create noise in the area and adversely affect recreational resources. Given the remote location of these recreational areas, visitor frequency would be expected to remain low. Effects on recreational resources under the No Action Alternative would be adverse, direct, local, long-term, and negligible.

3.10 VISUAL RESOURCES

Visual resources are those natural or human-made visible elements of a landscape that define the characteristic landscape for an observer. Examples of visual resources include scenic water or land formations, trees, parks, buildings or clusters of buildings, or other distinct human-made elements such as bridges or public art installations. These resources are particularly valued by a community or protected by law for their contributions to the viewshed, which consist of all the areas and features visible from an observer's viewpoint. Alterations to the landscape can occur through physical changes based on land use or through manipulation of viewing conditions (e.g., light or glare conditions) or both.

The area of analysis includes the visual resources at the project area and the surrounding vicinity. This section describes the visual resources in the area of analysis and evaluates each alternative's potential effects to the visual resources.

3.10.1 Affected Environment

3.10.1.1 Area of Analysis

The characteristic landscape of the area of analysis consists of both natural features and developed areas. The developed features in the landscape primarily consist of the Alaska Highway and the 55-acre LPOE. The existing LPOE sites' main visual features are the vehicle lanes, inspection points, gates, parking lots, exterior lighting, the Main LPOE Building, and the other buildings and facilities that make up the LPOE's operations as seen in **Figure 3.10-1**. The area around the existing LPOE site consists of an undeveloped, natural landscape consisting of forested hills and mountains, with some flatter areas consisting of short grasses, wetlands, and other types of waterbodies as seen in **Figure 3.10-1**. Other buildings and facilities include two Service Buildings with three wastewater lagoons and an overflow leach field as seen in **Figure 3.10-2**, and several housing buildings within the residential campus as seen in **Figure 3.10-3**. The Tetlin NWR is visible from the south side of the existing LPOE site as seen in **Figure 3.10-4**.

Source: Solv, 2023

Figure 3.10-1. Main LPOE Building with Associated Inspection Lanes and Gates Looking North-Northeast (left) and Other LPOE Buildings and Facilities Looking North-Northwest (right)


Source: Solv, 2023

Figure 3.10-2. Wastewater Lagoon Looking Northwest (left) and Overflow Leach Field Looking East (right)

Source: Solv, 2023

Figure 3.10-3. Housing Unit Located in Residential Campus Looking West

Due to the rural location of the area of analysis, potential observers of the viewshed are primarily limited to POV passengers and truck drivers crossing the U.S.-Canadian border and passing through the LPOE or those visiting or working at the LPOE. While heading northbound on approach to the LPOE, travelers can observe the LPOE towards the northeast, a steeply rising hill covered in trees, grasses, and shrubs to the west that obstructs some views of the background, and the scenic, natural landscape of rolling, forested hills and mountains with low-lying wetland vegetation and waterbodies to the east. The LPOE itself has buildings, fences, and trees that block out some of the surrounding views of the landscape. Once through the LPOE and beyond the steeply rising hills to the west, travelers can observe the natural landscape on all sides of the highway. Tetlin NWR is visible from the west to the south along the Alaska Highway as shown in **Figure 3.10-4**, while a similar landscape of undeveloped forests and rolling hills and mountains is visible from the north to the east. Hikers and recreationists are potential observers of the LPOE, as trailhead parking for the Tetlin NWR is in view of the LPOE. Observers traveling along the Alaska Highway and through the LPOE would generally pass through the area and may not be particularly attentive to the visual character of the surrounding landscape. Employees of the LPOE or frequent visitors would be exposed to the area on a more regular basis and would generally be more aware of the visual character of the surrounding landscape.

Source: Solv, 2023

Figure 3.10-4. South-facing Views of Tetlin National Wildlife Refuge

3.10.2 Environmental Consequences

This section discusses the potential effects of the alternatives on visual resources within the area of analysis. The assessment of effects on visual resources considers the characteristic landscape and the overall visual quality of an area and analyzes how the alternatives would alter the characteristic landscape. An effect would be considered major if a currently visually appealing element were substantially altered or removed, or a currently unappealing element were significantly improved.

3.10.2.1 Alternative 1 - Expansion and Modernization in Place

Project-related activities, along with construction vehicles and equipment, would be visible during the site preparation, construction, and demolition phases and alter the viewshed in the LPOE site. Construction vehicles and equipment, such as trucks, bulldozers, excavators, and pavers, would be needed to conduct site preparations, construction of new facilities, renovation of some existing facilities, and demolition of existing buildings. Off-site, construction camps consisting of modular homes and RV trailers would need to be stationed nearby to provide housing accommodations for construction workers. Construction camps, vehicles, and equipment are not a part of the characteristic viewshed, and project activities would physically alter the landscape during each project phase. This could detract from the views of the LPOE and the surrounding forest and adversely affect the viewshed in the LPOE site. However, these effects would only last the duration of the project activities and would cease upon their conclusion. These effects would be considered negligible since personal vehicles and trucks are already part of the viewshed at the LPOE, and the construction camps would be temporary. Therefore, construction-related activities would likely result in adverse, direct, local, short-term, and minor effects to visual resources.

The modernization of the LPOE would cause adverse effects to visual resources due to the conversion of natural lands into developed areas, shifting part of the characteristic landscape towards a more developed setting. The building space of the LPOE site would be more than double the size of the existing LPOE site, and land would be developed to accommodate this expansion. Newly constructed buildings and renovated facilities would change the viewshed by altering the appearance of the buildings and the form of the LPOE for the first time since its initial construction in 1972. This alteration to the characteristic landscape would likely result in a noticeable change to the viewshed in the project area, but the integrity of the viewshed would remain intact because the landscape already includes developed features. The modernized facility would likely resemble those developed features already occurring in the landscape and blend them into the viewshed. Any new lighting under Alternative 1 would be designed to minimize light pollution in accordance with CBP's Design Guidelines (CBP, 2023) and would not alter the low level of light pollution that already occurs at the existing LPOE. There would be no effect to visual resources from potential new lighting proposed under Alternative 1. In addition, the viewshed would only be affected for those traveling along the Alaska Highway and through the LPOE or those who are visiting or working at the LPOE. Therefore, the modernization of the LPOE would likely result in adverse, direct, local, long-term, and minor effects to visual resources.

3.10.2.2 No Action Alternative

Under the No Action Alternative, there would be no use permit for up to 6.5 acres from Tetlin NWR, site preparation, facility construction or renovation, or demolition and disposal of existing structures at the existing LPOE site. As described in the Affected Environment, travelers along the Alaska Highway would continue to observe a mixed landscape of natural features in the background and urban development in the foreground at the existing LPOE site. Minor repairs would occur at the existing LPOE site as needed, and operation and maintenance of the existing facilities would continue as described in Chapter 1. The viewshed at the existing LPOE site would only be affected for those traveling along the Alaska Highway and through the LPOE, or those who are visiting or working at the LPOE.

Effects on visual resources under the No Action Alternative would be adverse, direct, local, long-term, and negligible at the existing LPOE site.

3.11 Noise and Vibrations

This section presents an overview of noise and vibrations at the Alcan LPOE project area and the surrounding vicinity and evaluates each alternative's potential impacts from noise and vibrations.

3.11.1 Affected Environment

Sound is a physical phenomenon consisting of vibrations that travel through a medium, such as air, and are sensed by the human ear. Noise is defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, or is otherwise intrusive. Human response to noise varies depending on the type and characteristics of the noise distance between the noise source and the receptor, receptor sensitivity, and time of day. Noise is often generated by activities essential to a community's quality of life, such as construction or vehicular traffic.

Sound varies by both intensity and frequency. Sound pressure level, described in decibels (dB), is used to quantify sound intensity. The dB is a logarithmic unit that expresses the ratio of a sound pressure level to a standard reference level. Hertz is used to quantify sound frequency. The human ear responds differently to different frequencies. "A-weighing", measured in A-weighted decibels (dBA), approximates a frequency response expressing the perception of sound by humans. **Table 3.11-1** presents sound encountered in daily life and their dBA levels.

Table 3.11-1. Common Sounds and Their Levels

Outdoor	Sound level (dBA)	Indoor
Motorcycle	100	Subway train
Tractor	90	Garbage disposal
Noisy restaurant	85	Blender
Downtown (large city)	80	Ringing telephone
Freeway traffic	70	TV audio
Normal conversation	60	Sewing machine
Rainfall	50	Refrigerator
Quiet residential area	40	Library

Source: BLM, 2019

The dBA noise metric describes steady noise levels, although very few noises are, in fact, constant. Therefore, Day-night Sound Level (DNL) has been developed. DNL is defined as the average sound energy in a 24-hour period with a 10-dB penalty added to the nighttime levels (10 p.m. to 7 a.m.). It is a useful descriptor for noise because: 1) it averages ongoing yet intermittent noise; and 2) it measures total sound energy over a 24-hour period. In addition, Equivalent Sound Level (L_{eq}) is often used to describe the overall noise environment. L_{eq} is the average sound level in dB. **Table 3.11-2** shows the typical DNL levels associated with various types of land use.

Table 3.11-2. Standard Sound Levels Associated with Various Land Uses

Land Use Category	Typical DNL (dB)	Day Level (dB)	Night Level (dB)	People per square mile
Very noisy urban residential	67	66	58	63,840
Noisy urban residential	62	61	54	20,000
Urban and noisy suburban residential	57	55	49	6,384
Quiet urban and normal suburban residential	52	50	44	2,000
Quiet suburban residential	47	45	39	638
Very quiet suburban and rural residential	42	40	34	77

Source: BLM, 2019

3.11.1.1 Noise Guidelines

The Noise Control Act of 1972 (Public Law 92-574) directs Federal agencies to comply with applicable federal, state, and local noise control regulations. In 1974, the EPA provided information suggesting that continuous and long-term noise levels in excess of DNL 65 dBA are normally unacceptable for noise-sensitive land uses such as residences, schools, churches, and hospitals. In 1982, the EPA transferred the primary responsibility of regulating noise to state and local governments. The area of analysis is in a rural area of the Southeast Fairbanks Census Area, Alaska. The state of Alaska, the Southeast Fairbanks Census

Area, and the city of Tok do not have noise standards that are relevant to the activities under the proposed project.

In 29 CFR 1910, standards are established for occupational noise exposure that are administered by U.S. Occupational Safety and Health Administration (OSHA). Typically, construction contractors and helicopter operations such as would be present onsite for this project would have noise abatement/hearing conservation programs in place that institute noise control practices in the work environment that are overseen by OSHA.

3.11.1.2 Existing Noise and Vibrations

The area of analysis for noise effects includes the existing LPOE, the use of up to 6.5 acres from Tetlin NWR, and the immediate vicinity. Existing sources of noise near the proposed project include light traffic, trucks, helicopters, and natural sounds such as wind gusts and animal and bird vocalizations. The areas surrounding the project site can be categorized as remote and forested. The only noise-sensitive receptors are residences on the LPOE site. Due to the remoteness of the LPOE site and the low population density of the surrounding area, it is assumed that the closest noise-sensitive receptors would be quiet commercial and rural residential areas. Because of the remote location and lack of existing activity, there is no perceptible vibration existing at the site.

The existing noise environment for workers at the LPOE site, which would remain in use as an auxiliary support space for service operations and utilities if the proposed modernization occurs, is the existing port building. The existing port building envelope is a combination of materials including wood-framed, precast, and cast in place concrete wall panels (7¾ inches thick) with slab on grade with slab varying from 5 inches to 7.5 inches thick. The envelope is structurally composed of a reinforced concrete foundation, columns and beams with wood framed interior walls, and a wood truss flat roof. The building is currently clad in stone veneer at the base and metal paneling above, materials dating from 2012.

Currently, noise sources for the Alcan LPOE include two primary generators and an emergency generator. The two 250-kilowatt primary generators annually operate for about 4,400 hours each, and the one 175-kilowatt emergency generator annually operates for about 300 hours.

3.11.2 Environmental Consequences

This section evaluates effects from noise that may result from implementation of Alternative 1 and the No Action Alternative at the project site and its vicinity. Effects from noise would occur given the following conditions:

- Direct, adverse effects from noise would occur if the alternatives:
  - Constitute a fundamental negative or harmful change in noise levels – i.e., an increase in noise levels that produce harmful health effects to humans occupying the site;
  - Reduce the suitability of the LPOE site to support its current or planned use; or
  - Are inconsistent with existing noise control guidelines or management plans.
- Direct, beneficial effects would occur if the alternatives:
  - Increase the noise source separation distance or noise attenuation levels for noise sensitive receptors; or
  - Support the noise limitation goals necessary to promote effective functioning of the LPOE site.

The following sections describe the anticipated environmental consequences of noise for each alternative.

3.11.2.1 Alternative 1 – Expansion and Modernization in Place

The following subsections describe and analyze the effects on the area of analysis described in Section 3.11.1.2 that results from project activity noise, operational noise, and blasting noise and vibrations.

3.11.2.1.1 Project Activity Noise

Table 3.11-3 shows the anticipated noise levels for common types of construction equipment, including some equipment that is likely to be used during the site preparation, construction, and demolition phases of the project. BMPs would be implemented during project activities and operation of the expanded LPOE to minimize potential adverse noise and vibrations effects. Staging and stockpile areas would be located within or immediately adjacent to the construction footprint within the area of analysis to reduce the area of noise disturbance.

Almost all of the project activity with equipment noise would occur within the distances shown in **Table 3.11-3**. This means that the LPOE site, the Airs Hill Trailhead, and the vicinity nearby may experience greater than 50 dBA – 55 dBA, or quiet residential, noise levels while project activity occurs.

Assessing the equipment that is likely to be used for this project, it is unlikely that noise levels would reach the point where hearing protection would be required for anyone but equipment operators, whose exposure levels are regulated by OSHA and controlled by an established hearing conservation program.

Project activities would result in some short-term increases in noise level in the vicinity of the project site. These effects would not persist past the site preparation, construction, and demolition phases of the project. Residents would not be relocated until Year 2 of the project, so they would be present and subject to noise during the initial phases of project activities. After Year 2, the residents would be relocated to temporary housing; thus, the closest noise sensitive receptors (i.e., residences) would be at the Border City Lodge site, which is approximately 3 miles away from the existing LPOE.

Table 3.11-3. Construction Equipment Noise Levels

Equipment	Typical Noise Level (dBA) 50 ft from Source	Distance to Reduce Noise Level to 50dBA-55dBA (feet)
Air Compressor	81	1,600
Backhoe	80	1,600
Ballast Equalizer	82	1,600
Ballast Tamper	83	1,600
Compactor	82	1,600
Concrete Mixer	85	1,600
Concrete Pump	82	1,600
Concrete Vibrator	76	800
Crane Mobile	83	1,600
Dozer	85	1,600
Generator	81	1,600
Grader	85	1,600
Impact Wrench	85	1,600
Jack Hammer	88	2,400
Loader	85	1,600

Equipment	Typical Noise Level (dBA) 50 ft from Source	Distance to Reduce Noise Level to 50dBA-55dBA (feet)
Paver	89	2,600
Pile Driver (Impact)	101	10,600
Pile Driver (Sonic)	96	5,900
Pneumatic Tool	85	1,600
Pump	76	800
Rail Saw	90	3,000
Rock Drill	98	7,500
Saw	76	800
Scraper	89	2,600
Shovel	82	1,600
Truck	88	2,400

Source: FHWA, 2021

Project activity noise from Alternative 1 would either not be perceptible or would not serve as more than a temporary annoyance to residents at the Border City Lodge site. The Border City Lodge site would experience a slight and detectable increase in noise due to trucks passing by on their way to the construction site. Current Alcan LPOE residents, including CBP officers and their families, would be relocated to temporary housing off-site in Year 2; thus, they would be minimally impacted by construction noise (Hennebery Eddy Architects, 2019). Temporary project activity noise may also serve as an annoyance to the transiting public and CBP officers during LPOE operations, but exposure to this noise would not disrupt operations nor pose a safety risk. Project activity noise under Alternative 1 would have adverse, direct, local, short-term, minor effects on the LPOE site, Border City Lodge site, and the Airs Hill Trailhead.

3.11.2.1.2 Operational Noise

Once construction of the new LPOE is completed, project-related activities would cease and the associated camps, vehicles, and equipment would exit the area. The modernization of the LPOE would include site expansion and newly constructed or renovated facilities located near the Airs Hill Trailhead, which could impact the quality of the recreation resource through noise effects from LPOE operations, which are also discussed in Section 3.9, Recreation.

The LPOE also expects a two percent annual increase in vehicle traffic over the next 50 years. However, traffic is not expected to increase due to LPOE modernization. The increased traffic flow would cause a higher frequency of vehicles passing through the LPOE that would likely generate slightly more noise that could be detected from the trailhead and LPOE locations. During routine operation of the LPOE, noise from the traffic passing through the port would continue to have long-term adverse effects. With only a slight increase following LPOE modernization, noise receptors in the area would likely already be habituated to noise from existing LPOE operations. Therefore, noise effects because of traffic would remain nearly the same as under current conditions following project completion.

The indoor firing range may generate noise effects; however, the noise attenuating effects of the firing range building materials would reduce sound and minimize any noise being emitted from the building. Activity at the helicopter landing zone would create noise and could disrupt personnel at the LPOE during takeoffs and landings, but this would be similar to existing helicopter operations made without the benefit of a helicopter landing zone and limited to when the helicopter is used or dispatched. The Airs Hill Trail is in a remote location, it is not considered heavily trafficked, and it represents a small fraction of the 900,000-acre Tetlin NWR. Operational noise effects at the trailhead would be similar to what is experienced from current LPOE operations.

The two primary diesel generators and one emergency generator would continue to be used for approximately the same number of hours annually as is currently done. Therefore, there is no net effect on noise levels at the LPOE resulting from the use of primary and emergency generators.

The expanded LPOE would add an indoor firing range that would comply with all CBP design standards and OSHA regulations regarding noise (CBP, 2023). Operational noise would have adverse, direct, local, long-term, and negligible effects.

3.11.2.1.3 Blasting Noise and Vibrations

Blasting agents are likely to be used during blasting for foundations or buried utilities on existing GSA property. Blasting actions would be timed with residence demolition and tenant relocation to minimize exposure to workers and to residents.

For purposes of minimizing the vibration effect on the Main LPOE Building that would remain at the project site, any necessary blasting would comply with requirements of the State of Alaska Department of Transportation and Public Facilities (AKDOT&PF), Standard Specifications for Highway Construction, 2020 Edition (AKDOT&PF, 2020) or most recent edition. The process would be controlled blasting in conformance with a prepared blasting plan that limits the amount and placement of blasting agents that would be protective of nearby structures and personnel.

The exact number of LPOE workers that would be onsite or within 200 ft of the blasting source is unknown at this time. GSA and CBP would minimize personnel onsite during blasting operations and time active blasting activities to minimize effects. Personnel remaining onsite would be notified of upcoming blasting activities 24 hours in advance and would be issued proper Personal Protective Equipment during blasting activities or operations.

A predictable noise level at a critical structure (e.g., existing Main LPOE Building) separation distance from the blasting source may be calculated from a known noise level at a reference distance. The critical noise level that results from the calculation would be 83.4 dBA. This noise level is large enough that it would be disruptive to normal conversation, but not large enough to require hearing protection for a person standing just outside the Main LPOE Building or to have damaging health effects without hearing protection. Blasting noise and vibration would have adverse, direct, local, short-term, and moderate effects in the area of analysis.

3.11.2.2 No Action Alternative

Under the No Action Alternative, no site preparation, demolition, construction, or blasting would occur. Noise effects in the area of analysis would remain nearly the same. With consideration of a projected two percent increase in traffic, this alternative would have adverse, direct, local, long-term, and negligible effects in the area of analysis.

3.12 Solid and Hazardous Waste and Materials

The term “solid waste” refers to any discarded or abandoned material. GSA manages solid waste in accordance with federal, state, and local regulations, and waste is generally managed under the following categories: municipal solid waste (i.e., trash or garbage), construction and demolition waste, and hazardous waste (GSA, 2022).

Specific environmental statutes and regulations govern hazardous material and hazardous waste management activities at federal operations and facilities. For this analysis, the terms hazardous waste, hazardous materials, and toxic substances include those substances defined as hazardous by the Comprehensive Environmental Response, Compensation, and Liability Act, RCRA, and the Spill Prevention, Control, and Countermeasures Rule under CWA. In general, these regulations cover substances that, because of their quantity, concentration, or physical, chemical, or toxic characteristics, may present a danger to public health and welfare or the environment when released into the environment. Other federal laws applicable to hazardous waste and materials include:

- Clean Air Act;
- Safe Drinking Water Act;
- Occupational Safety and Health Act of 1970;
- Toxic Substances Control Act; and
- Federal Insecticide, Fungicide, and Rodenticide Act.

In addition to the acts and laws mentioned above, EO 12088, *Federal Compliance with Pollution Control Standards*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved. Solid waste management in Alaska is governed by the AKDEC Solid Waste Program under 18 AAC 60. Alaska's Solid Waste Program regulates health and environmental compliance at solid waste facilities through a combination of design review, permits and authorizations, inspections, monitoring, and compliance assistance (AKDEC, 2023b). Hazardous waste in Alaska is regulated primarily under the authority of the RCRA of 1976 and the authority of the AKDEC.

Alaska does not currently have an approved Hazardous Waste Program (HWP), though it is in development. Through 2023 Alaska Legislature funding, the AKDEC's Solid Waste Program is working with the EPA to gain approval for Alaska's HWP such that the EPA may authorize Alaska to implement key provisions of hazardous waste requirements as defined by RCRA Subtitle C.

Worker health and safety and public safety considerations concerning handling and disposal of hazardous materials which may affect human health and the environment are regulated by OSHA.

3.12.1 Affected Environment

The area of analysis for solid and hazardous waste and materials includes approximately the existing 55-acre Alcan LPOE property at the Alaska Highway MP 1221.8 and the use of up to 6.5 acres from the Tetlin NWR. The LPOE buildings within the area of analysis are characterized as the Main LPOE Building, Service Buildings, and Employee Housing.

Solv conducted a Phase I Environmental Site Assessment, which included a site reconnaissance conducted on June 13 and 14, 2023, at the Alcan LPOE. The Phase 1 Environmental Site Assessment was used to establish the existing conditions and to evaluate the consequences of Alternative 1 and the No Action Alternative on solid and hazardous material and waste.

3.12.1.1 Uses and Storage of Hazardous Materials and Wastes

The following section describes the solid and hazardous material and waste currently generated and stored, or present in the area of analysis.

3.12.1.1.1 Chemicals Associated with Maintenance Activities

Chemicals associated with maintenance activities are present at the existing Alcan LPOE. Chemicals and other maintenance materials at the existing LPOE are currently stored in the Service Building in an unlabeled storage rack and include substances subject to regulation under RCRA, such as paint, motor oil, household cleaners, and herbicides (e.g., glyphosate). The Service Building additionally houses two 55-gallon drums of propylene glycol. All maintenance activities associated with upkeep and repair of CBP equipment and facilities follow standard practices. The facility also includes a hazardous material containment shed (Pole Building) which stores three additional 55-gallon drums of propylene glycol. The U.S. Forest Service stores four 55-gallon drums of aviation kerosene adjacent to the grass auxiliary helicopter landing zone for helicopter refueling. Although these drums are not owned by GSA, GSA maintenance personnel conduct occasional monitoring of the drums to ensure that there are no major leaks or releases. No observations of leaks or releases were present in the vicinity of the four drums during site observations in June 2023 (Solv, 2023). The high volume of traffic through the LPOE occasionally contributes to small vehicular fluid leaks (i.e., oil, brake fluid, etc.) of less than five gallons. There are no reports of spills or leaks related to RCRA regulated substances at the LPOE.

The Alcan LPOE generates and stores onsite hazardous wastes including miscellaneous paints, solvents such as benzene (a toxic, highly flammable liquid), cleaning supplies, and diesel fuel and petroleum distillates like motor oil and thinners. Since the existing LPOE produces less than 220 pounds (100 kilograms) of hazardous waste per month, it is categorized as a Very Small Quantity Generator under 40 CFR §260.10. Very Small Quantity Generators face the lowest level of required actions for hazardous waste generators but are required to identify all the hazardous waste generated and ensure that any hazardous waste is delivered to a person or facility authorized to manage it. All hazardous waste generated at the facility is managed and disposed of in accordance with state and federal regulations.

3.12.1.1.2 Aboveground and Underground Storage Tanks

The existing Alcan LPOE facility currently contains seven ASTs and two USTs which are discussed in Sections 1.2.1.2 and 1.2.1.3. There is no evidence of contamination in association with the ASTs or USTs, and there are no reports of AST or UST spills or leaks at the facility.

3.12.1.1.3 Polychlorinated Biphenyls

Polychlorinated biphenyl (PCB) is an organic chlorine compound that was once widely used in electrical apparatuses and other technologies involving heat transfer. The area of analysis does not contain any PCBs.

3.12.1.1.4 Asbestos and Asbestos Containing Materials

Asbestos is a naturally occurring mineral fiber that was once used in a wide variety of building construction materials due to its fiber strength and heat resistance. However, disturbance or damage to Asbestos Containing Materials (ACMs) can release asbestos fibers into the air, which increases the risk of lung disease when inhaled. The EPA has introduced bans on a variety of specific ACMs under the Toxic Substances Control Act and Clean Air Act, examples of which include pipe insulation, flooring felt, and corrugated, commercial, or specialty paper (EPA, 2023e). National Emission Standards for Hazardous Air Pollutants (NESHAP) for asbestos is implemented under section 112 of the Clean Air Act to minimize the release of asbestos fibers during activities involving the handling of asbestos. NESHAP for asbestos requires the notification of the AKDEC and Alaska Occupational Safety and Health before any demolition of buildings that contain friable or regulated ACM, which is a material that contains more than one percent asbestos. Additionally, the AKDEC requires a notice of demolition to be sent to EPA at least 10 days prior to any demolition, regardless of the presence of hazardous materials or ACMs (AKDEC, 2023c).

ACMs are present in limited and controlled quantities at the existing Alcan LPOE. GSA removed the majority of ACMs from the Alcan LPOE during 2010 abatement and disposal activities. However, ACMs are still present in the pipe fittings, floor tiles, sheet flooring, and roofing tar of the residential triplex, fourplex, Service Building, Pole Building, and Main LPOE Building (EMI, 2015). These ACMs are in good condition and do not present current health risks to maintenance staff or residents.

3.12.1.1.5 Lead Based Paint and Other Lead Materials

Lead is a highly toxic metal that was once commonly used as an ingredient in paint. Due to concerns about the toxicity of lead dust that is released when LBP is damaged, the U.S. Consumer Product Safety Commission banned LBP in residential and public properties in 1978. Structures built before 1978 are likely to contain LBP, which is classified as paint that contains greater than or equal to 0.5 percent lead by weight, or 1.0 milligram per square centimeter lead by x-ray fluorescence. In the State of Alaksa, the waste generator or responsible party must coordinate with EPA Region 10 for hazardous waste characterization as the EPA is the current HWP regulator in the state. LBP debris, dust, chips, or sludge waste are subject to regulation under CFR 261.24 and the Toxicity Characteristic Leaching Procedure test. Wastes with a Toxicity Characteristic Leaching Procedure concentration for lead of greater than 5 milligrams per liter must be managed as a hazardous waste, while wastes of less than 5 milligrams per liter may be disposed at inert waste landfills (AKDEC, 2024a).

LBP is present at the existing Alcan LPOE facility in all buildings except for the CBP housing proposed for demolition under Alternative 1 (EMI, 2015).

3.12.1.2 Hazardous Cargo

Hazardous cargo occasionally passes through the Alcan LPOE. Commercial vehicles carrying hazardous materials or waste undergo primary inspection in the uncovered outermost lane. The uncovered, outermost inspection lane offers the greatest potential for hazardous waste and material contamination from incoming traffic at the LPOE. For most other sources, such as small oil and gasoline leaks from POVs, standard BMPs are in place to contain and remove accidental spills and leaks of fuel and chemicals.

Extensive safety measures are in place to ensure that no unauthorized entry of hazardous cargo occurs, that all hazardous cargo is properly identified through signage and documentation, and that no physical defects are present that could result in contamination, either at the Alcan LPOE or during transport within the U.S. If more extensive inspection of hazardous cargo reveals leakage, appropriate measures and protocols are followed by CBP personnel. Remediation equipment (i.e., fire extinguishers) and absorbent substances are stored at the LPOE for immediate availability in the event of a spill. As the LPOE does not provide long-term detention facilities for hazardous materials, GSA or CBP do not hold hazardous cargo for more than 48 hours after the date of detention. After this time, the shipment is considered unclaimed or abandoned and is turned over to the EPA for storage or disposition (19 CFR § 12.122). Facility personnel follow the most up-to-date regulations, guidance, and operating procedures that are relevant to inspecting and handling hazardous waste.

3.12.1.3 Generation and Disposal of Solid Wastes

The Alcan LPOE primarily generates standard household waste and small quantities of universal waste. It is estimated that the LPOE generates 5 yards of solid waste weekly. Solid waste at the LPOE is stored temporarily before being transported by an authorized waste disposal service to Tok, Alaska. Transportation of solid waste is conducted according to all state and federal standards and occurs quarterly. Universal waste disposal for the LPOE mainly includes used batteries and used-fluorescent bulbs. Disposal of universal waste follows all federal regulations found in 40 CFR 273.

3.12.2 Environmental Consequences

This section evaluates effects to solid and hazardous waste and materials that may result from implementation of Alternative 1 and the No Action Alternative in the area of analysis. Effects to solid and hazardous waste and materials would occur given the following conditions:

- Direct, adverse effects to solid and hazardous waste and materials would occur if the alternatives:
  - Result in the increased generation of solid and hazardous waste compared to current levels;
  - Generate incidental spill or leaks of hazardous waste; or
  - Disturb static hazardous materials.
- Direct, beneficial effects would occur if the alternatives:
  - Result in the decreased generation of solid and hazardous waste compared to current levels; or
  - Improvement to spill lead prevention systems.

The following sections describe the anticipated environmental consequence from solid and hazardous waste and materials under each alternative.

3.12.2.1 Alternative 1 - Expansion and Modernization in Place

Under Alternative 1, the residential triplex, fourplex, recreation, and support buildings would be demolished and replaced with new construction over three distinct phases to ensure minimal disruption to LPOE operations. Lead-safe practices would be employed during demolition (EPA, 2023b). NESHAP for asbestos would be implemented during the demolition of the facilities in Alternative 1. NESHAP BMPs for demolition include removing all asbestos-containing materials, adequately wetting all regulated ACMs materials, sealing the material in leak tight containers, and disposing of the ACMs as expediently as practicable (EPA, 2023e). Any other hazardous waste produced during construction and demolition would be disposed of properly, following appropriate federal regulations and local city and county disposal procedures and would be transported to Fairbanks, Alaska for disposal by licensed disposal contractors. The demolition of Alcan LPOE facilities would result in a considerable amount of solid demolition waste from Alternative 1. According to CBP and GSA standards, all non-hazardous construction and demolition waste would be recycled to the maximum extent feasible. Standing solid waste could contribute to potential effects to soil and water by residual contaminant runoff due to surface water. To mitigate containment runoff from solid waste, the solid waste would be removed regularly and hazardous waste separation BMPs would be administered to appropriate materials. The resulting solid waste would be removed and hauled to Tok, Alaska for disposal of standard materials.

During the demolition of the existing Alcan LPOE facility under Alternative 1, all existing ASTs and USTs would be removed and disposed of according to state and federal standards. The demolition and disposal of the ASTs and USTs would be conducted using licensed contractors and proper closure procedures. Proper closing procedures for small storage tanks such as the 500-gallon and 1,000-gallon ASTs include initial assessment; wet and dry pump; tank, pipe, and pump removal; and removal and remediation of any contaminated soil or groundwater; similarly for the USTs which could either be removed from the ground or filled with an approved substance such as grout or concrete. After completion proposed actions under Alternative 1, future residential unit heating would be provided from a centrally located boiler.

Even with licensed contractors and proper closure procedures, the chance of accidental spills cannot be eliminated. Any spills or releases of hazardous materials, pollutants, contaminants, or petroleum products would affect soil or water resources. However, any spill events would be addressed through the implementation of the Alcan LPOE spill response plan.

Project activities would require the onsite use and storage of hazardous materials, such as diesel fuel, paint, adhesives, thinners, and solvents, all of which would inherently increase the risk of an accidental spill. However, any hazardous materials associated with project activities would be used in accordance with federal, state, and local regulations. Additionally, construction vehicles and heavy machinery operating onsite may occasionally contribute to small oil and fuel leaks. Effects from these sources would be minimized by employing BMPs such as regular vehicle inspections and maintenance, maintaining proper storage of hazardous materials, and maintaining a clean working environment.

The storage, containment, or disposal of any debris, soils, universal waste, and potentially hazardous waste generated during d project activities would be addressed in accordance with applicable authorities and regulations such as RCRA; Spill Prevention, Control, and Countermeasures Rule; and the Alaska DEC. Debris, trash, and soils from project activities would only impart a nuisance to the immediate surroundings before cleanup. All project activities would follow applicable procedures to avoid producing hazardous waste or dust, which would minimize effects from the production, storage, and disposal of these materials. As such, the potential effects of hazardous waste and materials from project activities under Alternative 1 would be adverse, direct, local, short-term, and negligible.

Due to the proposed expansion of the facility in Alternative 1 to approximately three-times the enclosed building area (from 43,166 GSF to 129,145 GSF) and additional hiring of employees, the new facility would generate more solid waste relative to the existing facility. During operation of the proposed new Alcan LPOE facility, solid and universal waste would be disposed of through the same methods and contractors used at the existing facility. However, the amount of generated solid waste would not be substantial and would be easily accommodated by existing waste disposal contractors. Under Alternative 1, the generation of universal waste would decrease from the replacement of fluorescent bulbs with light-emitting diodes, which are not classified as universal waste. The disposal of universal waste would follow current standards and regulations. As such, effects of additional solid waste would be adverse, direct, local, long-term, and negligible, while the reduction of universal waste generation would be beneficial.

Under Alterative 1, the expanded and modernized Alcan LPOE would experience similar vehicle traffic through the LPOE as it currently does now. Commercial trucks transporting hazardous materials or waste would be inspected at the new HAZMAT canopy and could potentially cause leaks or spills. Any spills or releases of hazardous materials, pollutants, contaminants, or petroleum products would result in adverse effects to the affected soil or water resources. However, the risk of contamination due to the release of hazardous material would have a low probability of occurrence because CBP would utilize the same inspection and safety procedures that are currently in practice. In addition, any small spills that do occur would be easily remediated with the implementation of spill response plans in accordance with all applicable laws and regulations. However, over time, small spills of hazardous materials (e.g., oil, gasoline, or lubricant drips) could seep through cracks in the concrete or asphalt and contaminate the soil beneath. Effects of spills due to the new HAZMAT canopy would be adverse, direct, local, long-term, and negligible.

Alternative 1 would include a fuel storage area that complies with all current rules and regulations, including secondary containment. Aviation kerosene for U.S. Forest Service helicopter refueling would be included in this area. Additionally, under Alternative 1, the construction of a helicopter landing zone would lessen effects from potential leaks or spills from helicopters as any releases could be better mitigated than in an area without a dedicated helicopter landing zone. Compared to current fuel storage at the existing Alcan LPOE, the new fuel storage area would have a direct, beneficial, site-specific, long-term, and minor effects from reducing the potential for fuel leaks and spills.

The indoor firing range constructed under Alternative 1 would result in the production of hazardous materials from range activities. Indoor use of lead ammunition exposes range users and maintenance staff to lead through gun smoke which contains lead dust and fumes, spent ammunition casings, used bullets fired down-range, and maintenance activities on areas with lead which release lead dust. However, GSA and CBP would construct and operate the indoor firing range based on current health and safety requirements. This includes ventilation which moves air downrange away from users towards HEPA-filtered exhaust areas, use of dust suppression and cleaning methods, and use of personal protective equipment such as ventilators by all maintenance staff. Spent ammunition, casings, and other associated lead-contaminated materials would be disposed of according to state and federal rules and regulations leading to adverse, direct, site-specific, long-term, and negligible effects from hazardous waste.

3.12.2.2 No Action Alternative

Under the No Action Alternative, no site preparation, demolition of existing facilities, construction of newer, larger facilities, and expansion of Alcan LPOE operations would occur. Minor repairs would occur as needed, and the operation of the existing facilities would continue. The LPOE would continue to produce the same amounts of hazardous and solid waste and traffic carrying hazardous materials and waste would continue to affect the LPOE by occasional leaks and spills. The handling of solid and hazardous waste would be consistent with the existing hazardous material use and disposal practices. Thus, the No Action Alternative would continue to have adverse, direct, local, long-term, and negligible effects from the use of hazardous materials and generation of solid and hazardous waste at the LPOE.

3.13 Climate Change

Climate change refers to any significant changes in the measurement of climate that last for an extended period. These changes could include temperature, precipitation, wind patterns, or other effects that occur over several decades or longer. Greenhouse gases (GHGs) are components of the atmosphere that trap thermal energy and cause warming of the planetary surface. GHGs, such as water vapor, carbon dioxide, and methane occur naturally in the atmosphere. However, ever since the Industrial Revolution, some GHGs have been generated from human activities, such as the burning of fossil fuels (i.e., coal, oil, natural gas), deforestation, industrial processes, and some agricultural practices. GHG emissions released from human activities are widely recognized as a significant contributing factor to climate change. Human activities have released large amounts of carbon dioxide and other GHGs into the atmosphere, causing Earth's climate to change, and resulting in dangerous effects to human health and the environment (EPA, 2017).

This section provides a discussion on both the effects climate change would have on the Alcan LPOE and the potential effects the alternatives would have on climate change.

3.13.1 Affected Environment

In 2021, GHG emissions for the U.S. totaled over 6,340 million metric tons of carbon dioxide equivalent[5] (CO_2e). The largest source of human generated GHG emissions in the U.S. were from the burning of fossil fuels for electricity, heat, and transportation. Transportation accounted for 28 percent of the total GHGs emitted, followed by electric power (25 percent), industry (23 percent), residential and commercial (13 percent), and agriculture (10 percent). GHG emissions from transportation primarily come from burning fossil fuels for cars, trucks, ships, trains, and planes, while electric power emissions come from burning mostly coal and natural gas to produce power for other sectors, such as industry (EPA, 2023f). The changes

[5] CO_2e is a variable used in climate change analysis to express the total GHG emissions from a source. GHGs vary in the amount of warming they produce as well as their persistence in the atmosphere. CO_2e is a metric measure used to compare emissions of different GHGs in terms of their warming equivalent to emissions of CO_2 (UN-REDD, 2024).

to Earth's climate driven by increased human emissions of GHGs have widespread environmental effects, such as glacial melting, sea level rise, exacerbated flooding, and longer and more intense heat waves.

GHG emissions for Alaska total 37.9 million metric tons of CO_2e in 2021 as seen in **Table 3.13-1**. The industry sector accounted for the highest total of GHGs emissions in the state (54.8 percent), followed by transportation (25.4 percent), electrical power industry (7.7 percent), commercial (7.4 percent), residential (4.5 percent), and agriculture (0.2 percent) (EPA, 2023c). These GHGs accounted for a small fraction (0.6 percent) of the U.S. total due to Alaska's relatively small population. Alaska's population of approximately 733,000 in 2020 was 0.2 percent of the U.S. 2020 population of 331 million (USCB, 2023).

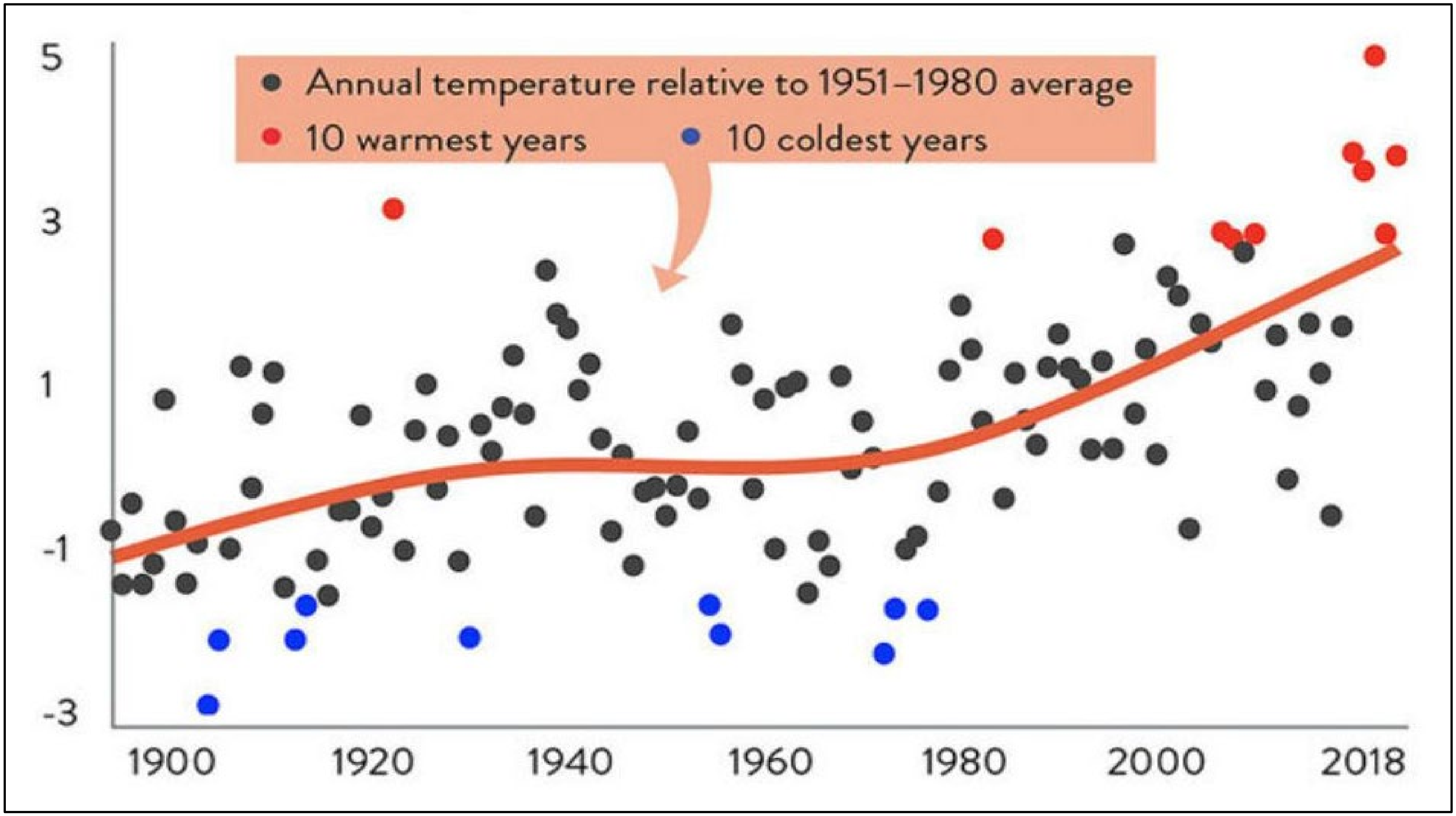
Table 3.13-1. Alaska GHG Emissions by Economic Sector in 2021

Sector	MMTCO_2e	Percent of Total (%)
Industry	20.8	54.8
Transportation	9.6	25.4
Electric Power Industry	2.9	7.7
Commercial	2.8	7.4
Residential	1.7	4.5
Agriculture	0.1	0.2
Alaska GHG Emissions Total	**37.9**	**100.0**
U.S. GHG Emissions Total (2021)	6,340	N/A
Alaska GHG Emissions as Percent of U.S. Total	N/A	0.6

Source: EPA, 2023c

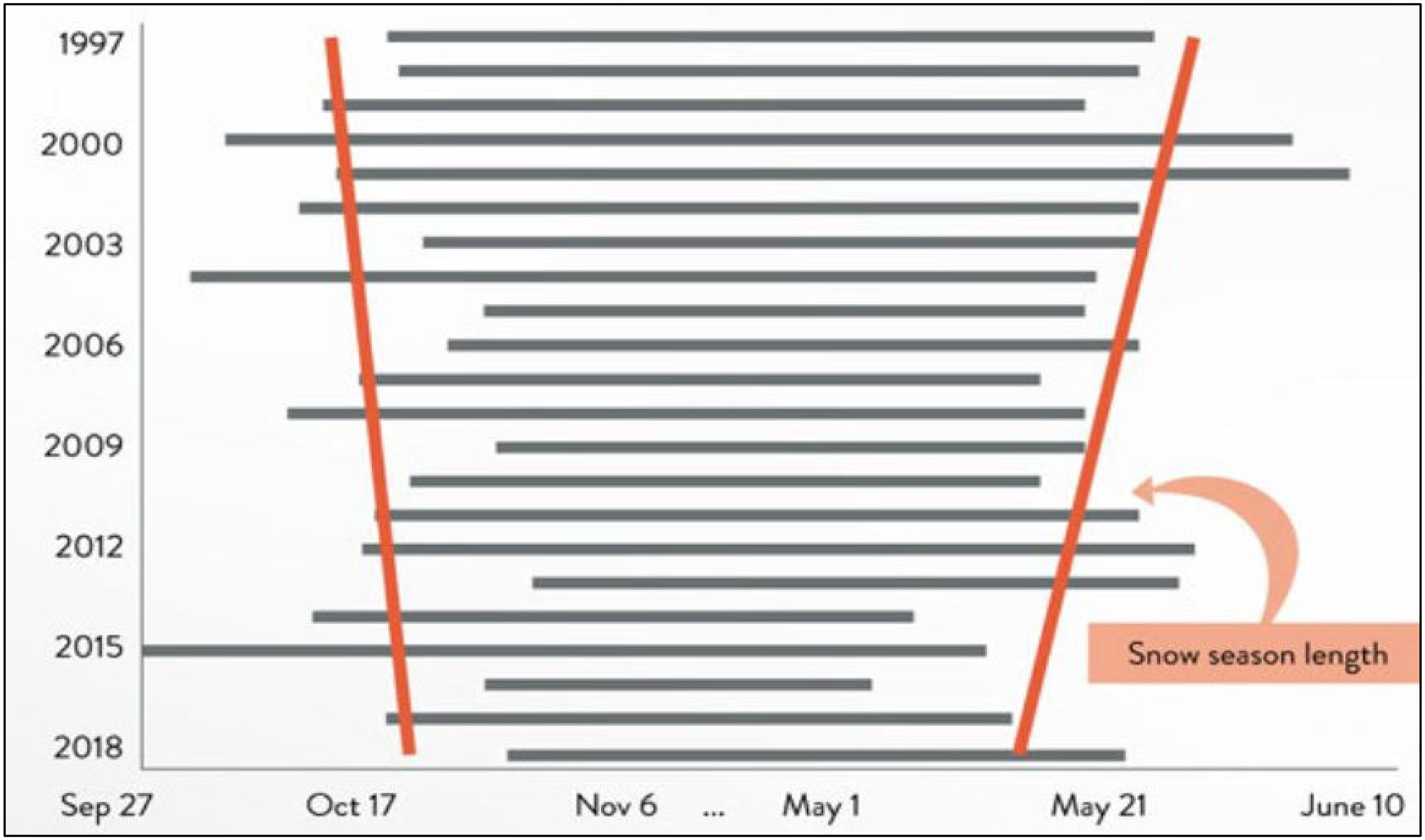
Since the middle of the 20th century, Alaska has been warming twice as fast as the global average, and it is warming faster than any other U.S. state. Alaska's ten coldest years on record have all occurred before 1980, while nine of its ten warmest years on record have occurred since 1980 as seen in **Figure 3.13-1**. Since 2014, there have been five to 30 times more record-high temperatures set than record lows. July 2019 was the hottest month in recorded history for the state, and June 2019 was the second warmest. Warmer temperatures have translated into a shrinking snow season statewide. Snowpacks have developed about a week later in fall and melt about two weeks earlier in the spring compared to the late 1990s as seen in **Figure 3.13-2** (Coggin, 2019). Permafrost soil lies beneath about 80 percent of Alaska's land surface. Rising temperatures could cause permafrost to thaw, which could destabilize the land's surface and cause potential damage to pipelines, buildings, roads, and other transportation and utility infrastructure (EPA, 2016).

Over the long term, climate change could put a strain on Alaska's infrastructure and economy. According to the Fourth National Climate Assessment, from 2008 to 2030, Alaska could spend between \$3.3 and \$6.7 billion to adapt to changes caused by a warming climate. Higher temperatures and greater snow and ice melt could lead to increases in transportation cost, as ice roads would need to be replaced by gravel roads. Gravel roads on the North Slope of Alaska have been estimated to cost as much as \$2.5 million per mile (Coggin, 2019).



Source: Coggin, 2019

Figure 3.13-1. Annual Temperatures for Alaska, 1900 - 2018



Note: Gray bars show the length of snow season in Alaska each year; orange slanting bars show the trending snow season over time.

Source: Coggin, 2019

Figure 3.13-2. Annual Alaska Snow Season, 1997 - 2018

Currently, the primary GHG emission sources contributing to climate change from the existing LPOE site includes vehicle emissions from vehicles passing through inspection lanes at the LPOE; and diesel fuel combustion from the two primary generators, the emergency generator, and the two boilers. The amount of GHGs emitted per vehicle depends on several factors, including the make and model of the vehicle, fuel used, and amount of time spent in the vehicle processing lane or idling. In addition, the LPOE has two, 250-kilowatt primary generators that annually operate for about 4,400 hours each, and one, 175-kilowatt emergency generator that annually operates for about 300 hours. The LPOE also has two, 2.0 Million British Thermal Unit boilers that annually operate for about 3,360 hours each. All generators and boilers use fuel oil No. 2. These sources were estimated to contribute about 2,642 metric tons of CO_2e annually (Appendix G-1), which would equate to the GHG emissions from about 629 gasoline-powered vehicles per year or 345 homes per year (EPA, 2023d). This estimation represents a nearly undetectable fraction of Alaska's GHG emissions (0.007 percent) and total U.S. GHG emissions (0.00004 percent) in 2021, as seen in **Table 3.13-1**. The existing LPOE site has not undergone any major improvements since its initial construction in 1972. Furthermore, CBP officers are required to follow trucks roughly 300 miles to Fairbanks, Alaska during the winter months so that cargo can be safely inspected during intense cold. CBP personnel must also travel to Fairbanks, Alaska for weapons training and qualification. The GHG emissions from these activities vary based on the frequency of these offsite trips, the make and model of the vehicles used, and the fuel used.

3.13.2 Environmental Consequences

This section evaluates effects to climate change that may result from the implementation of Alternative 1 and the No Action Alternative. Effects to climate change would occur if the activities conducted under each alternative contributed GHG emissions to the atmosphere. This section also discusses how climate change would have an effect on the LPOE under each alternative.

3.13.2.1 Alternative 1 - Expansion and Modernization in Place

This section discusses the GHG emissions related to project activities, particularly use of construction vehicles and equipment, along with social costs of GHG emissions related to the modernization of the LPOE.

3.13.2.1.1 Construction-related Activities

Construction-related activities would generate GHG emissions primarily from the combustion of diesel fuel in construction vehicles, heavy equipment, and other vehicles. Trucks, bulldozers, excavators, graders/rollers, tractors, and other types of vehicles and equipment would produce exhaust emissions during construction-related activities, such as grading, excavating, demolishing, building, transporting supplies, and other activities. Vehicles and equipment powered by gasoline and diesel engines would generate exhaust emissions that include GHGs, such as carbon dioxide, methane, and nitrogen oxides, and would contribute to climate change. GSA would require contractors to use the best available technology regarding construction equipment, to the extent possible, to minimize exhaust emissions. Annual and project GHG emissions from construction-related activities were estimated using EPA MOVES4 model emissions factors (Appendix G-2) and are presented in **Tables 3.13-2, 3.13-3,** and **3.13-4**. In **Table 3.13-2**, GHG emissions from construction equipment, construction POVs, and haul trucks were quantified, converted to CO_2e, and added together to determine how much GHGs would be emitted by each construction source per year. Based on these estimates, construction equipment would emit 3,401 metric tons CO_2e per year, construction POVs would emit 15.2 metric tons CO_2e per year, and haul trucks would emit 2,057 metric tons CO_2e per year, for a total of approximately 5,473 metric tons CO_2e per year. In addition, **Table 3.13-3** provides estimates of annual GHG emissions that could occur from vehicle idling (e.g., POVs, trucks and commercial vehicles, and transit buses) during LPOE operations. Based on these estimates, POVs would emit 5.1 metric tons CO_2e per year, trucks and commercial vehicles would contribute 5.7 metric tons CO_2e per year, and transit buses would contribute less than 1 metric ton CO_2e per year. **Table 3.13-4** presents the total GHG emissions that would occur during the proposed project under Alternative 1. Overall, the total annual GHG emissions from construction-related activities were estimated at 5,484 metric tons of CO_2e, and the total project GHG emissions from construction-related activities were estimated at 21,202 metric tons of CO_2e. These estimates would be considered nearly undetectable compared to Alaska's annual GHG emissions of 37.9 million metric tons of CO_2e in 2021 (**Table 3.13-1**). Effects from emissions would only last for the duration of project activities and would be regional in extent as they would extend beyond the project area. Therefore, effects to climate change during construction-related activities would likely be adverse, direct, regional, short-term, and negligible. These construction-related effects from GHG emissions would have an incremental, albeit negligible, long-term effect on climate change as well.

Table 3.13-2. Annual Construction GHG Emissions under Alternative 1

Source	GHG Emissions (metric ton)			
	CO_2	CH_4	N_2O	CO_2e
Construction Equipment	2,624	0.096	2.920	3,401
Construction POV Emissions	15.10	<0.001	<0.001	15.2
Haul Truck Emissions	2,042	0.012	0.054	2,057
Total	-	-	-	**5,473**

CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; POV = privately-owned vehicle)

Table 3.13-3. Annual Vehicle Idling GHG Emissions under Alternative 1

Vehicle Type	GHG Emissions		
	CO_2 (kg)	N_2O (kg)	CO_2e (metric ton)
POVs	5,098	0.084	5.1
Trucks/Commercial Vehicles	1,198	17.11	5.7
Transit Buses	14.13	0.202	0.068
Total (metric ton)	6.310	0.017	**10.9**

kg = kilogram; CO_2e = carbon dioxide equivalent

Table 3.13-4. Annual and Project GHG Emissions Total under Alternative 1

GHG Source	GHG Emissions	
	Annual CO_2e (metric tons)	Project CO_2e (metric tons)
Construction	5,473	21,156
Vehicle Idling	10.9	45.51
Project Total	**5,484**	**21,202**

CO_2e = carbon dioxide equivalent

3.13.2.1.2 Modernization

The modernization of the LPOE could potentially reduce GHG emissions due to the facility's enhanced layout and updated infrastructure. The new layout of inspection areas would optimize traffic flow and vehicle processing with new inbound inspection lanes and enclosed spaces for secondary inspection, thereby reducing traffic delays, congestion, and vehicle idling as well as associated exhaust emissions. New onsite facilities would provide CBP with the infrastructure needed to conduct their operations safely and securely, reducing or eliminating the need to travel offsite for these operations, along with the vehicle emissions associated with these trips. In addition, the existing service building and storage structure would be renovated to meet energy consumption standards. Energy efficiency and building insulation would be improved and would likely decrease the amount of fuel needed to heat residential homes and other LPOE buildings. Vehicle exhaust and GHG emissions related to the LPOE's infrastructure would still occur as part of the LPOE's operation and affect climate change; however, the modernized facility would likely reduce some GHG emissions related to LPOE operations and have a beneficial effect to climate change beyond the LPOE site.

CEQ 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. SC-GHG estimates provide an aggregated monetary measure of the net harm society would expect to incur with an incremental metric ton of emissions in a given year. These estimates could include but are not limited to climate change impacts 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. SC-GHG estimates can help the public and federal agencies understand the potential societal impacts from GHG emissions, which can aid in the evaluation and comparison of alternatives (GSA, 2024c). GSA used the workbook designed by the National Center for Environmental Economics at the EPA, which calculates the monetized net social benefits of future reductions in GHG emissions and the net social cost of increases in GHG emissions (Appendix G-3). **Table 3.13-5** provides estimates of annual SC-GHG values for a range of discount rates. 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 into the future. The results of **Table 3.13-5** show that the modernization of the LPOE would result in lower SC-GHG costs into the future.

Table 3.13-5. Social Cost of Annual GHG Emissions (millions, 2023$)

Discount Rate	2.5%	2.0%	1.5%
CO_2, Present Value in 2026	$2.90	$4.71	$8.00
CO_2, Annualized Value in 2030	$0.63	$1.00	$1.67
CH_4, Present Value in 2026	$0.00	$0.00	$0.00
CH_4, Annualized Value in 2030	$0.00	$0.00	$0.00
N_2O, Present Value in 2026	$0.57	$0.86	$1.36
N_2O, Annualized Value in 2030	$0.12	$0.18	$0.28
Total GHG, Present Value in 2026	$3.47	$5.57	$9.36
Total GHG, Annualized Value in 2030	$0.75	$1.18	$1.96

CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide

Alternative 1 would meet one of the goals of the purpose and need of the project, which is to reduce the carbon footprint of the LPOE facility. The modernization of the LPOE would provide beneficial, direct, regional, long-term, and negligible effects to climate change. As such, GHG emissions associated with Alternative 1 would continue to constitute an undetectable fraction of Alaska's GHG emissions and would make a negligible contribution to global climate change.

Climate change would continue to have an adverse effect on the LPOE site. Increased temperatures would likely cause heavier use of the HVAC system at the LPOE, resulting in more energy consumption and higher GHG emissions. As climate warms, permafrost soil could thaw and cause the land to shift or sink. This can damage transportation or utility infrastructure near the LPOE site, such as roads, buildings, pipelines, water supplies, and sewer systems (EPA, 2016). Any damage to the LPOE site from climate change could result in costly repairs or replacement of infrastructure, which could also affect the functionality of the LPOE. Therefore, under Alternative 1, climate change would likely have adverse, direct, regional, long-term, and moderate effects on the LPOE.

3.13.2.2 No Action Alternative

Under the No Action Alternative, there would be no site preparation, facility construction or renovation, or demolition and disposal of existing structures at the existing LPOE site. Minor repairs would occur as needed and maintenance and operation of the existing facilities would continue as described in Chapter 1. Generator and boiler use would remain relatively the same. Since improvements to the existing LPOE site would not be implemented, average queue times for vehicles would be expected to increase over time, resulting in increased vehicle emissions at the LPOE. CBP personnel would continue to travel offsite to attain their weapons training and qualifications, and to follow trucks to Fairbanks, Alaska to safely inspect cargo, emitting vehicle exhaust due to these trips. As a result, vehicle emissions would likely remain the same or increase slightly over the short and long term. These additional emissions would not appreciably affect climate change beyond the existing LPOE site; however, the No Action Alternative would not meet one of the goals of the purpose and need of the project, which is to reduce the carbon footprint of the facility. Therefore, effects on climate change under the No Action Alternative would be adverse, direct, regional, long-term, and negligible. GHG emissions associated with the No Action Alternative would constitute an undetectable fraction of Alaska's GHG emissions and would make a negligible contribution to global climate change.

The effects of climate change on the existing LPOE site would likely have adverse, direct, regional, long-term, and moderate effects on the LPOE.

3.14 Dismissed Resources

All potentially relevant resources were initially considered for analysis in this Final EIS. Consistent with NEPA implementing regulations and guidance, GSA focuses the analysis in an EIS on topics with the greatest potential for environmental impacts. CEQ regulations encourage NEPA analyses to be as concise and focused as possible, consistent with 40 CFR § 1500.4(e). Additionally, the resources were evaluated to determine level of significance and potential dismissal.

This section identifies those resources that are dismissed from further analysis and the rationale for dismissal. In conducting this analysis, a qualified subject matter expert reviewed the potential direct and indirect effects of the project relative to each environmental resource and indicated those resources which would not be substantially affected by any of the alternatives.

3.14.1 Transportation and Traffic

Transportation is the movement of people, materials, and goods. It includes ground transportation such as roads, railways, and shared uses (bicycle and pedestrian); air transportation; and water transportation. Traffic describes vehicle movements and volumes. There is very limited air traffic and very limited pedestrian and bicycle traffic in the area of analysis. No rail or water transportation facilities exist in the vicinity.

The Alcan LPOE site is located on a segment of the Alaska Highway extending from the U.S.-Canda border near MP 1222 northwestward to just beyond MP 1226. This portion of the Alaska Highway is also designated as Alaska Route 2 and Interstate A1. The highway includes one travel lane in each direction.

No public roadways intersect this segment of highway. The State of Alaska owns the roadway, and the AKDOT&PF maintains it. This segment of the Alaska Highway is in the AKDOT&PF Northern Region, Tok Maintenance District, and is serviced by the Northway Maintenance Facility (AKDOT&PF, No Date).

The Tetlin NWR bounds the transportation corridor along the southbound lanes, punctuated by two small areas of private land near MPs 1223 and 1226, each with access to the highway. The Tetlin NWR's Bucko Cabin and Scottie Creek Boat Launch each have access to the highway (USFWS, No Date-c) at the Scottie Creek Bridge near MP 1223.5 (AKDOT&PF, No Date). Private land and a utility corridor bound the transportation corridor along the northbound lanes with a few access points to the highway. Traffic volumes in the region are very low. A daily average of 220 vehicles traveled this segment of the Alaska Highway in 2020 (AKDOT&PF, No Date) and the U.S. Department of Transportation recorded a daily average of 41 to 199 vehicles crossing the border over the past 25 years (DOT, 2023).

Beyond short-term delays due to project activities, no effects to transportation and traffic resources are expected under the considered action alternative. Project activities may cause minor delays to traffic along the Alaska Highway should any lane closures be required. These delays would be short-term in duration and would likely be in the range of several minutes. Project-related delays would not contribute to reductions of access to community resources such as recreational sites, religious facilities, or public health and safety personnel and facilities. During the operational phase of the project, traffic conditions would be similar to current conditions. As such, transportation and traffic resources were dismissed from detailed consideration.

3.14.2 Utilities

Utilities include publicly available services that supply the water, sanitary sewer, storm sewer, energy, and communications that enable customers to carry out their day-to-day functions. Utilities and their customers may be public, private, or some combination thereof. The Alcan LOE lies 90 miles from Tok, the nearest established community, and public utilities do not exist in the area (Hennebery Eddy Architects, 2019). The Alcan LPOE is self-sufficient and currently provides its own required utility services other than fiber optic communications. The existing wastewater treatment facilities can support increased staffing at the LPOE. Under Alternative 1, the Alcan LPOE would remain self-sufficient and would not affect the availability, demand, or access of public utilities in the area. Therefore, this resource was dismissed from detailed consideration.

3.14.3 Air Quality

Effects to air quality were considered but dismissed from detailed study due to the low likelihood of adverse effects. Air quality is the measure of the atmospheric concentration of defined pollutants in a specific area. Air quality is affected by pollutant emission sources, as well as the movement of pollutants in the air via wind and other weather patterns. 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; and smoke from human-caused fires.

EPA Region 10 and the AKDEC regulate air quality in Alaska. Under the Clean Air Act (40 CFR Part 50), EPA established the National Ambient Air Quality Standards (NAAQS), which are the maximum allowable concentrations for six criteria pollutants that can be harmful to public health and the environment. The six criteria pollutants are carbon monoxide, lead, nitrogen dioxide, sulfur dioxide, particulate matter (less than or equal to 10 micrometers and less than or equal to 2.5 micrometers in diameter), and ozone. EPA has designated Southeast Fairbanks as an attainment area, meaning that the county meets or attains the

NAAQS (EPA, 2023i). The existing air quality is generally good with low air pollution from the current usage of three generators. GSA does not have a Title V permit for the generators; all generators were installed prior to 2012. The two main generators are tier 3, and the emergency generator is zero tier.

Under Alternative 1, some emissions of fugitive dust may occur during project activities, and the operation of construction equipment may release air pollutants. BMPs such as spraying water to minimize dust emissions, limiting idling times of construction equipment, using low-emission construction machinery and equipment, and powering equipment and vehicles with low sulfur diesel, would be implemented during project activities to reduce adverse impacts on air quality. Therefore, emissions from project activities would have negligible, short-term effects on air quality, and NAAQS would not be expected to be exceeded.

The modernized LPOE would likely result in decreased vehicle exhaust emissions due to reduced idling time, improved processing capacity, and the addition of on-site inspection facilities. Additionally, emissions from LPOE operations would be less than current conditions due to infrastructure upgrades, compliance with efficient building standards, and sustainable design, and NAAQS would not be expected to be exceeded. Therefore, Alternative 1 would result in negligible and adverse effects to air quality over the long term. As a result, this resource was dismissed from detailed consideration.

3.15 Unavoidable Adverse Environmental Effects

The effects of the action alternative on the environment have been described in detail in the previous individual resource sections of this chapter. **Table 3.15-1** provides a summary of unavoidable adverse environmental effects of the project.

Table 3.15-1. Unavoidable Adverse Environmental Effects

Resource Area	Unavoidable Adverse Environmental Effects
Land Use	Adverse, direct, local, long-term, minor effects to the Tetlin NWR resource area because up to 6.5 acres of refuge property would be set aside for a non-conservation use (helicopter landing) that would decrease the value of the land for habitat use due to noise and visual disturbance to wildlife.
Geology, Topography, and Soils	Adverse, direct, local, long-term, negligible effects to geology due to blasting activities. Adverse, direct, site-specific, long-term, minor effects on topography due to grading which would flatten and eliminate the topographic features at an approximately 14,400 sf area of Airs Hill. Adverse, direct, local, short- and long-term, moderate effects on soils from erosion, compaction, loss of natural soil horizons from grading and covering of soils with impervious surfaces.
Water Resources	Adverse, direct, local, short-term, minor effects to stormwater during project-related activities and adverse, direct, local, long-term, negligible effects to stormwater during LPOE operations. Adverse, direct, local, short-term, minor effects to surface waters during project-related activities and adverse, direct, local, long-term, negligible effects to surface waters during LPOE operations.

Resource Area	Unavoidable Adverse Environmental Effects
Biological Resources	Adverse, direct, local, long-term, negligible effects to vegetation due to the destruction and removal of native plant species during project activities. Adverse, direct, local, short- and long-term, negligible effects to wildlife due to the removal of minimal available habitat and disturbances from noise and activity during project activities and operation of the expanded port. Adverse, direct, local, long-term, moderate effects on wetlands if there is filling of 0.3 acres of wetlands and destruction of wetland vegetation (0.3 acres represents only a small fraction of the large wetland that surrounds the project site). Adverse, direct, local, short-term, negligible effects on migratory birds due to displacement from habitat surrounding the area of analysis, and adverse, direct, local, long-term, negligible effects due to operational traffic and routine maintenance disturbances.
Cultural and Tribal Resources	Adverse, direct and indirect, local, short-term, minor effects on the setting of the Alaska Military Highway Telephone and Telegraph Line due to noise and visual disturbance from project activities. No archaeological resources have been identified within the project area. If archaeological resources were discovered during project activities, there would be potential adverse or beneficial, direct, local, long-term impacts to cultural resources. Due to the level of past ground disturbance, it is unlikely archaeological resources encountered would be in their original context, so local, short-term, negligible effects would likely occur in the APE. Adverse, direct, local, short-term, minor effects on subsistence activities due to increased noise, emissions, and visual intrusions during project activities. Adverse, direct, local, long-term, moderate effects on subsistence activities due to continued access restrictions to traditional and modern fishing camps in the vicinity of the existing LPOE.
Environmental Justice	Adverse, direct, local, short- and long-term, moderate effects on tribal subsistence activities due to continued access restrictions at traditional fishing locations. Adverse, indirect, regional, long-term, moderate effects on Native Alaskan communities due to the continued presence of the international border, which historically and currently has separated U.S. members of Native Alaskan communities from friends and family in Canada. Adverse, direct, local, short-term, minor effects to the health and safety of children due to project-related disturbances.
Socioeconomics	Adverse, direct, regional, short-term, negligible effects would be expected on population and housing due to the influx of workers to temporary construction work camps and housing.
Recreation	Adverse, direct, local, short-term, minor effects on the accessibility and quality of recreational resources near the current LPOE due to project-related activities. Adverse, direct, local, long-term, negligible effects on the accessibility and quality of recreational resources near the current LPOE due to operational activities, such as noise from the indoor firing range and from the helicopter landing zone.
Visual Resources	Adverse, direct, local, short-term, minor effects to visual resources due to the presence of project-related activities, vehicles, and equipment. Adverse, direct, local, long-term, minor effects due to the construction of additional developed areas such as buildings and inspection lanes.

Resource Area	Unavoidable Adverse Environmental Effects
Noise and Vibrations	Adverse, direct, local, short-term, minor effects due to project-related activities. Adverse, direct, local, short-term, moderate effects from blasting noise and vibrations during the project activities period. Adverse, direct, local, long-term, negligible effects during operations
Solid and Hazardous Waste and Materials	Adverse, direct, local, short-term, negligible effects from project activities. Adverse, direct, local, long-term, negligible effects during operations due to increase of solid waste, potential spills with the new HAZMAT canopy, and from the indoor firing range.
Climate Change	Adverse, direct, regional, short-term, negligible effects to climate change during project-related activities. Short-term project activities effects on climate would have an incremental (albeit at a negligible level) long-term effect on climate as well. Adverse, direct, regional, long-term, moderate effects on the LPOE from climate change.

3.16 Irreversible and Irretrievable Commitments of Resources that would be Involved in the Project

Section 102(C)(v) of NEPA [42 USC § 4332] requires EISs to address "any irreversible and irretrievable commitments of 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, 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.

3.16.1 Irreversible Commitments of Resources

Under Alternative 1 the following irreversible commitment of resources would occur:

- Capital expenditure of approximately $190 million for design, materials, and labor;
- Consumption of fossil fuels (primarily diesel) and lubricants by heavy construction equipment (e.g., bulldozers, graders, scrapers, excavators, loaders, trucks) used to excavate and develop approximately 5 additional acres;
- Consumption of fossil fuels (primarily diesel) and lubricants by heavy construction equipment during demolition and disposal of existing facilities at the Alcan LPOE;
- Materials used to develop, and construct modernized LPOE structures, including cement/concrete, soil cement, steel, iron and other metallic alloys, copper wiring, polyvinyl chloride pipe, plastic and so forth; and

- Energy, supplied by fossil fuels or some other source of electricity, would be used over the operational life of the expanded modernized Alcan LPOE.

3.16.2 Irretrievable Commitments of Resources

Under Alternative 1 the following irretrievable commitments of resources would occur:

- Disturbance of approximately 15 acres of temporary disturbance and 5 acres of permanent disturbance of vegetation (the total construction footprint, all of which is disturbed, landscaped, or covered with impervious surfaces);
- Increase of approximately 4 acres of impervious surfaces.

Mitigation measures and BMPs would be implemented to minimize impacts; they are summarized for each resource in **Table 3.16-1**.

Table 3.16-1 Mitigation Measures and BMPs

Resource Area	Mitigation Measures and BMPs
Land Use	None.
Geology, Topography, and Soils	BMPs to address potential geologic hazards including radon-resistant construction techniques to prevent radon pervasion into facilities such as using gravel as gas permeable layer located below the foundation; a gas and vapor barrier between gravel and foundation; a vent pipe from the gravel; and thorough sealing and caulking of foundation itself. GSA's Seismic Mitigation Program would be followed to ensure seismic preparedness. Alaska Construction General Permit would be required to satisfy the NPDES program. Development of an SWPPP to document the BMPs to be used to control soil erosion and sedimentation including installing silt fencing and sediment traps, and reestablishing vegetation to minimize erosion and sedimentation. Revegetation around the buildings, parking lots, and other infrastructure where soils remain exposed after project activities with regionally appropriate native plant species. BMPs to prevent impacts to permafrost from earthwork activities include constructing insulated foundations.

Resource Area	Mitigation Measures and BMPs
Water Resources	BMPs would be implemented in accordance with the Alaska Construction General Permit, which establishes limits on pollutant discharges, monitoring and reporting requirements, and other provisions to minimize potential discharges and impacts to water quality. Development of a SWPPP to document the BMPs to be used on the construction site to reduce or prevent the discharge of pollutants. BMPs to prevent or mitigate the escape of sediment and manage or mitigate risk of spills include erosion control strategies during project activities that often include temporary seeding, use of silt fencing, installation of gravel construction entrances/exits, installation of temporary sediment basins, and other methods as determined during detailed design. Drop cloths, proper storage of chemicals, and immediate treatment of spill areas with absorbents and soil removal. Permanent stormwater BMPs, such as detention ponds, vegetated swales, or level spreaders, would be installed in compliance with local, state, and federal law. BMPs would be regularly maintained by mowing, removing debris, and repairing damage.
Biological Resources	BMPs to minimize introduction and establishment of invasive species include equipment washing; proper disposal of invasive species found during project activities; construction vehicles would use existing roadways to access the project area to avoid excessive disturbance to vegetation; disturbed areas would be replanted with native vegetation after the end of project activities. BMPs to minimize effects to wildlife during project activities and operation include construction vehicles would observe maximum speed limits to minimize the possibility for any wildlife-vehicle collisions; staging and stockpile areas would be located within or immediately adjacent to the construction footprint to reduce the area of habitat disturbance. BMPs to minimize erosion and potential effects to wetlands include: the installation of a silt fence around the construction site and placement of gravel or rip-rap for heavy vehicle transit. A SWPPP would be implemented to minimize erosion and avoid potential effects of project activities to wetlands. Compensatory mitigation measures if wetlands are destroyed. BMPs to minimize effects to migratory birds include limiting site work to occur outside of migratory BCC nesting season; conducting nest surveys to confirm presence or absence of nests in the area before work starts and establish buffers around active nests.

Resource Area	Mitigation Measures and BMPs
Cultural and Tribal Resources	The design phase would avoid the Alaska Military Highway Telephone and Telegraph Line to the maximum extent feasible. If adverse effects to the historic telephone line are identified during the design phase, then GSA would develop and implement mitigation measures under the Section 106 process. GSA contractors would be provided with an Inadvertent Discovery of Cultural Resources Plan for cultural resources and human remains, which would be implemented if such materials were uncovered during project activities. GSA would consult with the SHPO, Northway, and the Tanana Chiefs Conference to resolve any potential adverse effects resulting from an inadvertent discovery.
Environmental Justice	All contractors employed by GSA would be subject to a background check and only passing candidates would work on the project. CBP officers' families would be temporarily relocated to minimize their presence onsite during project activities.
Socioeconomics	None.
Recreation	The indoor firing range would incorporate design elements to minimize noise pollution.
Visual Resources	None.
Noise and Vibrations	Moving current Alcan LPOE residents to temporary housing would minimize the effects of project activities noise on residents. Blasting would be timed with residence demolition and tenant relocation to minimize exposure. A Blasting Plan would be prepared that limits the amount and placement of blasting agents. Personal Protective Equipment would be worn by workers during blasting activities or operations.

Resource Area	Mitigation Measures and BMPs
Solid and Hazardous Waste and Materials	Lead-safe practices would be employed during demolition. National Emission Standards for Hazardous Air Pollutants (NESHAP) BMPs for demolition include removing all asbestos-containing materials, adequately wetting all regulated ACMs materials, sealing the material in leak tight containers, and disposing of the ACMs as expediently as practicable. All non-hazardous construction and demolition waste would be recycled to the maximum extent feasible. BMPs for hazardous waste separation would be followed and solid waste would be hauled to Tok, Alaska for disposal of standard materials. Existing ASTs and USTs would be removed and disposed of according to state and federal standards. The demolition and disposal of the ASTs and USTs would be conducted using licensed contractors and proper closure procedures. A Spill Response Plan would be implemented to address potential spills or releases of hazardous materials. BMPs include regular vehicle inspections and maintenance, maintaining proper storage of hazardous materials, and maintaining clean working environment. BMPs would be implemented at the indoor firing range: ventilation, HEPA-filtered exhaust areas, use of dust suppression and proper cleaning methods, and use of PPE such as ventilators by maintenance staff.
Climate Change	Improvements to energy efficiency and building insulation would mitigate the effects of the updated LPOE on climate change due to expected decreases in fuel usage for heating residential and other LPOE buildings. The modernized and enhanced layout and updated infrastructure could reduce GHG emissions.

4.0 CUMULATIVE EFFECTS

CEQ regulations require federal agencies to assess the cumulative effects of federal projects during the decision-making process. Cumulative effects result "from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time." (40 CFR 1508.7). This section describes the cumulative effects that the alternatives, as well as other projects in the area, may have on the environment.

4.1 CUMULATIVE ACTIONS

Per 40 CFR 1508.25(a)(2), cumulative actions are those past, present, and reasonably foreseeable future actions that must be addressed in a cumulative effects analysis because their environmental effects may combine with the effects of the alternatives addressed in the NEPA document (CEQ, 1997).

4.1.1 Geographic and Temporal Scope

The geographic boundary for each resource in the cumulative effects analysis follows the geographic boundaries of direct and indirect effects for each resource analyzed in Chapter 3.0, unless noted otherwise for specific resources.

The temporal boundaries for cumulative effects in this analysis have three components – past, present, and reasonably foreseeable future cumulative actions. Past cumulative effects are captured under each resource's Affected Environment section in Chapter 3.0 since past actions and their effects have contributed to the current condition of a resource; it also comprises past actions that have occurred in the vicinity of the project area. Present and reasonably foreseeable future cumulative actions are included in this chapter if they are expected to overlap in space and time with the scope of this Final EIS.

4.1.2 Cumulative Actions Scenario

Recent major actions in the vicinity of the Alcan LPOE are associated with the resurfacing and rehabilitation of a portion of the Alaska Highway by the AKDOT&PF; all other identified actions are at least 150 miles from the Alcan LPOE project site and so are not considered cumulative actions. Current and foreseeable major future actions in the vicinity of the Alcan LPOE (i.e., within 25 miles) are associated with the continuation of these projects.

The Alaska Highway resurfacing and rehabilitation construction activities in the vicinity of the Alcan LPOE site would be anticipated to have the following effect in the short- and long-term (FHWA, 2017):

- Fuel consumption during material transport from the construction site, between the plant and the site, and the construction operations themselves.
- Exhaust and particulate emissions generated during construction.
- Traffic, congestion, and noise emissions generated during construction.

Recent past, current, and reasonably foreseeable future actions within 25 miles of the Alcan LPOE are identified in Sections 4.1.2.1 and 4.1.2.2.

4.1.2.1 Alaska Highway MP 1222-1227 Resurfacing

AKDOT&PF is resurfacing approximately 4.5 miles of the Alaska Highway between MPs 1222 and 1227 under the Alaska Highway MP 1222-1227 Resurfacing Project (AKDOT&PF, 2023), implemented in conjunction with the Alaska Highway MP 1235-1251 Rehabilitation project discussed in Section 4.1.2.2. Highway resurfacing methods commonly include crack sealing; base repair, or replacement of distressed pavement; and application of slurry sealant, or liquid asphalt (DDOT, No Date). The scope of this project includes a portion of the Alaska Highway within the existing LPOE site. The project began in 2022 and is ongoing with no fixed timeline.

4.1.2.2 Alaska Highway MP 1235-1251 Rehabilitation

AKDOT&PF is rehabilitating approximately 7 miles of the Alaska Highway between MP 1235 and 1252 under the Alaska Highway MP 1235-1251 Rehabilitation Project (AKDOT&PF, 2023), involving the construction of new passing lanes. Common highway rehabilitation strategies include pavement replacement; fine milling to create a level, non-skid surface; asphalt recycling; and asphalt compaction (Wirtgen Group, No Date). The project is occurring approximately 10 miles northwest of the Alcan LPOE site. The highway project began in 2022 along with the Alaska Highway MP 1235-1251 Resurfacing project and is ongoing with no fixed timeline.

4.2 Cumulative Effects on the Environment

As described in Section 4.1, GSA considers past, present, and foreseeable actions taking place in the action area in the assessment of cumulative effects. The following section analyzes the cumulative effects for each resource covered in Chapter 3. The analysis first summarizes the cumulative effects of the actions identified in 4.1, then considers how the incremental effects of Alternative 1 – when added to or acting synergistically with the cumulative effects of other past, present, and reasonably foreseeable future actions – would contribute to overall cumulative effects.

Resource areas in the Alcan LPOE current site and vicinity that would be cumulatively impacted because of the Alaska Highway resurfacing and rehabilitation activities include Land Use; Geology, Topography, and Soils; Water Resources; Biological Resources; Cultural and Tribal Resources; Environmental Justice; Socioeconomics; Recreation; Visual Resources; Noise and Vibrations; Solid and Hazardous Waste and Materials; and Climate Change.

The cumulative effects on the resources are presented in **Table 4.2-1**.

Table 4.2-1. Cumulative Effects on Resources

Resources	Cumulative Effects
Land Use	The Alaska Highway was constructed in 1942 and has since undergone routine construction and maintenance activities such as those described in Section 4.1.2 (AKDOT&PF, 2017). None of the projects described in Section 4.1.2 would alter current land use designations. Therefore, there would be no cumulative effects to land use in the area of analysis due to highway resurfacing and rehabilitation.
Geology, Topography, and Soils	All past, present, or reasonably foreseeable actions described in Section 4.1.2 would contribute cumulative effects on geology, topography, and soils. The construction of new traffic lanes would require adjustments to the local topography to appropriate road-level slopes. Use of heavy equipment would compact, loosen, and destroy the structure and function of organic and mineral soils while reducing soil moisture and increasing runoff and erosion. Soil compaction by heavy equipment and other vehicles decreases soil porosity and ultimately decreases vegetative productivity due to root restriction in compacted areas. Additional impervious surfaces would increase potential water runoff and minorly increase soil erosion in the vicinity of project sites. These projects would result in adverse, direct and indirect, local, long-term, and minor cumulative effects to topography and soils. Alternative 1 would contribute, adverse, direct, site-specific to local, short- and long-term, minor cumulative effects to topography and soils through increased soil erosion from runoff and soil compaction from heavy equipment. The No Action Alternative would not contribute to cumulative effects. There would be no cumulative effects on geology.
Water Resources	All past, present, or reasonably foreseeable actions described in Section 4.1.2 would contribute cumulative effects on water resources through disturbance of soils, removal of vegetation cover, and presence of chemicals and fuels on construction sites. These actions can contribute to localized increased rates of soil erosion and chemicals which can contaminate runoff and contribute to water quality declines in stormwater, receiving surface waters and wetlands, and groundwater recharge. The installation of additional lanes and impervious surfaces would increase stormwater discharges off the Alaska Highway, which can introduce chemicals, fuels, and other foreign substances into nearby groundwater and receiving surface waters. Lane siting would occur adjacent to existing roads and are unlikely to result in additional filling of wetlands. These projects would have adverse, direct, local, long-term, and minor cumulative effects on water resources. Alternative 1 would contribute adverse, direct, local, short- and long-term, minor cumulative effects to water resources from construction-related disturbance of soils leading to increased erosion, introduction of foreign materials into nearby surface waters, and increased stormwater runoff from installation of additional impervious surfaces. The No Action Alternative would contribute adverse, direct, local, long-term, negligible cumulative effects from continued stormwater runoff.

Resources	Cumulative Effects
Biological Resources	Projects discussed in Section 4.1.2 are associated with construction activities and would likely contribute adverse, cumulative mechanical, visual, and noise disturbance effects to vegetation, wildlife, and migratory birds in and near the project area, especially if they occur simultaneously. These cumulative actions would displace and disturb wildlife over a larger area, making it more difficult for animals to escape stressful noise and visual effects. However, much of the habitat that would be removed during highway resurfacing and rehabilitation is disturbed early-successional roadside habitat inhabited by invasive plant species (AKEPIC, 2022). It is unlikely that wildlife or migratory birds would occur in this habitat other than incidentally, and any displaced wildlife or birds could utilize the more suitable surrounding forest and wetland habitat. Invasive plants could be introduced or spread during construction, adversely impacting local plant communities. Cumulative effects on biological resources from other cumulative actions would be adverse, direct, local, short-and long-term, and minor. Alternative 1 would contribute adverse, direct, local, short- and long-term, and minor, cumulative effects to biological resources from visual and noise disturbance of wildlife during construction, vegetation and habitat disturbance and destruction, and noise and activity during operations. The No Action Alternative would contribute adverse, direct, local, long-term, and negligible cumulative impacts due to continued noise and activity from operation of the LPOE.
Cultural and Tribal Resources	The proposed Alcan LPOE expansion and modernization and the projects discussed under Section 4.1.2 largely consist of previously disturbed area; however, it is possible that development of the planned and reasonably foreseeable projects listed in Section 4.1.2 could have cumulative effects on cultural resources, either directly or indirectly. Increased traffic and construction noise could potentially reduce access to subsistence resources in the vicinity of the ongoing road projects. However, delays and disturbance would be confined to relatively small (i.e., approximately 3-5 mile) stretches of roadwork at a given period and would be limited to the construction period of projects. These cumulative effects would be adverse, direct, local, short-term, and minor. In the long-term, road resurfacing would ultimately improve access to nearby subsistence resources. These beneficial cumulative effects would be direct, local, and minor. Alternative 1 would contribute adverse, direct, local, short-term, and minor, cumulative effects to cultural resources from reduced access to and quality of subsistence resources. Adverse or beneficial, direct, local, permanent, and major cumulative effects could occur if cultural resources are discovered during ground-disturbing activities. In the long-term, restrictions to traditional fishing areas would result in adverse, direct, local, moderate cumulative effects to cultural resources from both Alternative 1 and the No Action Alternative.

Resources	Cumulative Effects
Environmental Justice	All past, present, or reasonably foreseeable actions described in Section 4.1.2 would contribute short-term effects to communities with EJ concerns through job opportunities, increased traffic, exposure to construction noise and emissions, and presence of construction camps in predominantly remote areas. There would be beneficial, direct and indirect, local, short-term, negligible cumulative impacts from increased job opportunities and adverse, direct, local, short-term, minor cumulative effects from increased health and safety risks to communities with EJ concerns during the construction phases. In the long-term, increased roadway quality associated with these projects could potentially i0 In the short term, Alternative 1 would contribute adverse and beneficial, direct and indirect, local, negligible cumulative effects from the creation of construction jobs; as well as adverse, direct, local, minor cumulative effects due to health risks associated with construction activities and camps to nearby communities with EJ concerns. In the long-term, Alternative 1 and the No Action Alternative would contribute adverse, direct, local, moderate cumulative effects to EJ communities due to restrictions to traditional fishing areas.
Socioeconomics	The projects discussed in Section 4.1.2 are associated with construction activities, and expenditures and would have beneficial, direct, local, short-term minor cumulative effects for the duration of the construction phases. Given their scale, the actions likely would not measurably affect per PCPI, stimulate consumer demand, or influence hiring trends within the ROI. Any beneficial cumulative socioeconomic effects resulting from these projects would not persist beyond the duration of the construction phases. In the long-term, these projects could negligibly benefit trade through increased efficiency of trucking operations along the Alaska Highway. Alternative 1 would contribute beneficial, direct and indirect, local, short-term, minor cumulative effects to socioeconomic resources in the ROI as capital expenditures on materials from local suppliers would likely result in small increases in PCPI and employment. The No Action Alternative would not contribute any cumulative effects.

Resources	Cumulative Effects
Recreation	The construction projects discussed in Section 4.1.2 would have adverse cumulative effects to recreational quality and access in the short-term but would improve recreational access in the long-term. Construction-related noise, visual presence of workers and heavy equipment, and emissions associated with these projects would result in minor degradation of the quality of nearby recreational resources. These cumulative effects would be adverse, direct, regional, short-term, and minor for the duration of the construction period. Pilot car use during roadway construction would also contribute to traffic delays and deter visitors from accessing recreational resources along construction routes. These short-term, moderate cumulative effects would be limited to the duration of the construction period but would be regional in extent as effects would extend to recreational areas accessed beyond the vicinity of construction sites. In the long-term, residents and visitors would have increased accessibility to recreational resources via rehabilitated stretches of highway; thus, there would be beneficial, direct, regional, long-term, and minor cumulative effects. Alternative 1 would contribute adverse, direct, local, short-term, negligible cumulative effects from construction-related activity due to construction related noise, visual disturbance, and emissions which would cumulatively degrade recreational quality in the vicinity of projects for the duration of the construction period. Alternative 1 would also contribute beneficial cumulative effects from increased visitation access. The No Action Alternative would not contribute any cumulative effects.
Visual Resources	The projects discussed in Section 4.1.2 are associated with construction activities and feature visible construction vehicles and equipment, as well as offsite construction camps consisting of modular homes and RV trailers. Construction camps, vehicles, and equipment are not part of the characteristic undeveloped viewshed in this area and would detract from scenic natural views. However, these adverse effects would not persist beyond the duration of the construction period of each project, would not be visible outside their immediate vicinity, and would not result in any long-term effects to the viewshed. Therefore, cumulative effects associated with these projects would be adverse, direct, local, short-term, and minor. Alternative 1 would have adverse, direct, local, short-term, and minor cumulative effects on visual resources from the presence of construction camps, vehicles, and equipment. In the long-term, the modernized LPOE would alter the characteristic landscape to a minor degree through clearing of vegetation and the presence of modernized structures. Thus, Alternative 1 would contribute adverse, direct, local, long-term, and minor, cumulative effects. The No Action Alternative would contribute adverse, direct, local, long-term, and negligible cumulative effects with the continued existence of the current LPOE in the viewshed.

Resources	Cumulative Effects
Noise and Vibrations	The highway projects discussed in Section 4.1.2 are associated with construction activities and may contribute cumulative noise disturbance effects to noise receptors in and near the project areas. The resurfacing project is the nearest of the two projects at MP 1222, with the LPOE at MP 1221.8. So, there could be a relatively short period of time when there could be additive noise with the resurfacing project at MP 1222, if the resurfacing and LPOE projects occur simultaneously. Cumulative effects from these other projects would be adverse, direct, local, short-term, and minor. Alternative 1 would contribute adverse, direct, local, short-term, negligible cumulative effects from noise arising from construction supply trucks passing through the LPOE. Alternative 1 and the No Action Alternative would both contribute adverse, direct, local, long-term, negligible cumulative effects from noise during operation of the LPOE.
Solid and Hazardous Waste and Materials	All past, present, or reasonably foreseeable actions described in Section 4.1.2 would produce solid waste and hazardous materials and could have adverse cumulative effects. Pavement replacement requires fine milling of the roadway which produces non-hazardous solid asphalt waste. Solid asphalt removed from the roadways would likely be recycled onsite as a new roadway and would only require temporary storage (FHWA, 2020). Use of heavy equipment for roadwork activities such as crack sealing, base repair, fine surface milling, and asphalt compaction may contribute small leaks of vehicular fluid, but the effects of these leaks would be minimal. Thus, these projects would have adverse, direct, local, short-term, negligible cumulative effects. Alternative 1 would contribute adverse, direct, local, short-term, and negligible cumulative effects due to the release of diesel fuel, gasoline, paints, and solvents (hazardous materials) and worker exposure to ACMs and Lead-containing surfaces during construction. Alternative 1 and the No Action Alternative would contribute adverse, direct, local, long-term, and negligible cumulative effects during operations due to the generation of wastes.
Climate Change	The projects discussed in Section 4.1.2 are associated with construction activities and would have adverse cumulative effects on climate change. Increased air emissions of criteria pollutants, GHGs, and fugitive dust emissions generated by these activities would not persist beyond the duration of the construction phases, although they would contribute to the overall emissions profile of the region. Therefore, these projects would have adverse, direct, regional, short-term, and negligible cumulative effects on climate change. Alternative 1 would contribute adverse, direct, regional, short-term, and negligible cumulative effects on climate change from emissions of criteria pollutants, GHGs, and fugitive dust during the construction/demolition phase. In the long-term, Alternative 1 would contribute beneficial, direct, regional, and negligible cumulative effects due to enhanced energy efficiency of structures. The No Action Alternative would contribute adverse, direct, regional, long-term, and negligible cumulative effects on climate change from increases in average queue times for vehicles and increased vehicle emissions at the LPOE.

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Table 5.0-1. List of Preparers

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APPENDIX A: ALCAN LAND PORT OF ENTRY ENVIRONMENTAL IMPACT STATEMENT PUBLIC SCOPING REPORT

Alcan Land Port of Entry Environmental Impact Statement Public Scoping Report

Prepared for:
Region 10, U.S. General Services Administration

Contract Number: 47QRAA18D00DH
Order Number: 47PA0323F0008

solv™

Submitted by:

8201 Greensboro Dr., Suite 700
McLean, VA 22102

June 28, 2023

CONTENTS

TABLES:

FIGURES:

ACRONYMS AND ABBREVIATIONS

AK	Alaska
AKDT	Alaska Daylight Time
AH	Alaska Highway
CA	Canada
CBP	Customs and Border Protection
CBSA	Canada Border Services Agency
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CWA	Clean Water Act
DEIS	Draft Environmental Impact Statement
DOT	Department of Transportation
EIS	Environmental Impact Statement
EJ	Environmental Justice
FR	Federal Register
GSA	General Services Administration
LPOE	Land Port of Entry
NEPA	National Environmental Policy Act
NGO	Non-Governmental Organization
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NWR	National Wildlife Refuge
TEK	Traditional Ecological Knowledge
U.S.	United States
USC	United States Code

1.0 INTRODUCTION

The United States (U.S.) General Services Administration (GSA) is preparing an Environmental Impact Statement (EIS) to analyze the potential impacts of the proposed expansion and modernization of the Alcan Land Port of Entry (LPOE) and Housing, as required by the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] 4321-4347), the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 Code of Federal Regulations [CFR] 1500-1508), and the GSA Public Buildings Service's NEPA Desk Guide.

GSA conducted public scoping and held a scoping meeting as part of the NEPA process associated with developing the EIS. This report describes the project (i.e., background, project location, and facilities, proposed action, and alternatives) and public scoping meeting, provides scoping materials used, and summarizes the public comments received during the public scoping period held from April 7, 2023 to May 15, 2023. This document also includes the following seven appendices:

- Appendix A: Notice of Intent
- Appendix B: Newspaper Affidavits and Tear Sheets
- Appendix C: Press Release
- Appendix D: Interested Parties Letters and List of Stakeholders
- Appendix E: Public Meeting Handouts and Registration
- Appendix F: Submitted Public Comments
- Appendix G: Index of Comments

2.0 PROJECT DESCRIPTION

The Alcan LPOE and Housing is located at Milepost 1221.8 on the Alaska Highway (AH), approximately 0.43 miles from the U.S./Canada (CA) border. The Alcan LPOE and Housing are located in a remote location and subject to long periods of extreme cold, heavy snow, severe wind, and operation in total darkness due to their high latitude. This facility is the only 24-hour LPOE serving personal vehicles and commercial traffic between the Yukon Territory, CA, and mainland Alaska (AK). The proposed facility would provide improved employee housing and increased security standards to replace the original LPOE and Housing, which were constructed in 1972 with limited additions and no renovations over the past 50 years. Figure 2-1 depicts the regional location of the existing Alcan LPOE.

Source: Hennebery Eddy Architects, 2019.

Figure 2-1. Regional Location of the Alcan LPOE and Housing

2.1 PROJECT LOCATION

The Alcan LPOE is located in a remote area of eastern AK at Milepost 1221.8 on the AH. The LPOE is bounded by the U.S.-CA border to its east; the Tetlin National Wildlife Refuge (NWR) to its south and west; and undeveloped state lands to its north. The LPOE is predominantly surrounded by woodlands and some wetlands.

The modernized LPOE could also be relocated to a 40-acre location consisting of state and private land approximately 4 miles northwest of the current Alcan LPOE along the AH at Milepost 1226. The private property portion of the considered site location consists of a small area of development, including residences and out-structures. The state property portion of the considered site location consists primarily of undeveloped forest as well as one gravel access road. The considered site location is bounded by the AH to the south and undeveloped state lands to the north, east, and west.

The U.S. Customs and Border Protection housing units at the 'Border City' are approximately 3.5 miles northwest from the LPOE on the AH. See Figure 2-2 below for a map of the project area and vicinity.

Source: Hennebery Eddy Architects, 2019.

Figure 2-2. Alcan LPOE and Housing Vicinity

2.2 EXISTING FACILITIES

The existing Alcan LPOE includes port facilities, employee housing and support features, and necessary infrastructure. The existing facilities of the LPOE have only received minor additions and improvements since their original construction in 1972. See Figure 2-3 below for an aerial image of the existing Alcan LPOE.

Source: Hennebery Eddy Architects, 2019.

Figure 2-3. Existing Alcan LPOE

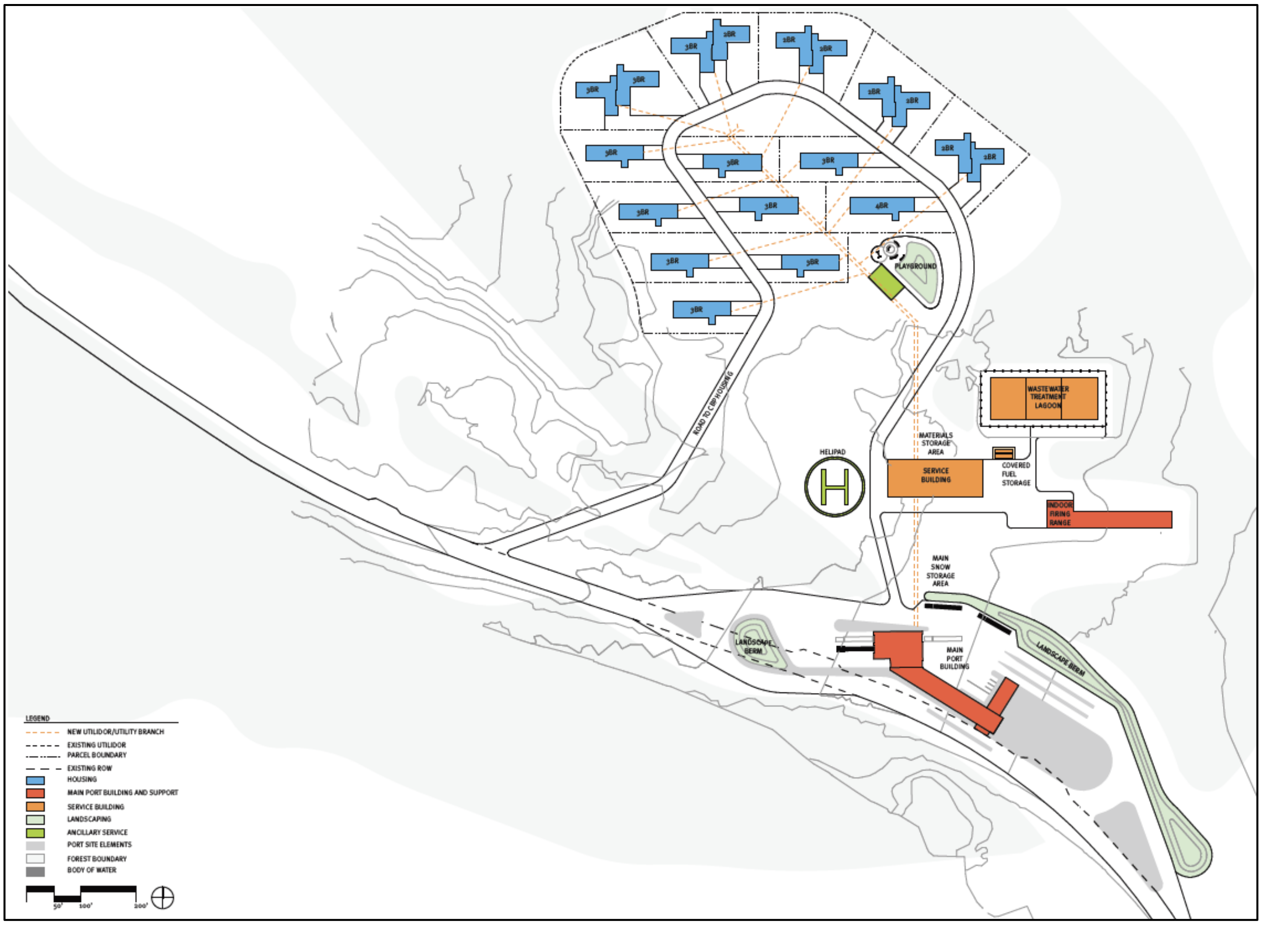
2.3 PROPOSED ALTERNATIVES

The Draft EIS (DEIS) will consider two action alternatives and one no action alternative. The first action alternative, Alternative 1, would expand and modernize the current LPOE at the current site. GSA would acquire additional land from the Tetlin NWR in order to proceed with construction, renovation, and demolition activities. See Figure 2-4 below for the proposed layout of the expanded and modernized LPOE under Alternative 1.

Source: Hennebery Eddy Architects, 2019.

Figure 2-4. Proposed Alternative 1 for Alcan LPOE and Housing Project Site

The second action alternative, Alternative 2, would acquire 10 acres of private land and 30 acres of state land in order to construct an expanded port at a new site located approximately four miles northwest of the existing port. This location would require a small reroute of the AH through the proposed site location. The proposed project site has historically been used as a vehicle staging area and temporary fill material storage area, but currently serves as a residence with associated outbuilding. Under this alternative, the existing LPOE would eventually be demolished after the new port becomes functional. See Figure 2-5 below for the proposed layout of the new expanded and modernized LPOE under Alternative 2.



Source: Hennebery Eddy Architects, 2019.

Figure 2-5. Proposed Alternative 2 for Alcan LPOE and Housing Project Site

The no action alternative assumes that demolition of existing facilities, construction of new facilities, and expansion of LPOE operations would not occur. The LPOE would continue to operate under current conditions.

3.0 NOTICE OF INTENT FOR THE DEVELOPMENT OF AN EIS AND TO CONDUCT PUBLIC SCOPING

Notification of the Alcan LPOE scoping meeting was accomplished using multiple channels of communication, including ads in local newspapers, letters to interested parties, and social media posts. This section summarizes the outreach conducted to inform the public of the upcoming public meeting and solicit comments on the Proposed Action.

3.1 NOTIFICATION OF SCOPING MEETING

GSA developed a Notice of Intent (NOI) to formally announce to the public and other interested parties of GSA's intent to prepare an EIS for the expansion and modernization of the Alcan LPOE, and conduct a scoping meeting to invite participation from the public. The NOI was published in the Federal Register (FR) on April 7, 2023. The public scoping period was held from April 7, 2023 to May 15, 2023. The final NOI is included in Appendix A.

3.2 NEWSPAPERS ADVERTISEMENTS

Five advertisements were printed in local newspapers in the weeks preceding the public scoping meeting. The advertisements indicated GSA's intent to prepare an EIS and conduct a public meeting; provided a brief description of the project; listed the project website URL; identified the public scoping meeting time and location; and included instructions for submitting comments.

The advertisement was published in the *Delta Wind* on April 20, 2023, the *Fairbanks Daily News-Miner* on April 19 and 25, 2023, and the *Anchorage Daily News* on April 20 and 25, 2023. Other local newspapers were contacted, including the *Alaska Native News*, the *Mukluk News*, and *Interior Alaska News*, but either did not respond or could not publish the advertisement prior to the public meeting. Tear sheets and an affidavit of the legal notices are included in Appendix B.

3.3 SOCIAL MEDIA

GSA posted a press release on April 12, 2023 on the GSA Northwest Arctic Region 10 website that briefly summarized the purpose of the meeting, detailed the time and date, and provided a link to the virtual meeting. A screenshot of the press release can be found in Appendix C.

3.4 INTERESTED PARTIES LETTER

A scoping letter dated April 18, 2023, was emailed or mailed to all parties on the distribution list which included state and local officials; federal, state, and local government agencies, non-governmental organizations (NGOs); and individuals with a known or potential interest in the proposed action. The letter provided background information on the project, a brief description of the alternatives, the date and time of the public scoping meeting, and instructions on how to submit comments. Copies of the letter and emails sent to interested parties are included in Appendix D. Appendix D also includes a list of stakeholders identified for the Alcan LPOE Modernization Project, including the meeting attendees that indicated continued interest in the project.

4.0 PUBLIC SCOPING MEETING

The purpose of the public scoping meeting is to provide the public with information regarding the proposed project, answer questions, identify concerns regarding the potential environmental impacts that may result from the implementation of the proposed project, and solicit comments to help guide the selection of action alternatives and resource areas to be analyzed in the EIS.

4.1 MEETING DETAILS AND LOCATION

The public meeting was held on Wednesday, April 26, 2023, from 5:00 to 7:00 PM Alaska Daylight Time (AKDT) on the Zoom online meeting platform. A total of 19 individuals registered and participated in the virtual public meeting. Of these 19 attendees, 13 people were affiliated with the project, two people represented other U.S.- and AK- government agencies, and four people were members of the general public.

A video meeting format in Zoom was used to encourage discussion and information sharing and to ensure that the public had opportunities to speak with representatives of GSA. This format consisted of an approximately 45-minute presentation and an open house session that facilitated discussion between GSA and the public. The presentation provided background on the project and an explanation of the NEPA process. The presentation was recorded and posted to the "GSA (General Services Administration)" YouTube channel. After the presentation, attendees were provided with the opportunity to ask questions and provide comments on the project.

An informational handout was shared in the chat box during the virtual meeting that contained details about the project background, NEPA process, project alternatives, and how to submit comments. Additionally, a mailable comment form was shared for attendees who wished to provide written comments. Attendees also had the opportunity to sign up for additional project updates. The handout, comment form, and virtual registration form are included in Appendix E.

5.0 PUBLIC SCOPING COMMENTS

GSA invited scoping comments on the Alcan LPOE EIS to obtain input from the public, agencies, and other interested parties on the proposed project. All comments received are provided in Appendix F.

5.1 COLLECTING COMMENTS

Comments were submitted to GSA verbally at the public scoping meeting and through emails and letters during the public scoping comment period. No comments were received via the online comment form distributed during the public meeting or traditional mail.

5.2 SUMMARY OF COMMENTS

Comments were indexed based on the source or commenter. Commenters included federal, state, or local agencies (A) and members of the public (P). Each comment was cataloged with a code based on the source of the comment and the order in which it was received (e.g., P3 was the third comment received by a member of the public). A total of 11 commenters provided 34 comments during the scoping period. Appendix G includes an index of commenters by type (i.e., agency, public) and date.

5.3 ISSUES IDENTIFIED DURING SCOPING

Each concern or question associated with a commenter was categorized by subject. Table 5-1 shows the comments categorized by subject and the number of comments received.

Table 5-1. Commenters and Comments by Subject

Subject	Number of Agency Commenters (A)[a]	Number of Public Commenters (P)[b]	Number of Comments
Air Quality	1	0	2
Biological Resources	1	0	2
Climate Change	1	0	1
Cumulative Impacts	1	0	1
Environmental Justice	1	0	1
Light Pollution	0	1	1
Meaningful Public Engagement	2	0	4
Outside the Scope of the EIS	0	2	3
Permits	1	0	2
Recreational and Subsistence Resources	1	0	4
Requests for Information	4	2	11
Water Resources	1	0	2

Subject	Number of Agency Commenters (A)[a]	Number of Public Commenters (P)[b]	Number of Comments
Total	6	5	34

[a]Agency (A) commenters include those from federal, state and local agencies. Individuals provided comments in multiple subjects.

[b]Public (P) commenters include individual members of the public.

5.4 SUMMARY OF COMMENTS BY SUBJECT

This section summarizes the comments that were received during the public scoping period. The comments were organized into 12 subject categories as shown in Table 5-1 above.

5.4.1 Air Quality

One commenter submitted two comments regarding air quality. The first comment requested that the DEIS include analysis of the potential impacts of project construction, maintenance, and operations on emissions of air pollutants and air toxics, including diesel particulate matter emissions and fugitive dust emissions. Additionally, this comment requested analysis of the direct, indirect, and cumulative impacts of this project on air pollution emissions compared to background air pollution concentrations and state/federal air quality standards. The second comment requested a discussion about the potential air quality impact on sensitive populations along with strategies for mitigation.

5.4.2 Biological Resources

One commenter submitted two comments on biological resources. The first comment discussed the project's impact on permafrost and vegetation, specifically in identifying baseline information, the impact of surface disturbances, potential options for mitigation, the risk of invasive species introduction, and post-project restoration options. The second comment requested the DEIS evaluate the potential impacts to endangered, threatened, and candidate species and their habitat, and describe how the proposed project will meet all requirements under Endangered Species Act, including consultation with the U.S. Fish and Wildlife Service.

5.4.3 Climate Change

One commenter submitted one comment regarding climate change. The comment requested that the DEIS consider potential climate impacts, mitigation, and adaptation issues.

5.4.4 Cumulative Impacts

One commenter submitted one comment regarding cumulative impacts. The comment requested that the DEIS include an assessment of the resources impacted, the geographic area and time over which the project would have an impact, and the past, current, and reasonably foreseeable future actions impacting the resources of concern. Additionally, the commenter requested that the DEIS include baseline environmental conditions and scientifically defensible threshold levels.

5.4.5 Environmental Justice

One commenter submitted one comment regarding Environmental Justice (EJ). The comment requested that the DEIS: apply methods from the "Environmental Justice Interagency Working Group Promising Practices for EJ Methodologies in NEPA Reviews" report to this project, characterize the project with information or data related to EJ concerns, describe potential EJ concerns for all EJ Indexes at or above the 80th percentile in the state and/or nation, screen for and describe all individual block groups within or intersecting a one-mile radius of the project, describe individual block groups within the project area in addition to an area-wide assessment, and acquire additional data from county-level reports and local knowledge to supplement EJScreen when identifying EJ concerns.

5.4.6 Light Pollution

One commenter submitted one comment regarding light pollution. The comment discussed the importance of the natural darkness of the area, given the proximity of the LPOE to Wrangell-St. Elias National Park, which is the largest wilderness area in the National Wilderness Preservation System. The commenter suggested adherence to sustainable lighting principles that would minimize the impact of light pollution from the updated facility.

5.4.7 Meaningful Public Engagement

Two commenters submitted four comments regarding meaningful public engagement. The first comment recommended reviewing and considering community feedback, ensuring engagement is sensitive and responsive to the impacted community, making sure community feedback is reflected in decision-making, designing robust participation opportunities, providing early and frequent outreach and engagement opportunities, and addressing accessibility to engagement through translation/interpretation services, removing technological barriers, providing plain language presentations, and announcing and scheduling meetings with consideration for community working hours. The second comment emphasized the importance of consultation with local Tribes and incorporating feedback specifically within the DEIS. The third comment recommended the DEIS include the identification, inclusion, and integration of Traditional Ecological Knowledge (TEK) into the NEPA analysis. The fourth comment asked if the Upper Tanana villages had been notified of the public meeting.

5.4.8 Outside the Scope of the EIS

Two commenters submitted three comments that were outside the scope of this EIS. One commenter suggested that the project add public amenities to the border station, including ample restrooms for the public before entering customs. The commenter also recommended that the project add cellphone service coverage to the port. These public amenities are beyond the scope of this project. Another commenter questioned if GSA had considered relocating the airfield for processing planes that cross the border, which is currently located in Northway. This commenter suggested moving the border station and airfield closer to Tok. This suggested action is outside the scope of this project. GSA informed the commenter that, other than the off-site option 4 miles farther away from the border, there were no plans to move the port closer to Tok. GSA also directed the commenter to Customs and Border Protections (CBP)'s field operations office in Portland for more questions about the airport operations at Northway.

5.4.9 Permits

One commenter submitted two comments regarding permits. The comment requested identifying the National Pollutant Discharge Elimination System (NPDES) permits for the construction phase, new (or modifications to) existing permits for operations, and how any previous permit exceedances could be prevented by incorporating pollution prevention measures into the project. The commenter also requested that the DEIS identify any permits that may be required that would need coordination with USACE or the state of AK. This includes permits that would are provided based on Section 303, 401, and/or 404 of the Clean Water Act (CWA).

5.4.10 Recreational and Subsistence Resources

One commenter submitted four comments on recreational and subsistence resources; all comments are related to public access to the Tetlin NWR for recreation and subsistence hunting.

The first comment discusses the impact of proposed Alternative 1 on access to the Airs Hill Trail and public parking area. The comment states that under Alternative 1, the updated facility would restrict access to the current trailhead and parking area and restrict access to the Airs Hill Trail, the longest trail in the Tetlin NWR, which currently has a planned extension to a public-use historic cabin. The second, third, and fourth comments are all regarding access considerations for the Tetlin NWR if the LPOE is relocated to the Alternative 2 location. The comments discuss logistical impediments to visitors carrying firearms (for hunting or bear protection) and the impact on boat access to Desper and Scottie Creeks and a stabilized and restored public-use historic cabin.

5.4.11 Requests for Information

Six commenters provided 11 requests for additional information regarding various aspects of the Project. The topics covered and corresponding GSA responses are summarized in the list below:

1. One commenter requested additional information on the proposed project and alternatives, including a project map or tentative development plan.
    i. GSA provided the commenter with aerial map images of the proposed project areas and encouraged the commenter to attend the public meeting, which would provide more details on the project alternatives.
2. One commenter requested GIS coordinates for the Alcan LPOE to determine if there were any contaminated sites associated with the facility.
    i. GSA provided the GIS coordinates of the Alcan LPOE to the commenter.
3. One commenter requested a copy of the letter that describes the project and provides instructions for submitting comments.
    i. GSA sent a copy of the interested parties letter to the commenter and added them to the list of stakeholders for the project.
4. One commenter requested further information about the modernized LPOE beyond what was available on the project website.
    i. GSA described the alternatives under consideration and directed the commenter to CBP’s field operations office in Portland for any questions regarding airport operations at Northway.
5. During the public scoping meeting, one commenter asked if the off-site alternative would result in extension of the project timeline.
    i. GSA provided preliminary estimates for the development timelines of the two alternatives. The on-site location would have an estimated completion date of approximately 2030, and the off-site location would have an estimated completion date of approximately 2028. These dates are subject to change as the project develops.
6. During the public scoping meeting, one commenter asked why a second site was under consideration for the expanded and modernized LPOE.
    i. GSA explained that the feasibility study analyzed the benefits and drawbacks of multiple potential options. The off-site location would help ensure the continuity of port operations and would result in an easier phasing process for the construction of the expanded port because the existing port could continue to be used throughout the construction period.

7. The same commenter also asked how co-locating operations with the Canada Border Service Agency (CBSA) would impact the project.
   i. GSA explained that the discussions between the U.S. and CA are still preliminary and there are still issues that need to be resolved. However, GSA noted that a joint operation would not result in substantial impacts to the design and size of the facility itself.
8. The same commenter asked if a joint project would require a joint presidential permit from the Department of State.
   i. GSA does not have a definitive answer at this time, but does not believe a joint presidential permit would be necessary given that the Alcan LPOE would be located solely on U.S. land under both alternatives. GSA also noted that there are precedents for joint CBSA and CBP activities which would help inform the development of joint operation of the facility, such as CBP officers that work in CA at the Vancouver Airport in British Columbia for preclearance of travelers.
9. The same commenter also asked if the project would require collaboration with the Federal Highways Administration or the AK Department of Transportation (DOT) to update the highway.
   i. GSA explained that under Alternative 1 alterations to the routing of the existing highway would be very minimal and be contained to the footprint of the facility itself and that any highway modifications necessary under Alternative 2 would remain within the existing AH right-of-way. However, GSA also noted that the feasibility study only contains preliminary design decisions.
10. This commenter asked if there would be any other agencies involved with the project, such as a cooperating agency.
    i. GSA stated that there would be more information available in the Draft EIS. GSA is open to input from federal and state agencies.
11. This commenter asked if there was an estimated date for the publication of the Draft EIS.
    i. The Draft EIS is currently scheduled for publication in May, 2024.

5.4.12 Water Resources

One commenter submitted two comments regarding consideration of impacts to water resources. The commenter recommends the DEIS identify any discharges to waters of the United States that are known or are likely, to occur during the construction and operation of the project and how these discharges would be managed and minimized. The commenter also requested that the DEIS include a complete analysis of water resources that ensures that the project is consistent with the requirements of the CWA, and describe mitigation measures if necessary.

6.0 LIST OF REFERENCES

(Hennebery Eddy Architects, 2019). Hennebery Eddy Architects. 2019. Feasibility Study Report – Alcan LPOE and Housing Replacement. U.S. Department of Homeland Security, U.S. Customs and Border Protection.

APPENDIX A: NOTICE OF INTENT

- Community Development Financial Institution (CDFI)
- Educational Institution
- Foundation
- Service Provider
- Think Tank/Policy Organization
- Other
  - Government
- Primary Area of Expertise (select one) *
  - Civil rights
  - Community development finance
  - Community reinvestment and stabilization
  - Consumer protection
  - Economic and small business development
  - Labor and workforce development
  - Financial technology
  - Household wealth building and financial stability
  - Housing and mortgage finance
  - Rural issues
  - Other (please specify)
- Secondary Area of Expertise (select one)
  - Civil rights
  - Community development finance
  - Community reinvestment and stabilization
  - Consumer protection
  - Economic and small business development
  - Labor and workforce development
  - Financial technology
  - Household wealth building and financial stability
  - Housing and mortgage finance
  - Rural issues
  - Other (please specify)
- Resume *
  - The resume should include information about past and present positions you have held, dates of service for each, and a description of responsibilities.
- Cover Letter *
  - The cover letter should explain why you are interested in serving on the CAC as well as what you believe are your primary qualifications.
- Additional Information
  - At your option, you may also provide additional information about your qualifications.

Qualifications

The Board is interested in candidates with knowledge of fields such as affordable housing, community and economic development, employment and labor, financial services and technology, small business, and asset and wealth building, with a particular focus on the concerns of low- and moderate-income consumers and communities. Candidates do not have to be experts on all topics related to consumer financial services or community development, but they should possess some basic knowledge of these areas and related issues. In appointing members to the CAC, the Board will consider a number of factors, including diversity in terms of subject matter expertise, geographic representation, and the representation of women and minority groups.

CAC members must be willing and able to make the necessary time commitment to participate in organizational conference calls and prepare for and attend meetings two times per year (usually for two days). The meetings will be held at the Board's offices in Washington, DC The Board will provide a nominal honorarium and will reimburse CAC members only for their actual travel expenses subject to Board policy.

By order of the Board of Governors of the Federal Reserve System, acting through the Director of the Division of Consumer and Community Affairs under delegated authority.

Ann E. Misback,

Secretary of the Board.

[FR Doc. 2023–06435 Filed 4–6–23; 8:45 am]

BILLING CODE 6210–01–P

GENERAL SERVICES ADMINISTRATION

[Notice-P–2023–01; Docket No. 2023–0002; Sequence No. 13]

Notice of Intent To Prepare an Environmental Impact Statement and Public Scoping Meeting and Request for Comments for the Expansion and Modernization of the Alcan Land Port of Entry in Alcan, Alaska

AGENCY: Office of Public Building Services (PBS); General Services Administration, (GSA).

ACTION: Notice.

SUMMARY: Pursuant to the requirements of the National Environmental Policy Act of 1969(NEPA)and the GSA/PBS NEPA Desk Guide, GSA intends to prepare an Environmental Impact Statement (EIS) to analyze the potential impacts from the proposed modernization and expansion of the existing Alcan Land Port of Entry (LPOE)located in Alcan, Alaska. GSA has initiated the required section 106 consultation of the National Historic Preservation Act (NHPA) involving outreach efforts with the Alaska State Historic Preservation Office (SHPO) and Alaska Native Villages.

DATES: A virtual public scoping meeting in open house format will be held on Wednesday, April 26, 2023, from 5:00 p.m. to 7:00 p.m., Alaska Daylight Time (AKDT). Interested parties should submit comments by Monday, May 15, 2023, to be considered in the formation of the Draft EIS. The views and comments of the public are necessary to help determine the scope and content of the environmental analysis. The meeting will be on the Zoom platform where GSA will present and distribute project information and obtain public input on the project.

All mail in comments must be postmarked by May 15, 2023.

Deadlines for Requests of Special Accommodations: Persons needing special accommodations shall notify Emily Grimes at *AlcanLPOE@gsa.gov* by 2:30 p.m. AKDT, on Wednesday, April 19, 2023.

ADDRESSES: The public is encouraged to provide written comments regarding the scope of the EIS at the meeting and throughout the comment period.

Submit comments identified by Notice P–2023–01 by either of the following methods:

- *Email: AlcanLPOE@gsa.gov.* Include Notice Identifier in the subject line of the message.
- *Virtual Meeting:* Comment forms will be distributed during the virtual open-house public meeting, which can also be submitted during the meeting. The link for the public scoping meeting will be made available on the GSA project website: *https://www.gsa.gov/about-us/regions/welcome-to-the-northwest-arctic-region-10/buildings-and-facilities/alaska/alcan-land-port-of-entry.*
- *Mail:* U.S. General Services Administration, Attention: Emily Grimes, Environmental Program Manager, 1301 A Street, Suite 610, Tacoma, WA 98402
- ***Federal Register:*** Submit comments in response to Notice–P–2023–01 via *http://www.regulations.gov.* Submit comments via the Federal eRulemaking portal by searching for "Notice–P–2023–01". Select the link "Comment" that corresponds with "Notice–P–2023–01." Follow the instructions provided at the screen. Please include your name, company name (if any), and "Notice–P–2023–01" on your attached document. Comments received generally will be posted without change to *http://www.regulations.gov,* including any personal and/or business confidential information provided. To confirm receipt of your comment(s), please check *http://www.regulations.gov,* approximately two-to-three days after submission to verify posting.

FOR FURTHER INFORMATION CONTACT: Emily Grimes, Environmental Program

Manager, Facilities Management Division, GSA, Phone (253) 394–4026. Email *AlcanLPOE@gsa.gov.*

SUPPLEMENTARY INFORMATION: The Alcan LPOE is located in a remote area of eastern Alaska on the Alaska Highway and is subject to sub-arctic weather conditions. It is the only year-round land crossing between the Alaskan mainland and Canada. The current Alcan LPOE and its associated housing have only received minor additions and improvements since the original construction in 1972 and does not meet current operational needs. This modernization project is needed to meet the U.S. Customs and Border Protection's (CBP) current Program of Requirements for the port, provide optimal operational flow, address deficiencies, improve customer service to travelers, and provide a comfortable working and living environment for CBP personnel and their families. GSA and CBP are currently exploring the possibility of operating the Alcan LPOE jointly with the Canada Border Services Agency (CBSA) and will update the considered alternatives when a decision is finalized.

Alternatives Under Consideration

The EIS will consider two ''action'' alternatives and one ''no action'' alternative. Alternative 1 would consist of land acquisition, construction, and demolition activities. This alternative would relocate the Alcan LPOE location to a proposed site area on the Alaska Highway that is approximately 4 miles to the northwest of the Alaska-Canada border. This alternative would include the acquisition of the proposed site area and demolition of onsite defunct structures, including a gas station, duty-free shop, and small outbuildings. New LPOE facilities and structures would then be constructed on the acquired site, including a main port building with enclosed inspection lanes and a commercial inspection dock, a service building, a firing range, employee housing, and recreation amenities. Upon completion of the new LPOE, the existing LPOE would be decommissioned.

Alternative 2 consists of demolition, renovation, and expansion activities at the existing Alcan LPOE. These activities would include the demolition of existing housing units, construction of a new port building and housing, renovation or reuse of existing main port and support buildings, and the installation of new equipment, systems, and port support infrastructure. Expansion in this location would require the securement of additional easements from the Tetlin National Wildlife Refuge. Demolition, construction, and renovation activities would be sequenced to maintain current port operations for the entirety of the construction period.

Alternative 3 consists of the ''no action'' alternative, which assumes that GSA would not expand or modernize the LPOE and that port operations would continue under current conditions.

Anamarie Crawley,

Director, Facilities Management Division, GSA–PBS Northwest/Arctic Region (R10).

[FR Doc. 2023–07304 Filed 4–6–23; 8:45 am]

BILLING CODE 6820–DL–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[60-Day–23–0314; Docket No. CDC–2023–0024]

Proposed Data Collection Submitted for Public Comment and Recommendations

AGENCY: Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS).

ACTION: Notice with comment period.

SUMMARY: The Centers for Disease Control and Prevention (CDC), as part of its continuing effort to reduce public burden and maximize the utility of government information, invites the general public and other federal agencies the opportunity to comment on a continuing information collection, as required by the Paperwork Reduction Act of 1995. This notice invites comment on a proposed information collection project titled The National Survey of Family Growth (NSFG). This survey is designed to provide nationally representative, scientifically credible data on factors related to birth and pregnancy rates, family formation and dissolution patterns, and reproductive health.

DATES: CDC must receive written comments on or before June 6, 2023.

ADDRESSES: You may submit comments, identified by Docket No. CDC–2023–0024 by any of the following methods:

- *Federal eRulemaking Portal: www.regulations.gov.* Follow the instructions for submitting comments.
- *Mail:* Jeffrey M. Zirger, Information Collection Review Office, Centers for Disease Control and Prevention, 1600 Clifton Road NE, MS H21–8, Atlanta, Georgia 30329.

Instructions: All submissions received must include the agency name and Docket Number. CDC will post, without change, all relevant comments to *www.regulations.gov.*

Please note: Submit all comments through the Federal eRulemaking portal (*www.regulations.gov*) or by U.S. mail to the address listed above.

FOR FURTHER INFORMATION CONTACT: To request more information on the proposed project or to obtain a copy of the information collection plan and instruments, contact Jeffrey M. Zirger, Information Collection Review Office, Centers for Disease Control and Prevention, 1600 Clifton Road NE, MS H21–8, Atlanta, Georgia 30329; Telephone: 404–639–7570; Email: *ombcdc.gov.*

SUPPLEMENTARY INFORMATION: Under the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3501–3520), federal agencies must obtain approval from the Office of Management and Budget (OMB) for each collection of information they conduct or sponsor. In addition, the PRA also requires federal agencies to provide a 60-day notice in the **Federal Register** concerning each proposed collection of information, including each new proposed collection, each proposed extension of existing collection of information, and each reinstatement of previously approved information collection before submitting the collection to the OMB for approval. To comply with this requirement, we are publishing this notice of a proposed data collection as described below.

The OMB is particularly interested in comments that will help:

1. Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

2. Evaluate the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

3. Enhance the quality, utility, and clarity of the information to be collected;

4. Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.,* permitting electronic submissions of responses; and

5. Assess information collection costs.

APPENDIX B: NEWSPAPER AFFIDAVITS AND TEAR SHEETS

ANCHORAGE DAILY NEWS

AFFIDAVIT OF PUBLICATION

Account #: 105893
8201 Greensboro Drive, #700, McLean, VA 22102

Order #: W0037619 Cost: $632.2

STATE OF ALASKA
THIRD JUDICIAL DISTRICT

Lisi Misa being first duly sworn on oath deposes and says that she is a representative of the Anchorage Daily News, a daily newspaper. That said newspaper has been approved by the Third Judicial Court, Anchorage, Alaska, and it now and has been published in the English language continually as a daily newspaper in Anchorage, Alaska, and it is now and during all said time was printed in an office maintained at the aforesaid place of publication of said newspaper. That the annexed is a copy of an advertisement as it was published in regular issues (and not in supplemental form) of said newspaper on

04/20/2023, 04/25/2023

and that such newspaper was regularly distributed to its subscribers during all of said period. That the full amount of the fee charged for the foregoing publication is not in excess of the rate charged private individuals.

Signed Lisi Misa

Subscribed and sworn to before me
this 28th day of April 2023.

Jada L. Nowling

Notary Public in and for
The State of Alaska.
Third Division
Anchorage, Alaska

MY COMMISSION EXPIRES
2024-07-14

Jada L. Nowling
ELECTRONIC NOTARY PUBLIC
STATE OF ALASKA
MY COMMISSION EXPIRES 07/14/2024

Public Meeting for the Alcan Land Port of Entry Environmental Impact Statement

Pursuant to the requirements of the National Environmental Policy Act of 1969 (NEPA), The U.S. General Services Administration (GSA) intends to prepare an Environmental Impact Statement (EIS) to analyze the potential impacts from the proposed modernization and expansion of the Alcan Land Port of Entry (LPOE) facility in Alaska.

The Alcan LPOE is located in a remote area of eastern Alaska on the Alaska Highway and is subject to sub-arctic weather conditions. It is the only year-round land crossing between the Alaskan mainland and Canada. The current Alcan LPOE and its associated housing have only received minor improvements since their original construction in 1972 and do not meet current operational needs. This modernization project is needed in order to meet U.S. Customs and Border Patrol's (CBP) current Program of Requirements for the port, provide optimal operational flow, address deficiencies, improve customer service to travelers, and provide a comfortable working and living environment for CBP personnel and their families.

The EIS will consider two project alternatives which include acquiring land, demolishing existing facilities, and constructing new facilities. These alternatives will be compared against a third "no action" alternative wherein the current LPOE facility would continue to operate under existing conditions. CBP and GSA are currently exploring the possibility of operating the Alcan LPOE jointly with the Canada Border Services Agency (CBSA) and will update the considered alternatives when a decision is finalized.

The views and comments of the public are necessary to help determine the scope and content of the environmental analysis. The public is encouraged to attend the virtual public meeting on Wednesday April 26, 2023 from 5:00 to 7:00 PM Alaska Daylight Time (AKDT). The registration link for meeting attendance is available on the GSA project website: https://www.gsa.gov/about-us/regions/welcome-to-the-northwest-arctic-region-10/buildings-and-facilities/alaska/alcan-land-port-of-entry.

Interested parties should submit written comments postmarked on or before May 15, 2023 to be considered in the formation of the Draft EIS using one of the following methods:

* **Public Meeting**: Submit comments at the virtual public meeting via comment forms.

* **Email**: Send an email to AlcanLPOE@gsa.gov with "Alcan LPOE EIS" in the subject line

* **Mail**: Send written comments to the following address:
General Services Administration
Attention: Emily Grimes, Environmental Program Manager
1301 A Street, Suite 610, Tacoma, WA 98402

For further information, contact Emily Grimes, GSA NEPA Project Manager, at 253-394-4026 or AlcanLPOE@GSA.gov. For press inquiries only, please contact Christi Chidester Votisek, Public Affairs Officer at 253-931-7127 or christina.chidester@gsa.gov.

Pub: Apr. 20, 25/2023

TriDelta, Incorporated
PO Box 986
Delta Junction, AK 99737
Phone: (907) 460-8629
Email: michael@trideltanews.com

Delta Wind Seward Journal

Invoice

Customer: Solv, Llc

Solv, Llc
8201 Greensboro Dr
McLean, VA 22102

DATE	INVOICE #	DUE DATE	ACCOUNT MANAGER
4/20/2023	2023-40838	4/20/2023	Tim Holoday

Pub.	Issue	Position	Ad Title	Color	Card Rate	Surcharge & Discount Details	Net	Total Surcharges	Amount
Delta Wind Print Edition	04/20/2023	Classified	Public Meeting for the Alcan Land Port of Entry Environmental Impact Statement	Black & White	$166.00	Affidavit & Tear Sheet Charge: 30.00	$196.00	$30.00	$196.00
							$196.00	$30.00	$196.00
								Total	**$196.00**

Total:	**$196.00**

Customer Account payment posted on 4/20/2023	($196.00)
Total Due After Payments	**$0.00**

Thank you for your business.

Payment is due on the due date.
A $10.00 fee will be added to all invoices not paid by the due date.
A monthly finance charge will be added to all unpaid invoices.

AFFIDAVIT OF PUBLICATION

UNITED STATES OF AMERICA
STATE OF ALASKA
FOURTH JUDICIAL DISTRICT

Before me, the undersigned, a notary public, this day personally appeared, Michael Paschall who, being first duly sworn according to law, says that he represents TriDelta, Incorporated, publisher of Delta Wind, a newspaper of general circulation published in Delta Junction in said Fourth Judicial District and State of Alaska, and that the advertisement of which the annexed is a true copy, was published in said newspaper on the following day(s):

4/20/2023

and that the rate charged is not in excess of the rate charged private individuals, with the usual discounts.

Michael R. Paschall

Subscribed and sworn before me this 24TH **day of** April **, 2023.**

"Official Seal"
Notary Public
T.P. Holoday
State of Alaska
Commission #200310008 Expires 3/10/2024

Notary Public in and for the
State of Alaska
My commission expires: March 10, 2024

HELP WANTED

Airport Equipment Rentals Delta Junction is seeking a full-time shop helper. Qualifications: Operate 5k forklift, small engine knowledge, troubleshoot, must be able to dead lift 50+ pounds, familiar with a shop environment, must be able to work in outdoor environment, attention to detail, self-motivated, multi-tasker.
Must be 18 and have a valid driver's license, must be dependable, punctual and have strong work ethic.
Prepares and organizes their work, using data for check in and check out equipment, cleaning interior and exterior of equipment, ability to work under pressure and stressful situations while still maintaining cooperative working relationships with staff.
Must be willing to roll your sleeves up, get dirty, and get the job done. Climb in and out of obscure locations, and self-manage quality & time. Pay starts at $18 + depending on qualifications.
https://airportequipmentrentals.com/wp-content/uploads/2018/02/Job-Application.pdf
Email resume to: deltacounter@aer-inc.net or bring by the shop at MP 1421 Alaska Highway

GVEA Position Announcement Member Services Representative I-Satellite (Delta Junction)

Regular, non-exempt, Bargaining
Closing Date: May 2, 2023
GVEA offers a competitive benefit package that includes medical, dental and vision insurance, life insurance, disability benefits, a retirement plan, 401(k) plan and more.
Visit our web site at www.gvea.com for a complete job description and employment application. Employment applications must be submitted to the Human Resources office by the closing date. GVEA is located at 758 Illinois Street, Fairbanks, Alaska, 99701 or call us at 907-452-1151.
GVEA is a Drug Free/Equal Opportunity Employer.

HELP WANTED

TRAX INTERNATIONAL

TRAX Mission Test Support Services

is now hiring
In Delta Junction, Alaska

Seasonal Positions
CRTC - Material Expeditor

Please visit our website to apply for these positions:

www.traxintl.com

EOE - M/F/D/V

WANTED

Sutton Aircraft:
WANTED: Old aircraft parts inventories, non-airworthy aircraft, engines, misc. parts. In-state cash buyer. 907-745-6969 (landline).

PUBLIC NOTICE

Public Meeting for the Alcan Land Port of Entry Environmental Impact Statement

Pursuant to the requirements of the National Environmental Policy Act of 1969 (NEPA), The U.S. General Services Administration (GSA) intends to prepare an Environmental Impact Statement (EIS) to analyze the potential impacts from the proposed modernization and expansion of the Alcan Land Port of Entry (LPOE) facility in Alaska.
The Alcan LPOE is located in a remote area of eastern Alaska on the Alaska Highway and is subject to sub-arctic weather conditions. It is the only year-round land crossing between the Alaskan mainland and Canada. The current Alcan LPOE and its associated housing have only received minor improvements since their original construction in 1972 and do not meet current operational needs. This modernization project is needed in order to meet U.S. Customs and Border Patrol's (CBP) current Program of Requirements for the port, provide optimal operational flow, address deficiencies, improve customer service to travelers, and provide a comfortable working and living environment for CBP personnel and their families.
The EIS will consider two project alternatives which include acquiring land, demolishing existing facilities, and constructing new facilities. These alternatives will be compared against a third "no action" alternative wherein the current LPOE facility would continue to operate under existing conditions. CBP and GSA are currently exploring the possibility of operating the Alcan LPOE jointly with the Canada Border Services Agency (CBSA) and will update the considered alternatives when a decision is finalized.
The views and comments of the public are necessary to help determine the scope and content of the environmental analysis.
The public is encouraged to attend the virtual public meeting on Wednesday April 26, 2023 from 5:00 to 7:00 PM Alaska Daylight Time (AKDT). The registration link for meeting attendance is available on the GSA project website: https://www.gsa.gov/about-us/regions/welcome-to-the-northwest-arctic-region-10/buildings-and-facilities/alaska/alcan-land-port-of-entry.
Interested parties should submit written comments postmarked on or before May 15, 2023 to be considered in the formation of the Draft EIS using one of the following methods:
- Public Meeting: Submit comments at the virtual public meeting via comment forms.
- Email: Send an email to AlcanLPOE@gsa.gov with "Alcan LPOE EIS" in the subject line
- Mail: Send written comments to the following address:

General Services Administration
Attention: Emily Grimes, Environmental Program Manager
1301 A Street, Suite 610, Tacoma, WA 98402
For further information, contact Emily Grimes, GSA NEPA Project Manager, at 253-394-4026 or AlcanLPOE@GSA.gov.
For press inquiries only, please contact Christi Chidester Votisek, Public Affairs Officer at 253-931-7127 or christina.chidester@gsa.gov.

AFFIDAVIT OF PUBLICATION

UNITED STATES OF AMERICA
STATE OF ALASKA } SS.
FOURTH DISTRICT

Before me, the undersigned, a notary public, this day personally appeared Kaira Lum, who, being first duly sworn, according to law, says that he/she is an Advertising Clerk of the Fairbanks Daily News-Miner, a newspaper (i) published in newspaper format, (ii) distributed daily more than 50 weeks per year, (iii) with a total circulation of more than 500 and more than 10% of the population of the Fourth Judicial District, (iv) holding a second class mailing permit from the United States Postal Service, (v) not published primarily to distribute advertising, and (vi) not intended for a particular professional or occupational group. The advertisement which is attached is a true copy of the advertisement published in said paper on the following day(s):

04/19/2023

04/25/2023

and that the rate charged thereon is not excess of the rate charged private individuals, with the usual discounts.

Kaira Lum

Subscribed and sworn to before me on this 1st day of May, 2023

Jennifer M. Robinson
Notary Public in and for the State Alaska.

My commission expires 02-11-2026

STATE OF ALASKA
NOTARY PUBLIC
Jennifer M. Robinson
My Commission Expires February 11, 2026

00067291

Public Meeting for the Alcan Land Port of Entry Environmental Impact Statement

Pursuant to the requirements of the National Environmental Policy Act of 1969 (NEPA), The U.S. General Services Administration (GSA) intends to prepare an Environmental Impact Statement (EIS) to analyze the potential impacts from the proposed modernization and expansion of the Alcan Land Port of Entry (LPOE) facility in Alaska.

The Alcan LPOE is located in a remote area of eastern Alaska on the Alaska Highway and is subject to sub-arctic weather conditions. It is the only year-round land crossing between the Alaskan mainland and Canada. The current Alcan LPOE and its associated housing have only received minor improvements since their original construction in 1972 and do not meet current operational needs. This modernization project is needed in order to meet U.S. Customs and Border Patrol's (CBP) current Program of Requirements for the port, provide optimal operational flow, address deficiencies, improve customer service to travelers, and provide a comfortable working and living environment for CBP personnel and their families.

The EIS will consider two project alternatives which include acquiring land, demolishing existing facilities, and constructing new facilities. These alternatives will be compared against a third "no action" alternative wherein the current LPOE facility would continue to operate under existing conditions. CBP and GSA are currently exploring the possibility of operating the Alcan LPOE jointly with the Canada Border Services Agency (CBSA) and will update the considered alternatives when a decision is finalized.

The views and comments of the public are necessary to help determine the scope and content of the environmental analysis. The public is encouraged to attend the virtual public meeting on Wednesday April 26, 2023 from 5:00 to 7:00 PM Alaska Daylight Time (AKDT). The registration link for meeting attendance is available on the GSA project website: https://www.gsa.gov/about-us/regions/welcome-to-the-northwest-arctic-region-10/buildings-and-facilities/alaska/alcan-land-port-of-entry.

Interested parties should submit written comments postmarked on or before May 15, 2023 to be considered in the formation of the Draft EIS using one of the following methods:

Public Meeting: Submit comments at the virtual public meeting via comment forms.

Email: Send an email to AlcanLPOE@gsa.gov with "**Alcan LPOE EIS**" in the subject line

Mail: Send written comments to the following address:
General Services Administration
Attention: Emily Grimes, Environmental Program Manager
1301 A Street, Suite 610, Tacoma, WA 98402

For further information, contact Emily Grimes, GSA NEPA Project Manager, at 253-394-4026 or AlcanLPOE@GSA.gov.

For press inquiries only, please contact Christi Chidester Votisek, Public Affairs Officer at 253-931-7127 or christina.chidester@gsa.gov.

Publish: 4-19 & 4-25-2023

APPENDIX C: PRESS RELEASE

GSA to Host Public Meeting for the New Alcan Land Port of Entry

April 12, 2023

Public Scoping Meeting begins conversation with local community

TACOMA, Wash. — In compliance with the National Environmental Policy Act (NEPA), the U.S. General Services Administration will host a public meeting in support of an Environmental Impact Statement (EIS) for the expansion and modernization of the Alcan Land Port of Entry, located near Tok, Alaska. The public is invited to attend the virtual meeting on Wednesday, April 26, 2023, from 5:00pm – 7:00pm Alaska Daylight Time.

The meeting will be conducted in an open house format. GSA will offer the public an opportunity to hear about the project and learn how they can provide input on the issues that are important to the community. This input is a valuable step in the process and will be used by GSA to determine the scope and content of the EIS.

WHEN: Wednesday, April 26th from 5:00pm – 7:00pm AKDT

WHERE: Online meeting hosted via Zoom. Register here: http://ow.ly/xEwB50NEryt

WHO: General public

The Alcan LPOE is the only year-round, full service, 24-hour port of entry serving personal vehicles and commercial truck traffic between Yukon Territory, Canada, and Interior Alaska. It's situated in a remote location along the Alaska Highway. Established in 1972, the facility is now over 50 years old and in urgent need of replacement. The new facility, funded by the Bipartisan Infrastructure Law, will meet the U.S. Custom and Border Protection's (CBP) current mission requirements, improve customer service to travelers and provide a comfortable working and living environment for CBP personnel and their families.

GSA is currently exploring multiple possibilities for the new Alcan LPOE, including relocating the port to a new site approximately 4 miles to the northwest of the Alaska-Canada border. Additionally, GSA and CBP are considering a port operated in conjunction with the Canada Border Services Agency (CBSA).

The public is encouraged to provide written comments regarding the scope of the EIS at the meeting and throughout the comment period. **Comments referencing Notice #P–2023–01 will be accepted though Monday, May 15, 2023 via the following methods:**

- **Virtual Meeting:** Comment forms will be distributed & collected during the virtual public meeting. Register for the public scoping meeting at http://ow.ly/xEwB50NEryt .
- **Email:** Send your comments to AlcanLPOE@gsa.gov and include Notice #P–2023–01 in the subject line.
- **Mail:** Send written comments referencing Notice #P–2023–01 to the following address:
  U.S. General Services Administration
  Attention: Emily Grimes, Environmental Program Manager
  1301 A Street, Suite 610
  Tacoma, WA 98402

Project information, including a video recording of this public meeting, will be available at: gsa.gov/Alcan.

Contact

Christi Chidester Votisek
Public Affairs Officer

Northwest/Arctic Region

- Office: 253-931-7127
- Cell: 415-816-8512
- christina.chidester@gsa.gov

APPENDIX D: INTERESTED PARTIES LETTERS AND LIST OF STAKEHOLDERS

GSA, Northwest/Arctic Region

April 21, 2023

Dear Interested Reader,

Please be advised that the U.S. General Services Administration (GSA) will be preparing an Environmental Impact Statement (EIS) to analyze the potential environmental impacts from the proposed modernization and expansion of the existing Alcan Land Port of Entry (LPOE).

The Alcan LPOE is located in a remote area of eastern Alaska on the Alaska Highway and is subject to sub-arctic weather conditions. It is the only year-round land crossing between the Alaskan mainland and Canada. The current Alcan LPOE and its associated housing have only received minor improvements since their original construction in 1972 and do not meet current operational needs. This modernization project is needed in order to meet U.S. Custom and Border Patrol's (CBP) current Program of Requirements for the port, provide optimal operational flow, address deficiencies, improve customer service to travelers, and provide a comfortable working and living environment for CBP personnel and their families.

The EIS will consider two project alternatives which include acquiring land, demolishing existing facilities, and constructing new facilities. Alternative 1 would involve the construction of a modernized LPOE and all associated structures on 40 acres to be acquired by GSA approximately four miles northwest of the existing LPOE. Alternative 2 would involve construction and modernization of the LPOE in its current location. These alternatives will be compared against a third "no action" alternative wherein the current LPOE facility would continue to operate under existing conditions. CBP and GSA are currently exploring the possibility of operating the Alcan LPOE jointly with the Canada Border Services Agency (CBSA) and will update the considered alternatives when a decision is finalized.

The EIS will address potential environmental impacts of the proposed alternatives. Analyzed resource areas will include but are not limited to geology and soils, biological resources, water resources, cultural and tribal resources, socioeconomics, environmental justice and protection of children's health, utilities, traffic and transportation, air quality, climate change, noise, and visual resources.

The views and comments of the public are necessary to help determine the scope and content of the environmental analysis. The public is encouraged to attend the virtual public meeting on Wednesday April 26, 2023 from 5:00 to 7:00 PM Alaska Daylight Savings Time (AKDT). The registration link for meeting attendance is available on the GSA project website: https://www.gsa.gov/about-us/regions/welcome-to-the-northwest-arctic-region-10/buildings-and-facilities/alaska/alcan-land-port-of-entry.

Interested parties should submit written comments postmarked on or before May 15, 2023 to be considered in the formation of the Draft EIS using one of the following methods:

- **Scoping Meeting**: Submit comments at the virtual public meeting via comment forms.
- **Email**: Send an email to AlcanLPOE@gsa.gov with "**Alcan LPOE EIS**" in the subject line

- **Mail**: Send written comments to the following address:

  General Services Administration
  Attention: Emily Grimes, Environmental Program Manager
  1301 A Street, Suite 610, Tacoma, WA 9840

For further information, contact Emily Grimes, GSA NEPA Project Manager, at (253) 394-4026 or AlcanLPOE@gsa.gov. For press inquiries only, please contact Christi Chidester Votisek, Public Affairs Officer at (253) 931-7127 or christina.chidester@gsa.gov.

From:	Robbie Baldwin
To:	"dec.commissioner@alaska.gov"
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:05:00 PM
Attachments:	GSA Alcan LPOE EIS - Interested Parties Letter.pdf image001.png image002.png

Dear Mr. Brune,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From:	Robbie Baldwin
To:	"jason.olds@alaska.gov"
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:05:00 PM
Attachments:	GSA Alcan LPOE EIS - Interested Parties Letter.pdf image001.png image002.png

Dear Mr. Olds,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From: Robbie Baldwin
To: "jon.wendel@alaska.gov"
Subject: GSA Alcan LPOE EIS Preparation and Public Meeting
Date: Tuesday, April 18, 2023 5:03:00 PM
Attachments: GSA Alcan LPOE EIS - Interested Parties Letter.pdf
image001.png
image002.png

Dear Mr. Wendel,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From:	Robbie Baldwin
To:	"gene.mccabe@alaska.gov"
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:03:00 PM
Attachments:	GSA Alcan LPOE EIS - Interested Parties Letter.pdf image001.png image002.png

Dear Mr. McCabe,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From: Robbie Baldwin
To: "dnr.oha@alaska.gov"
Subject: GSA Alcan LPOE EIS Preparation and Public Meeting
Date: Tuesday, April 18, 2023 5:03:00 PM
Attachments: GSA Alcan LPOE EIS - Interested Parties Letter.pdf
image001.png
image002.png

Dear Ms. Bittner,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From:	Robbie Baldwin
To:	"joseph.kemp@alaska.gov"
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:03:00 PM
Attachments:	GSA Alcan LPOE EIS - Interested Parties Letter.pdf image001.png image002.png

Dear Mr. Kemp,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From:	Robbie Baldwin
To:	"dot.commissioner@alaska.gov"
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:02:00 PM
Attachments:	GSA Alcan LPOE EIS - Interested Parties Letter.pdf image001.png image002.png

Dear Mr. Anderson,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From:	Robbie Baldwin
To:	"ryan.vanderstar@cbsa-asfc.gc.ca"; Vanderstar, Ryan
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:02:00 PM
Attachments:	GSA Alcan LPOE EIS - Interested Parties Letter.pdf image001.png image002.png

Dear Mr. Vanderstar,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From:	Robbie Baldwin
To:	"info@tokalaskainfo.com"
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:01:00 PM
Attachments:	GSA Alcan LPOE EIS - Interested Parties Letter.pdf image001.png image002.png

Dear Tok Chamber of Commerce,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From:	Robbie Baldwin
To:	"info@ruralcap.org"
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:01:00 PM
Attachments:	GSA Alcan LPOE EIS - Interested Parties Letter.pdf image001.png image002.png

Dear Mr. Williams,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From:	Robbie Baldwin
To:	"edward.v.wahmann@cbp.dhs.gov"
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:11:00 PM
Attachments:	GSA Alcan LPOE EIS - Interested Parties Letter.pdf image001.png image002.png

Dear Mr. Wahmann,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From: Robbie Baldwin
To: [redacted]
Subject: GSA Alcan LPOE EIS Preparation and Public Meeting
Date: Tuesday, April 18, 2023 5:01:00 PM
Attachments: GSA Alcan LPOE EIS - Interested Parties Letter.pdf
image001.png
image002.png

Dear Mr. Bruton,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From:	Robbie Baldwin
To:	"lance.e.robinson@cbp.dhs.gov"
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:11:00 PM
Attachments:	GSA Alcan LPOE EIS - Interested Parties Letter.pdf image001.png image002.png

Dear Mr. Robinson,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From: Robbie Baldwin
To: "diana_biesanz@fws.gov"
Subject: GSA Alcan LPOE EIS Preparation and Public Meeting
Date: Tuesday, April 18, 2023 5:08:00 PM
Attachments: GSA Alcan LPOE EIS - Interested Parties Letter.pdf
image001.png
image002.png

Dear Ms. Biesanz,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From:	Robbie Baldwin
To:	"Bayless, Shawn"
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:07:00 PM
Attachments:	GSA Alcan LPOE EIS - Interested Parties Letter.pdf image001.png image002.png

Dear Mr. Bayless,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From:	Robbie Baldwin
To:	"lesley.dewilde@bia.gov"
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:07:00 PM
Attachments:	GSA Alcan LPOE EIS - Interested Parties Letter.pdf image001.png image002.png

Dear Ms. DeWilde,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From: Robbie Baldwin
To: "melissa.head@alaska.gov"
Subject: GSA Alcan LPOE EIS Preparation and Public Meeting
Date: Tuesday, April 18, 2023 5:06:00 PM
Attachments: GSA Alcan LPOE EIS - Interested Parties Letter.pdf
image001.png
image002.png

Dear Ms. Head,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv
Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From:	Robbie Baldwin
To:	"pirzadeh.michelle@epa.gov"
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:06:00 PM
Attachments:	GSA Alcan LPOE EIS - Interested Parties Letter.pdf image001.png image002.png

Dear Ms. Pirzadeh,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From:	Robbie Baldwin
To:	"harvey.templeton@alaska.gov"
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:05:00 PM
Attachments:	GSA Alcan LPOE EIS - Interested Parties Letter.pdf image001.png image002.png

Dear Mr. Templeton,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From: Robbie Baldwin
To: "sixkiller.casey@epa.gov"
Subject: GSA Alcan LPOE EIS Preparation and Public Meeting
Date: Tuesday, April 18, 2023 5:16:00 PM
Attachments: GSA Alcan LPOE EIS - Interested Parties Letter.pdf
image001.png
image002.png

Dear Mr. Sixkiller,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv
Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From:	Robbie Baldwin
To:	"michelle.watchman@bia.gov"
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:39:00 PM
Attachments:	GSA Alcan LPOE EIS - Interested Parties Letter.pdf image001.png image002.png

Dear Ms. Watchman,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

From:	Robbie Baldwin
To:	"michaelanthony.peterson@cbp.dhs.gov"
Subject:	GSA Alcan LPOE EIS Preparation and Public Meeting
Date:	Tuesday, April 18, 2023 5:13:00 PM
Attachments:	image001.png GSA Alcan LPOE EIS - Interested Parties Letter.pdf image002.png

Dear Mr. Peterson,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124
Robbie.Baldwin@solvllc.com
www.solvllc.com

APPENDIX D. List of Stakeholders

Italicized entries indicate stakeholders added by request throughout the scoping process

Organization	Contact Name	Affiliation	Address	Email	Phone Number(s)
Project Stakeholders					
U.S. Customs and Border Protection	Michael A. Peterson, Port Director	CBP		michaelanthony.peterson@cbp.dhs.gov	907-774-2252
	Edward Wahmann, Assistant Port Director	CBP		edward.v.wahmann@cbp.dhs.gov	
	Lance Robinson, Area Director	CBP		lance.e.robinson@cbp.dhs.gov	
	Dave Song, BIL Project Manager	CBP			
Federal Agencies					
Environmental Protection Agency Region 10	Casey Sixkiller, Regional Administrator	Office of the Regional Administrator	U.S. EPA, Region 10 1200 Sixth Avenue, Suite 155 Seattle, WA 98101	sixkiller.Casey@epa.gov	Office: 800-424-4372 Office: 206-553-1234
	Michelle Pirzadeh, Deputy Regional Administrator			pirzadeh.michelle@epa.gov	Office: 206-553-1200
	Rebecca Chu, Manager – Policy and Environmental Review Branch	Environmental Review Branch		chu.rebecca@epa.gov	206-553-1774
	Susan Sturges, NEPA Reviewer – Transportation Sector Lead	Environmental Review Branch		sturges.susan@epa.gov	206-553-2117
U.S. Congress	Senator Lisa Murkowski	Senator Murkowski's Office	522 Hart Senate Office Building Washington DC 20510		202-224-6665

Organization	Contact Name	Affiliation	Address	Email	Phone Number(s)
Federal Agencies					
U.S. Congress	Trina Bailey, Regional Special Assistant (Fairbanks)	Senator Murkowski's Office	Courthouse Square 250 Cushman Avenue, Suite 2D Fairbanks, Alaska 99701		907-456-0233 Fax: 877-857-0322
	Senator Dan Sullivan	Senator Sullivan's Office	702 Hart Senate Office Building Washington DC 20510		202-224-3004
	Representative Mary Peltola	Representative Peltola's Office	2314 Rayburn House Office Building, Independence Ave SW Bldg, Washington, DC 20515	team@marypeltola.com	907-206 7000 202-225-5765
U.S. Fish and Wildlife Service	Diana Biesanz, Regional Realty Officer, Alaska Region	Alaska Region	1011 E. Tudor Road, MS 211 Anchorage, AK 99503		907-786-3426
	Shawn Bayless, Tetlin Refuge Manager	National Wildlife Refuge System	Tetlin National Wildlife Refuge 1.3 Mile Borealis Tok, AK 99780 United States	Shawn_Bayless@fws.gov	907-883-9401
GSA	Kim Gant, Region 10 Historic Preservation Officer	Historic Preservation	1110 S. Capitol Way, Suite 30 Olympia, WA 98501	Kim.Gant@dahp.wa.gov	360-586-3074
U.S. Bureau of Indian Affairs	Michelle Watchman, Deputy Regional Director	BIA Alaska Regional Office	Alaska Region Regional Office Indian Affairs 3601 C Street Suite 1200 Anchorage, AK 99503-5947		907- 271-4042
	Lesley DeWilde Superintendent	BIA Fairbanks Agency	101 12th Avenue, Room 166, Fairbanks, AK, 99701	lesley.dewilde@bia.gov	907-456-0229
U.S. National Park Service	Davyd Halyn Betchkal, Biologist / Acoustician	Natural Sounds/Night Skies Division	MP 237 Parks Hwy PO Box 9 Denali Park, AK 99755	Davyd_Betchkal@nps.gov	970-305-0191

Organization	Contact Name	Affiliation	Address	Email	Phone Number(s)
State Agencies					
Alaska Department of Natural Resources	Melissa Head, Natural Resource Manager 2	Alaska Department of Natural Resources	3700 Airport Way Fairbanks, Alaska 99709	melissa.head@alaska.gov	907-451-2719
	Harvey Templeton			harvey.templeton@alaska.gov	907-451-2727
Alaska State Legislature	Senator Click Bishop	Alaska State Senate	State Capitol Room 504 Juneau AK, 99801	senator.click.bishop@akleg.gov	907-465-2327
	Representative Mike Cronk	Alaska State House of Representatives	State Capitol Room 418 Juneau AK, 99801	representative.mike.cronk@akleg.gov	907-465-4527
Alaska Office of the Governor	Governor Mike Dunleavy		Office of the Governor P.O. Box 110001 Juneau, AK 99811-0001		907-451-2920 Fax: 907-451-2858
Alaska Department of Environmental Conservation	Jason Brune, DEC Commissioner	Office of the Commissioner	Department of Environmental Conservation P.O. Box 111800 Juneau, Alaska 99811	dec.commissioner@alaska.gov	907-465-5066 Fax: 907-465-5070
	Gary Mendivil, Environmental Program Specialist			gary.mendivil@alaska.gov	Office: 907-465-5061 Cell: 907-209-0247
	Jason Olds, Acting Director	Division of Air Quality		jason.olds@alaska.gov	907-465-5100 Fax: 907-465-5129
	Christina Carpenter, Director	Division of Environmental Health			907-269-7644
	Jon Wendel, Compliance Manager	Division of Water – Compliance	410 Willoughby Avenue Juneau, AK 99811	jon.wendel@alaska.gov	907-465-5364 Fax: 907-451-2188
Alaska Department of Environmental Conservation	Gene McCabe, Program Manager	Division of Water – Wastewater Discharge Authorization	555 Cordova Street Anchorage, AK 99501	gene.mccabe@alaska.gov	907-269-7580 Fax: 907-334-2415

Organization	Contact Name	Affiliation	Address	Email	Phone Number(s)
State Agencies					
Alaska State Office of History & Archaeology	Judith E Bittner, Chief; OHA and SHPO	Alaska DNR, Office of History & Archaeology	550 West 7th Avenue Suite 1310	dnr.oha@alaska.gov	907-269-8715 907-269-8721 Fax: 907-269-8908
Alaska Department of Transportation and Public Facilities	Joe E Kemp, P.E. Acting Northern Region Director	Northern Region	PO Box 112500 (mailing) 3132 Channel Drive Juneau, Alaska 99811-2500	joseph.kemp@alaska.gov	907-451-2210
	Ryan Anderson P.E. Commissioner	Alaska Department of Transportation & Public Facilities		dot.commissioner@alaska.gov	907-465-3900
Alaska Department of Transportation and Public Facilities	Kerri Martin, Environmental Impact Analyst, III	Department of Transportation, NR Highway Design	2301 Peger Road Fairbanks, AK 99709	kerri.martin@alaska.gov	907-451-5126
Canadian Government					
Canada Customs and Border Service Agency	Ryan Vanderstar, Assistant Director, CBSA Project Lead	Pacific Region		ryan.vanderstar@cbsa-asfc.gc.ca	
Tribal Governments					
Tanana Chiefs Conference	Brian Ridley, Chief/Chairman	Executive Board of Directors	122 1st Avenue Fairbanks, AK 99701		907-452-8251 Fax: 907-459-3851
	Sharon Hildebrand, Vice President				
	Charlie Wright, Secretary				
	Herbie Demit				

Organization	Contact Name	Affiliation	Address	Email	Phone Number(s)
Tribal Governments					
Tanana Chiefs Conference	Nancy James	Executive Board of Directors	122 1st Avenue Fairbanks, AK 99701		907-452-8251 Fax: 907-459-3851
	Joe Petruska				
	Lori Baker				
	Charlie Green				
	Eugene Paul				
	Alex Hanna				
	Trimble Gilbert, First Traditional Chief				
	Peter Demoski				
	Gerald Albert, Traditional First Chief	Northway Traditional Council	P.O. BOX 516 Northway, AK 99764	nvcta@aptalaska.net	907-778-2311 Fax: 907-778-2220
	Michael Sam, Traditional First Chief	Native Village of Tetlin	P.O. BOX 797 Tok, AK 99780	tetlinvillagecouncil@gmail.com	907-883-2021 Fax: 907-883-1267
	David Flenaugh, General Manager	Tetlin Native Corporation	P.O. Box 657 Tok, AK 99780	dflenaugh@tetlincorp.com	907-280-9498 Fax: 888-898-1176

Organization	Contact Name	Affiliation	Address	Email	Phone Number(s)
Tribal Governments					
Tanana Chiefs Conference	Joni Young, President	Tok Native Association	P.O. BOX 372 Tok, AK 99780		907-940-5020
Ahtna, Inc.	Ken Johns, Chair	Board of Directors	115 Richardson Hwy Glenallen, AK 99588		907-822-3476 Fax: 907- 822-3495
	Karen Linnell, Vice Chair				
	Cecil Stanford, Secretary				
	Linda Pete, Treasurer				
	Nicholas Jackson, Director				
	Lucille Lincoln, Director				
	Susan Taylor, Director				
	Clint Marshall, Director				
	Genevieve John, Director				
	Jessica Denny, Director				

Organization	Contact Name	Affiliation	Address	Email	Phone Number(s)
Tribal Governments					
Ahtna, Inc.	Grant Rebne, Director	Board of Directors	115 Richardson Hwy Glenallen, AK 99588		907-822-3476 Fax: 907- 822-3495
	Jason B. Hart, Director				
	John Dye, Director				
Doyon Limited	Christopher Simon, Chair	Board of Directors	1 Doyon Place, Suite 300 Fairbanks, AK 99701-2941		907-459-2000 Fax: 907-459-2060
	Shirley Cleaver, Vice Chair				
	Betty Huntington, Treasurer				
	Jennifer Fate, Secretary				
	Cheryl Cadzow				
	Walter Carlo				
	Charleen Fisher				
	Jerry Isaac				

Organization	Contact Name	Affiliation	Address	Email	Phone Number(s)
Tribal Governments					
Doyon Limited	Georgianna Lincoln	Board of Directors	1 Doyon Place, Suite 300 Fairbanks, AK 99701-2941		907-459-2000 Fax: 907-459-2060
	Jody Potts-Joseph				
	Sonta Roach				
	Marvin Roberts				
	Orie G. Williams				
Public and Private Organizations					
Tok Chamber of Commerce			Tok Chamber of Commerce P.O. Box 389, Tok, Alaska 99780 United States	info@tokalaskainfo.com	1-907-883-5775
Rural Alaska Community Action Program, Inc.	Joe Williams, President	RurAL CAP Central Office	731 E 8th Ave. Anchorage, Alaska 99501	info@ruralcap.org	907-279-2511 Fax: 907-278-2309
Friends of Alaska National Wildlife Refuges	David Raskin, President		59975 Eider Ave. Homer, AK 99603	davidc.raskin@me.net	425-209-9009
Members of the Public					
Private Landowner (old gas station)	[redacted]			[redacted]	

Organization	Contact Name	Affiliation	Address	Email	Phone Number(s)
Members of the Public					
Public	John Brown		[redacted]	[redacted]	
Public	Thomas Middendorf, Senior Aviation Planner	Dowl		[redacted]	[redacted]
Public	Cristine Traber	Miller-hull		[redacted]	
Public	Dr. Dwight Sanders SE			[redacted]	
Public	John Branco			[redacted]	

APPENDIX E: PUBLIC MEETING HANDOUTS AND REGISTRATION

National Environmental Policy Act (NEPA) Process

- The National Environmental Policy Act (NEPA) requires Federal agencies to consider potential environmental impacts before making a decision or taking action on their projects. The environmental review process under NEPA provides an opportunity for you to be involved in the Federal agency decision-making process.

- The National Historic Preservation Act (NHPA) establishes a process to identify any historic properties that could be affected by the project or action, assess the effects of the project, and seek ways to avoid or mitigate any adverse effects on historic properties. GSA will pursue and complete compliance with NHPA during the NEPA process.

Project Background

- The Alcan Land Port of Entry (LPOE) is located in a remote area of southeastern Alaska and processes personal vehicles and commercial traffic. The LPOE is subject to sub-arctic weather conditions and is the only year-round operating land port between USA and Canada.

- The Alcan LPOE includes port facilities, employee housing and support features, and necessary infrastructure. The existing facilities of the LPOE have only received minor additions and improvements since their original construction in 1972. This project seeks to expand and modernize the Alcan LPOE to meet the current operational needs.

Proposed Alternatives

The EA will consider two "action" alternatives and one "no action" alternative. The two **"action" alternatives** would consist of land acquisition, construction, renovation, and demolition activities, and could include:

- Construction and operation of new LPOE facilities including a new port building, associated housing, and other structures;
- Demolition or renovation of existing port buildings; and
- Land acquisition at a new site area (Alternative 1) or from the Tetlin National Wildlife Refuge (Alternative 2).

The "**no action" alternative** assumes that demolition of existing facilities, construction of new facilities, and expansion of LPOE operations would not occur. The LPOE would continue to operate under current conditions.

Submitting Comments

1. Fill out a comment form and submit it during this meeting

2. Email comment to AlcanLPOE@gsa.gov
   Include "Alcan LPOE EIS" in the subject line of the message.

3. Mail comment by Monday, May 15, 2023 to:
   Attention: Emily Grimes
   NEPA Project Manager
   U.S. General Services Administration
   1301 A Street, Suite 610
   Tacoma, WA 98402

4. For press inquiries only, please contact Christi Chidester Votisek at (253) 931-7127 or christina.chidester@gsa.gov

Thank you for your participation!

Please comment by either mailing to the address provided; or submitting online at:

AlcanLPOE@gsa.gov

Please reference **"Alcan LPOE EIS"** in the subject line of the email. Comments **MUST** be postmarked on or before May 15 to ensure full consideration during the scoping process.

____
____
____
____

Place Stamp Here

General Services Administration
Attention: Emily Grimes, Environmental Program Manager
1301 A Street, Suite 610
Tacoma, WA 9840

Tape Here

GSA Alcan Land Port of Entry EIS Scoping Comment Form

GSA

Public participation is an essential component of the National Environmental Policy Act (NEPA) process, and GSA welcomes comments on the Environmental Impact Statement (EIS) for the expansion of a Land Port of Entry (LPOE) at Alcan, AK.

Please fill out the following form to ensure that the analysis, and ultimately the decision, considers the affected communities' opinions.

If you would like to be added to the mailing list and receive information about the project, please provide your email or mailing address.

Name: ________________________________
Affiliation (Optional): ________________________
Mailing Address: ___________________________
City: ____________ State: ________ Zip Code: ______
Email: ________________________________

Please check the box below if you would like to be informed of project updates.

❑ Yes, mail/email to the above address.

Which key issues and topics would you like to see covered in the EIS?

What adverse or beneficial impacts do you think the proposed project might have on the natural and human environment?

Please provide any other comments you may have below. Attach additional sheets as needed.

Virtual Sign-in Sheet

Name	Email	Affiliation	Informed of project updates?
Leon Kolankiewicz	Leon.Kolankiewicz@solvllc.com	Solv	n/a
Robbie Baldwin	Robbie.Baldwin@solvllc.com	Solv	n/a
Kevin Ebert	Kevin.Ebert@solvllc.com	Solv	n/a
Tom Middendorf	[redacted]	none	Yes, via email
Ryan Vanderstar	Ryan.Vanderstar@cbsa-asfc.gc.ca	CBSA	Yes, via email
Rick Rachow	rick.rachow@gsa.gov	GSA	n/a
Bob Bliss	robert.bliss@gsa.gov	GSA	n/a
Susan Sturges	sturges.susan@epa.gov	EPA	Yes, via email
Becky Graham	rebecca.graham@gsa.gov	GSA	n/a
Rachel Schneider	rachel.l.schneider@cbp.dhs.gov	CBP	n/a
Scott Grieger	scott.l.grieger@cbp.dhs.gov	CBP	n/a
Tom Roper	thomas.c.roper@cbp.dhs.gov	CBP	n/a
Amy Heusser	amy.heusser@gsa.gov	GSA	n/a
Aaron Evanson	david.evanson@gsa.gov	GSA	n/a
Dave Song	da-we.song@cbp.dhs.gov	CBP	n/a
Cristine Traber	[redacted]	none	Yes, via email
DR DWIGHT SANDERS SE	[redacted]	none	Yes, via email
John Branco	[redacted]	none	Yes, via email

APPENDIX F: SUBMITTED PUBLIC COMMENTS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue, Suite 155, 14-D12
Seattle, WA 98101-3144

REGIONAL ADMINISTRATOR'S DIVISION

May 15, 2023

Emily Grimes, Environmental Program Manager
General Services Administration
1301 A Street, Suite 610
Tacoma, Washington 98402

Dear Emily Grimes:

The U.S. Environmental Protection Agency has reviewed General Services Administration's April 2023 notice to prepare an Environmental Impact Statement for the Alcan Land Port of Entry (EPA Project Number 23-0017-GSA). EPA has conducted its review pursuant to the National Environmental Policy Act and our review authority under Section 309 of the Clean Air Act. The CAA Section 309 role is unique to EPA and requires EPA to review and comment publicly on any proposed federal action subject to NEPA's environmental impact statement requirement.

The Draft EIS will consider the effects of proposed modernization and expansion of the Alcan Land Port of Entry. Alcan LPOE is in a remote area of eastern Alaska on the Alaska Highway. It is the only year-round, full service, 24-hour port of entry serving personal vehicles and commercial truck traffic between Yukon Territory, Canada and Interior Alaska. The DEIS will consider two action alternatives: modernizing and expanding the existing LPOE; and relocating the LPOE to a new site approximately four miles to the northwest of the current location near the Alaska-Canada border. The proposal may include operating the Alcan LPOE jointly with the Canada Border Services Agency.

EPA supports GSA's project commitment to increase energy and water efficiency, adhere to sustainable design principles, and minimize climate risk liabilities. EPA has identified concerns about potential impacts from project activities and has included comments on water quality and aquatic resources, air quality, climate change, permafrost and vegetation, environmental justice, meaningful community engagement, traditional ecological knowledge, and cumulative impacts. Enclosed are more detailed recommendations.

Thank you for the opportunity to provide scoping comments for this DEIS development process. If you have questions about this review, please contact Susan Sturges of my staff at 206-553-2117 and sturges.susan@epa.gov or me, at (206) 553-1774 or at chu.rebecca@epa.gov.

Sincerely,

REBECCA CHU Digitally signed by REBECCA CHU
Date: 2023.05.15 11:57:11 -07'00'

Rebecca Chu, Chief
Policy and Environmental Review Branch

Enclosure

USEPA Detailed Scoping Comments for the
Alcan Land Port of Entry Project
Near Tok, Alaska
May 2023

Water Quality and Aquatic Resources

Revised Definition of Waters of the United States

On January 18, 2023, EPA and the Department of Army published a final rule establishing the Revised Definition of "Waters of the United States" (2023 Rule).[1] The 2023 Rule became effective on March 20, 2023. However, on April 12, 2023, a district court judge in North Dakota issued an order preliminarily enjoining the 2023 Rule in 24 states, including Alaska.[2] In light of this preliminary injunction, as of the date of these comments, EPA and the Department of Army are interpreting "waters of the United States" (WOTUS) consistent with the pre-2015 regulatory definition in Alaska. Any CWA permit issued for the project will be evaluated for impacts to WOTUS based on the regulatory definition applicable at that time, which may be different from the regulatory definition that is currently applicable. For the latest information on interpretation of WOTUS in Alaska, EPA encourages GSA to contact the U.S. Army Corps of Engineers Alaska District (USACE) or the EPA. You may also visit EPA's Rule Status webpage for information about the status of the rule and litigation.[3]

Clean Water Act § 402

In Alaska, EPA issues National Pollutant Discharge Elimination System (NPDES) permits for federally-owned facilities located in Denali National Park; facilities operating outside state waters; facilities that have been issued Clean Water Act § 301(h) waivers; and all permits on tribal lands. EPA has delegated authority to issue other NPDES permits to the Alaska Department of Environmental Conservation.[4]

EPA recommends the DEIS identify any discharges to WOTUS that are known, or are likely, to occur during construction and operation of the project and how these discharges would be managed and minimized. Identify the NPDES permits that will be obtained for the construction phase, new (or modifications to) existing permits for operations, and how any previous permit exceedances could be prevented by incorporating pollution prevention measures into the project.

CWA § 404

CWA§ 404 requires permits from the USACE for the discharge of dredged or fill material into WOTUS. Wetlands, vegetated shallows, mud flats, and cobble substrates are all considered special aquatic sites under the CWA Section 404(b)(1) Guidelines (40 CFR 230).

EPA recommends that the DEIS:

- Clearly identify any discharges to WOTUS that are known, or likely, to occur that will be subject to CWA § 404. Identify and describe the impact of those discharges, control

[1] Department of the Army, Corps of Engineers, Department of Defense; and Environmental Protection Agency (January 18, 2023). Revised Definition of "Waters of the United States." 88 FR 3004.
[2] *See West Virginia v. EPA*, 2023 WL 2914389 (D. N.D. 2023).
[3] https://www.epa.gov/wotus/definition-waters-united-states-rule-status-and-litigation-update . Accessed 5/11/2023.
[4] https://dec.alaska.gov/water/wastewater/. Accessed 5/5/2023.

measures to be employed to address those impacts, and best management practices to prevent discharge of water and pollutants.

- Include sufficient information that can serve as a basis to determine whether the project would satisfy the requirements for the CWA § 404 permit or identify appropriate measures to mitigate the project's impacts to all WOTUS.
- Structure the alternatives analysis so that it is consistent with meeting requirements of both the CWA and NEPA.
- Describe the regulatory criteria and processes utilized to screen potential alternatives and thoroughly evaluate alternatives that would pose less adverse impacts.
- Describe how compensatory mitigation will be quantified and provided to offset impacts, with specific project examples and options as available.

For context on the CWA § 404(b)(1) analysis, the Guidelines include four main requirements (40 CFR 230.10 (a) through (d)):

Least Environmentally Damaging Practical Alternative (LEDPA) Determination - Section 230.10(a)
A CWA § 404 permit can be issued for the LEDPA only. Practicable alternatives include those that are capable and feasible of being done after taking into consideration costs, technology, and logistics. Costs alone cannot make a project not practicable. USACE permit decisions require a comprehensive evaluation of the range of alternatives to ensure the permitted alternative is the LEDPA. Identification of the LEDPA is achieved by performing an alternatives analysis that estimates the direct, indirect, and cumulative impacts to jurisdictional WOTUS that would result from each of the potential project alternatives. Only when this analysis has been performed can the applicant or the permitting authority be assured that no discharge other than the practicable alternative with the least impact on the aquatic ecosystem will be authorized.

Water Quality - Section 230.10(b)
Prohibits permitting projects that would cause or contribute to violations of water quality standards, violates any applicable toxic effluent standard, jeopardizes continued existence of endangered or threatened species and impacts to critical habitat under the Endangered Species Act, or violates any requirements to protect any marine sanctuary designated under Marine Protection, Research, and Sanctuaries Act.

Significant Degradation - Section 230.10(c)
Prohibits permitting a project that causes or contributes to significant degradation of aquatic resources. Effects contributing to significant degradation include: (1) adverse effects on plankton, fish, shellfish, wildlife, and special aquatic sites (40 CFR 230.10(c)(1)), (2) adverse effects on life stages of aquatic life (40 CFR 230.10(c)(2)), (3) aquatic ecosystem diversity, productivity, and stability including loss of fish and wildlife habitat (40 CFR 230.10(c)(3)), and (4) impairment or destruction of endangered species habitat (40 CFR 230.30(2)).

Mitigation - Section 230.10(d)
Requires compensatory mitigation for unavoidable impacts to aquatic resource functions. The 2008 Joint EPA-Corps Federal Mitigation Rule (40 CFR 230.91-98) establishes a preference for compensatory mitigation based on a watershed approach, which can ensure that potential direct and indirect impacts of the project are offset. In addition to identifying all measures to

avoid and minimize adverse impacts to the aquatic environment (showing compliance with 40 CFR Part 230.10(a)), for unavoidable impacts, identify compensatory mitigation.

CWA§ 401

The CWA provides states and authorized tribes the authority to grant, deny, or waive certification of proposed federal licenses or permits that may discharge into WOTUS. This section of the CWA is an important tool for states and authorized tribes, in collaboration with federal agencies, to help protect the water quality of federally regulated waters within their borders. In developing the DEIS, EPA recommends early coordination with the State of Alaska regarding CWA § 401 for the purposes of streamlining regulatory processes.

CWA § 303(d)

The CWA requires states to develop a list of impaired waters that do not meet water quality standards, establish priority rankings, and develop action plans called Total Maximum Daily Loads (TMDLs) to improve water quality. EPA recommends the DEIS include information on any CWA § 303(d) impaired waters in the project area and any efforts related to TMDLs. Discuss what effect, if any, project discharges may have on impaired waterbodies. EPA recommends the DEIS describe existing restoration and enhancement efforts for those waters, how the proposed project will coordinate with on-going protection efforts, and any mitigation measures that will be implemented to avoid further degradation of impaired waters.

Air Quality

EPA recommends the DEIS discuss air quality impacts from project construction, maintenance, and operations with respect to criteria air pollutants and air toxics, including diesel particulate matter emissions and fugitive dust emissions. Discuss the direct, indirect, and cumulative impacts of project related air emissions. Disclose current representative background air pollutant concentrations in the areas of the project and compare these concentrations to the state and federal ambient air quality standards. Disclose any air quality requirements related to the project.

For air pollutant emissions expected during construction, discuss the potential exposure of these pollutants to nearby sensitive populations. EPA recommends including a discussion of measures to minimize air quality impacts on the local environment and decrease exposure of construction- related emissions to sensitive populations. For example, locate construction equipment and staging zones away from sensitive receptors and fresh air intakes to buildings.

Climate Change

On January 9, 2023, Council on Environmental Quality (CEQ) published interim guidance to assist federal agencies in assessing and disclosing climate change impacts during environmental reviews.[5] CEQ developed this guidance in response to EO 13990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*. This interim guidance is effective immediately. CEQ indicated that agencies use this interim guidance to inform the NEPA review for all new proposed actions and may use it for evaluations in process, as agencies deem appropriate, such as informing the consideration of alternatives or helping address comments raised through the public comment process.

[5] https://www.federalregister.gov/documents/2023/01/09/2023-00158/national-environmental-policy-act-guidance-on-consideration-of-greenhouse-gas-emissions-and-climate. Accessed 5/5/2023.

EPA recommends the DEIS apply the interim guidance as appropriate, to ensure robust consideration of potential climate impacts, mitigation, and adaptation issues.

Permafrost and Vegetation

The proposed project may result in the disturbance of permafrost resulting from removing the overlying vegetation and organic material, placing gravel fill material on the surface for access roads and facility pads, or excavating and trenching the area to install underground facilities. EPA recommends that the DEIS include discussion of the following:

- Baseline information on vegetation and permafrost, including a location/mapping analysis.
- Surface disturbance activities to permafrost and vegetation and related impacts.
- Mitigation measures to minimize the project impacts to permafrost and vegetation.
- Potential for invasive plant introduction and control mechanisms to minimize economic, ecological, and human health impacts in the area.
- Restoration and reclamation of disturbed areas post project construction.

Environmental Justice

On April 21, 2023, President Biden signed Executive Order 14096, *Revitalizing Our Nation's Commitment to Environmental Justice for All*[6] which highlights the need for a whole-of-government effort to confront longstanding environmental injustices and inequities. Consistent with Executive Order 12898 and each agency's statutory authority, EO 14096 calls on each agency to make achieving EJ part of its mission, including by carrying out environmental reviews under NEPA in a manner that:

- analyzes direct, indirect, and cumulative effects of federal actions on communities with EJ concerns;
- considers best available science and information on any disparate health effects (including risks) arising from exposure to pollution and other environmental hazards, such as information related to the race, national origin, socioeconomic status, age, disability, and sex of the individuals exposed; and
- provides opportunities for early and meaningful involvement in the environmental review process by communities with EJ concerns potentially affected by the proposed action.

EJScreen is EPA's nationally consistent environmental justice screening and mapping tool.[7] EJScreen offers a variety of powerful data and mapping capabilities that enable users to understand details about the population of an area and the environmental conditions in which they live. The tool provides information on environmental and socioeconomic indicators as well as pollution sources, health disparities, critical service gaps, and climate change data. The data is displayed in color-coded maps and standard data reports which feature how a selected location compares to the rest of the nation and state.

Assessing EJScreen information is a useful first step in understanding or highlighting locations that may be candidates for further review or outreach. EPA considers a project to be in an area of potential environmental justice (EJ) concern when an EJScreen analysis for the impacted area shows one or more at or above the 80th percentile in the nation and/or state. An area may also warrant additional review if other information suggests the potential for EJ concerns. An EJScreen analysis which does not reveal

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[6] https://www.whitehouse.gov/briefing-room/presidential-actions/2023/04/21/executive-order-on-revitalizing-our-nations-commitment-to-environmental-justice-for-all/. Accessed 5/11/23.

[7] EPA's Environmental Justice Screening and Mapping Tool (Version 2.0): https://ejscreen.epa.gov/mapper/. Accessed 5/5/2023.

the potential for EJ concerns should not be interpreted to mean that there are definitively no EJ concerns present.

It is important to consider all impacted areas by the proposed action(s). Areas of impact can be very focused and contained within a single block group, or broader, spanning across several block groups and communities.[8] Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators.[9] Further review or outreach may be necessary for the proposed action. To address these potential concerns, EPA recommends the DEIS:

- Apply methods from "Environmental Justice Interagency Working Group Promising Practices for EJ Methodologies in NEPA Reviews" report to this project.[10] This report compiles methodologies from current agency practices for integrating EJ considerations in NEPA processes.
- Characterize the project site with specific information or data related to EJ concerns.[11]
- Describe potential EJ concerns for all EJ Indexes at or above the 80th percentile in the state and/or nation.
- Screen for and describe all individual block groups within or intersecting a 1-mile radius of the project.
- Describe individual block groups within the project area in addition to an area-wide assessment.
- As EJScreen does not have data on all factors that may be relevant for identify EJ concerns, supplement data with county level reports and local knowledge.

Projects in rural locations can often occur near communities with EJ concerns experiencing critical service gaps (e.g., food deserts, medically underserved areas) or near locations where Tribal members and indigenous peoples reside. EPA recommends consulting data in EJScreen on these topics (and other reasonably available data) to help inform EJ scoping efforts. Due to low population densities in rural areas, the presence of communities with EJ concerns can be underrepresented. Underrepresentation can also result from larger geographic units of analysis (e.g., census tracts) in rural areas.

Meaningful Public Engagement

EPA recommends the DEIS detail the opportunities for effective and meaningful public engagement for communities with EJ concerns, as described in the Promising Practices for EJ Methodologies in NEPA reviews and EO 14096. We recommend the following measures to further advance meaningful involvement:

- Carefully review and consider community feedback provided during the NEPA process. Ensure that the NEPA engagement approach is sensitive and responsive to the wellbeing of affected communities.

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[8] Agencies should define community as "either a group of individuals living in geographic proximity to one another, or a geographically dispersed set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions" (Interim Justice40 Guidance – Executive Order 14008 on Tackling the Climate Crisis at Home and Abroad, January 27, 2021).

[9] EPA's Technical Documentation for EJScreen: https://www.epa.gov/ejscreen/technical-information-about-ejscreen . Accessed 5/5/2023.

[10] Promising Practices for EJ Methodologies in NEPA Reviews: https://www.epa.gov/sites/default/files/2016-08/documents/nepa_promising_practices_document_2016.pdf . Accessed 5/5/2023.

[11] For more information about potential EJ concerns, refer to the July 21, 2021, Memorandum for the Heads of Departments and Agencies Interim Implementation Guidance for the Justice40 Initiative: https://www.whitehouse.gov/wp-content/uploads/2021/07/M-21-28.pdf. Accessed 5/5/2023.

- Ensure that community feedback is reflected in the decision-making process. Design robust community engagement practices to maximize participation opportunities for communities that would be affected by the project, such as community-based workshops to facilitate discussion and issue resolution. Community-based workshops may also provide an opportunity to identify key issues and milestones for meaningful engagement in the NEPA process for the communities.
- Provide early and frequent outreach and engagement opportunities to collect and incorporate community feedback throughout the NEPA process and to maintain maximum transparency.
- Ensure that translation/interpretation services are provided to accommodate linguistically isolated populations.
- Address technology barriers that may prohibit participation from communities affected by the project.
- Ensure that meetings are scheduled at a time and location that is accessible for community participants, including scheduling meetings after work hours and on weekends as appropriate.
- Provide ample notice of meetings and commenting opportunities so that community members have sufficient time to prepare and participate.
- Promote engagement opportunities within appropriate outlets used by affected communities, such as newspapers, radio, and social media.
- Ensure that all project-related information is conveyed using plain language so that community members of varied reading proficiencies can readily understand the project-related information.

Tribal Consultation
EPA encourages GSA to consult with the Tribes and incorporate feedback from the Tribes when making decisions regarding the project. EPA recommends the DEIS describe the issues raised during the consultations and how those issues were addressed.

Traditional Ecological Knowledge
On November 30, 2022, CEQ published Guidance for Federal Department and Agencies on Indigenous Knowledge.[12] EPA recommends the DEIS include the identification, inclusion, and integration of Traditional Ecological Knowledge (TEK) into the NEPA analysis. This can include the collection of local and traditional knowledge concerning the affected environment, anticipated impacts from the project, as well as traditional hunting and land use patterns in the area. TEK could also be used to support the understanding of how climate change has impacted local environmental resources and subsistence resources. In addition to reviewing any pertinent traditional environmental knowledge currently available, additional studies and outreach may be conducted as necessary to clearly identify concerns and potential impacts, including cumulative impacts, from the proposed project and project alternatives.

Cumulative Effects
EPA recommends the DEIS include an assessment of the cumulative impacts that would be associated with the proposed action, specifically, five key areas:
- Resources, if any, that are being cumulatively impacted.
- Appropriate geographic area and the time over which the effects have occurred and will occur.

[12] https://www.whitehouse.gov/wp-content/uploads/2022/12/OSTP-CEQ-IK-Guidance.pdf. Accessed 5/5/2023.

- All past, present, and reasonably foreseeable future actions that have affected, are affecting, or would affect resources of concern.
- A benchmark or baseline of existing environmental conditions.
- Scientifically defensible threshold levels.

Endangered Species

The proposed project may impact endangered, threatened, or candidate species listed under the Endangered Species Act and their habitats. State sensitive species may also be impacted. EPA recommends that the DEIS:

- Identify the endangered, threatened, and candidate species under ESA, and other sensitive species within the project area and vicinity.
- Provide information on the critical habitat for the species.
- Evaluate impacts the project could have on the species and their critical habitats.
- Describe how the proposed project will meet all requirements under ESA, including consultation with the U.S. Fish and Wildlife Service.

FRIENDS OF
ALASKA
NATIONAL WILDLIFE REFUGES

Friends of Alaska National Wildlife Refuges

National Friends of the Year 2010

www.alaskarefugefriends.org

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Becharof NWR
Innoko NWR
Izembek NWR
Kanuti NWR
Kenai NWR
Kodiak NWR
Koyukuk NWR
Nowitna NWR
Selawik NWR
Tetlin NWR
Togiak NWR
Yukon Delta NWR
Yukon Flats NWR

May 12, 2023

Re: **Notice #P–2023–01**

Friends of Alaska National Wildlife Refuges (Friends) is a 501(c)(3) non-profit corporation that supports all 16 National Wildlife Refuges in Alaska on a voluntary basis. We request that the DEIS for **Notice #P–2023–01, Port of Alcan replacement** analyze the **full range of impacts on the Tetlin National Wildlife Refuge,** particularly impacts to the recreational, subsistence, historical, and watershed resources of the Refuge. All proposed actions and alternatives must adhere to the purposes and legal requirements embodied in the Alaska National Interest Conservation Lands Act (ANILCA), especially the provisions governing subsistence and the transfer of lands from and to a federal conservation unit.

Alternative 1. This alternative would remove 10 Refuge acres from Conservation Status, obliterating the Airs Hill Trailhead and blocking public access. This impact on the human and natural environment must be addressed in the DEIS and propose mitigation, such as moving the trailhead and parking area and acquiring mitigation acres. This is the Refuge's longest trail with a planned one-mile extension that will connect the highway to the Refuge's historic Mirror Lake public use cabin, making it the only Refuge cabin that is hiking accessible.

Alternative 2. We have major concerns about this alternative. The DEIS must address the impact of moving the Port of Entry four miles up the highway, which would locate key refuge recreational, historic, and subsistence assets on the "wrong" side of the port of entry. The EIS must address **how the relocation of Port Alcan will affect human access to the Refuge**. This proposed relocation may deter visitors and subsistence hunters from going through a relocated Port Alcan to access Desper and Scottie Creeks and other refuge lands adjacent to those four miles of the Alcan Highway. It should also address potential impediments to the transport of firearms through the relocated Port because this is a hunting area and many visitors carry guns for bear protection. It should explicitly describe the requirements for identification/documentation by Refuge visitors who must return through the port of entry.

Scottie and Desper creeks are among the Refuge's most important recreational assets. Therefore, a thorough analysis must address:

- The canoe routes that offer an opportunity for a loop trip and access to the lake country of the Refuge. Canoes can be launched at either Desper or Scottie Creek, and Desper also has a boat launch suitable for skiffs. Friends has led three trips to this area.
- Scottie and Desper creeks important access for both subsistence and sport hunting.
- The Refuge's Scottie Creek highway crossing also contains a historic cabin that the Refuge has stabilized and repaired for public use. This must be addressed under historical resources.

Thank you for the opportunity to comment. Please include us on your mailing list for this project info@alaskarefugefriends.org.

Sincerely,

David C. Raskin, Ph.D.
President
Friends of Alaska National Wildlife Refuges

Emily Grimes - 10PMEA <emily.grimes@gsa.gov>

Alcan LPOE EIS - EPA Comments

2 messages

'Sturges, Susan (she/her/hers)' via Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov> Mon, May 15, 2023 at 1:26 PM
Reply-To: "Sturges, Susan (she/her/hers)" <Sturges.Susan@epa.gov>
To: "AlcanLPOE@gsa.gov" <AlcanLPOE@gsa.gov>

Hello,

Please see attached for EPA's scoping comments for GSA's proposed Alcan Land Port of Entry Project. Thank you.

Sincerely,

Susan Sturges

NEPA Reviewer, Transportation Sector Lead

U.S. Environmental Protection Agency Region 10

Policy and Environmental Review Branch

1200 6th Avenue, Suite 155, MS 14-D12 | Seattle, WA 98101-3144

(206) 553-2117 | sturges.susan@epa.gov

Submit NEPA environmental review documents to R10-NEPA@epa.gov

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23-0017-GSA_NOI_AlcanLPOE.pdf
400K

Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov> Tue, May 16, 2023 at 7:31 AM
To: Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov>
Cc: "Sturges, Susan (she/her/hers)" <Sturges.Susan@epa.gov>

Hello Susan,

Thank you for taking the time to review the proposed project information and providing comments. These will be reviewed and addressed within the Draft Environmental Impact Statement.

Regards,
[Quoted text hidden]

Emily Grimes - 10PMEA <emily.grimes@gsa.gov>

Alcan LPOE EIS

2 messages

john brown [redacted] Wed, May 10, 2023 at 9:36 PM
To: AlcanLPOE@gsa.gov

Thanks for the opportunity to comment on the new Alcan Border Station.
I have used this border station dozens of times over the last 50 years.

Please put on the mailing list for any communication and updates on this project.

Due to the remote nature and extreme weather at this station, the site should include some amenities not found at most stations.

First, the station needs ample public restrooms, accessible before the customs station. A place that people can use before they get in the queue to clear customs.

Second, the station needs to make arrangements for cell phone service at the site. Cell service would greatly improve the safety and convenience of the operation for the public and the employees. Currently the nearest cell coverage is 20+ miles from the station.

I realize that these services are not normally provided at border stations, but the absence of alternative nearby facilities makes this site unique.

Thanks,

John Brown
[redacted]

Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov> Thu, May 11, 2023 at 9:09 AM
To: Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov>
Cc: john brown [redacted]

Hello John,

Thank you for taking the time to provide your comments on the proposed construction project at the Alcan Land Port of Entry. Your comments will be reviewed and addressed in the environmental review.

In addition, your request for being added to the mailing list has been accepted.

Thank you for expressing interest in this project.

Expansion and Modernization of Alcan Land Port of Entry, Alcan, Alaska (Notice #P–2023–01)

2 messages

'Betchkal, Davyd' via Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov> Mon, May 1, 2023 at 2:51 PM
Reply-To: "Betchkal, Davyd" <Davyd_Betchkal@nps.gov>
To: "AlcanLPOE@gsa.gov" <AlcanLPOE@gsa.gov>
Cc: "Pearson, Georgina A" <Gina_Pearson@nps.gov>

To the GSA Environmental Program Manager,

Thank you for this opportunity to comment on the proposed expansion and modernization of the Alcan Land Port of Entry during the scoping phase of the project.

Natural lightscapes are part of the resources and values protected under the National Park Service Organic Act. Various other priority management objectives are also associated with natural darkness including wildlife, cultural and historic resources, public health and safety, visitor enjoyment, and wilderness character. The national park area of concern related to this project is Wrangell St-Elias National Park, the largest designated Wilderness in the National Wilderness Preservation System. The park protects more than nine million acres of Alaskan tundra and boreal forest and associated wildlife. One of the qualities embodied in wilderness character is the opportunity for solitude or a primitive and unconfined type of recreation, including an experience free from the sights of modern development (artificial light at night). The NPS main concern is sky glow from the project.

The NPS Management Policies (https://www.nps.gov/subjects/policy/upload/MP_2006.pdf) direct park managers to “preserve, to the greatest extent possible, the natural lightscapes of parks, which are natural resources and values that exist in the absence of human-caused light”. A major threat to the conservation of natural lightscapes (naturally dark night skies) is light pollution and therefore, preserving natural lightscapes inherently includes the application of sustainable outdoor lighting principles.

NPS policy also states that parks should “minimize light that emanates from park facilities, and also seek the cooperation of park visitors, neighbors, and local government agencies to prevent or minimize the intrusion of artificial light into the night scene of the ecosystems of parks.” Sustainable outdoor lighting also improves energy efficiency, reduces operation & maintenance costs and carbon footprints.

The NPS encourages GSA to consider adopting early in the planning process sustainable lighting principles that are not only used by the NPS, but many other agencies and organizations around the country. See below infographic designed by our partners at IES and IDA. Thinking about lighting early on can help inform proper lighting design and develop lighting mitigations that protect the night sky resource and its associated resources and values.

On behalf of Wrangell St. - Elias National Park and Preserve,
Davyd Halyn

--

Davyd Halyn Betchkal (he/they)
Natural Sounds and Night Skies Division
Biologist / Acoustician

MP 237 Parks Hwy
PO Box 9
Denali Park, AK 99755

(office) ~~907 683 5754~~ forwarded to cell...
(work cell) 970 305 0191

thought ↔ action

Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov> Mon, May 1, 2023 at 4:09 PM
To: Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov>
Cc: "Betchkal, Davyd" <Davyd_Betchkal@nps.gov>, "Pearson, Georgina A" <Gina_Pearson@nps.gov>

Hello Davyd,

Thank you for providing this information and comment to GSA. This information will be researched during the NEPA process and will also be taken into account prior to construction.

Regards

[Quoted text hidden]

FW: GSA Alcan LPOE EIS Preparation and Public Meeting

5 messages

Templeton, Harvey M (DNR) <harvey.templeton@alaska.gov> Tue, Apr 18, 2023 at 3:44 PM
To: "AlcanLPOE@gsa.gov" <AlcanLPOE@gsa.gov>
Cc: "Head, Melissa M (DNR)" <melissa.head@alaska.gov>

Good Afternoon,

Are there any more materials detailing the proposed project and its alternatives? Usually when we get scoping inquiries the details of the proposed project are outlined (*e.g.*, proposed site maps, a tentative development plan, etc.). I didn't notice any imagery or additional details attached to the letter or in the linked webpage. Having that additional information would allow DMLW to provide a more informed response.

Also, I apologize for the duplicative email I sent to Robbie. I just noticed it asked to direct questions to this email address.

Thanks,
Harvey

Harvey Templeton (he/him)

Natural Resource Manager 1

Division of Mining, Land, and Water

Department of Natural Resources

3700 Airport Way

Fairbanks, Alaska 99709-4699

(907) 451-2727

From: Robbie Baldwin <Robbie.Baldwin@solvllc.com>
Sent: Tuesday, April 18, 2023 1:06 PM
To: Templeton, Harvey M (DNR) <harvey.templeton@alaska.gov>
Subject: GSA Alcan LPOE EIS Preparation and Public Meeting

Dear Mr. Templeton,

I am a contracted environmental scientist assisting the General Services Administration (GSA) with the preparation of an Environmental Impact Statement (EIS) for the modernization of the Alcan, Alaska Land Port of Entry (LPOE). The attached letter describes details of the project, instructions for commenting, and instructions for registration for the upcoming virtual public meeting on Wednesday, April 26th. Please direct all questions regarding the project to the AlcanLPOE@gsa.gov inbox.

Thank you,

solv

Robbie Baldwin 703 760 4801 x124

Robbie.Baldwin@solvllc.com

www.solvllc.com

GSA Alcan LPOE EIS - Interested Parties Letter.pdf
118K

Richard Rachow - 10PCC <rick.rachow@gsa.gov> Tue, Apr 18, 2023 at 5:01 PM
To: "Templeton, Harvey M (DNR)" <harvey.templeton@alaska.gov>

Cc: "AlcanLPOE@gsa.gov" <AlcanLPOE@gsa.gov>, "Head, Melissa M (DNR)" <melissa.head@alaska.gov>

Aaron and Emily,

Do we have anything that would suffice for the info requested from Harvey? Or perhaps a quick meeting?

thanks,

Rick

Rick Rachow, PMP
Capital Projects Branch Chief
GSA, PBS, Northwest/Arctic Region (10)
Phone: 907-227-4987
Email: rick.rachow@gsa.gov

[Quoted text hidden]

Emily Grimes - 10PMEA <emily.grimes@gsa.gov> Tue, Apr 18, 2023 at 5:11 PM
To: Richard Rachow - 10PCC <rick.rachow@gsa.gov>
Cc: "Templeton, Harvey M (DNR)" <harvey.templeton@alaska.gov>, "AlcanLPOE@gsa.gov" <AlcanLPOE@gsa.gov>, "Head, Melissa M (DNR)" <melissa.head@alaska.gov>

Hi Harvey,

The presentation on April 26th will go over the details of the proposed alternatives and design layout with maps. The public comment period for the initial scoping period ends on May 15th. This will not be the only time to make comments during this NEPA Analysis, so all future comment periods will also be discussed during the presentation.

Thank you

Emily Grimes
Environmental Program Manager
GSA, PBS, Northwest/Arctic Region
1301 A Street, Suite 610
Tacoma, WA 98402
Email: emily.grimes@gsa.gov
Cell: 253-394-4026

[Quoted text hidden]

Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov> Tue, Apr 18, 2023 at 5:21 PM
To: Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov>
Cc: "Templeton, Harvey M (DNR)" <harvey.templeton@alaska.gov>, "Head, Melissa M (DNR)" <melissa.head@alaska.gov>

Hi Harvey,

As an update to my email. I will look into providing you with some figures to help assist your agency with any possible comments.

Thank you for bringing this to my attention.

[Quoted text hidden]

Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov> Thu, Apr 20, 2023 at 9:01 AM
To: Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov>
Cc: Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov>, "Templeton, Harvey M (DNR)" <harvey.templeton@alaska.gov>, "Head, Melissa M (DNR)" <melissa.head@alaska.gov>

Good Morning Harvey,

I have attached two aerial map images with shapes roughly outlining the proposed project areas. Details are still being developed on the project, which includes, design, layout and location. Due to this, it will be helpful to attend the upcoming meeting where GSA can explain current proposed actions and the reasoning behind them.

Thank you

[Quoted text hidden]

2 attachments

Proposed Alternative Off-Site Location Google Maps.jpg
264K

U.S. Customs and Border Protection - Alcan Port of Entry - Google Maps.jpg
320K

GIS Coordinates for Alcan LPOE Project

4 messages

Mendivil, Gary A (DEC) <gary.mendivil@alaska.gov> Tue, Apr 18, 2023 at 2:59 PM
To: "AlcanLPOE@gsa.gov" <AlcanLPOE@gsa.gov>, "Robbie.Baldwin@solvllc.com" <Robbie.Baldwin@solvllc.com>

Would someone be able to provide GIS coordinates for the Alcan LPOE project so that our department can determine if there is a contaminated site associated with the facility?

Gary Mendivil

Office of the Commissioner

Alaska Department of Environmental Conservation

(907) 465-5061 office

(907) 209-0247 cell

Richard Rachow - 10PCC <rick.rachow@gsa.gov> Tue, Apr 18, 2023 at 3:26 PM
To: "Mendivil, Gary A (DEC)" <gary.mendivil@alaska.gov>, Aaron Evanson - 10PCC <david.evanson@gsa.gov>
Cc: "AlcanLPOE@gsa.gov" <AlcanLPOE@gsa.gov>, "Robbie.Baldwin@solvllc.com" <Robbie.Baldwin@solvllc.com>

Aaron,

Please provide the info requested.

thanks,

Rick

Rick Rachow, PMP
Capital Projects Branch Chief
GSA, PBS, Northwest/Arctic Region (10)
Phone: 907-227-4987
Email: rick.rachow@gsa.gov

[Quoted text hidden]

Aaron Evanson - 10PCC <david.evanson@gsa.gov> Tue, Apr 18, 2023 at 4:00 PM
To: Richard Rachow - 10PCC <rick.rachow@gsa.gov>
Cc: "Mendivil, Gary A (DEC)" <gary.mendivil@alaska.gov>, "AlcanLPOE@gsa.gov" <AlcanLPOE@gsa.gov>, "Robbie.Baldwin@solvllc.com" <Robbie.Baldwin@solvllc.com>

Gary,
Alcan GIS Coordinates: 62.620559125789, -141.0077708428981

Please let me know if you need any further information.

Thanks,
Aaron
[Quoted text hidden]
--

U.S. General Services Administration

Aaron Evanson (he/him)
Capital Project Manager
Ph: 206.445.5876
david.evanson@gsa.gov

Richard Rachow - 10PCC <rick.rachow@gsa.gov> Tue, Apr 18, 2023 at 4:56 PM
To: Aaron Evanson - 10PCC <david.evanson@gsa.gov>
Cc: "Mendivil, Gary A (DEC)" <gary.mendivil@alaska.gov>, "AlcanLPOE@gsa.gov" <AlcanLPOE@gsa.gov>, "Robbie.Baldwin@solvllc.com" <Robbie.Baldwin@solvllc.com>

thanks Aaron

Rick Rachow, PMP
Capital Projects Branch Chief
GSA, PBS, Northwest/Arctic Region (10)
Phone: 907-227-4987
Email: rick.rachow@gsa.gov

[Quoted text hidden]

GSA Alcan LPOE EIS Prep and Public Meeting

5 messages

Martin, Kerri L (DOT) <kerri.martin@alaska.gov> Wed, Apr 19, 2023 at 10:44 AM
To: "AlcanLPOE@gsa.gov" <AlcanLPOE@gsa.gov>

Hello,

I would be interested in the virtual Public meeting on April 26th . Is it possible to get a copy of the letter that describes the project and instructions for commenting?

Thank You,

Kerri

Kerri L. Martin

Department of Transportation & Public Facilities| NR Highway Design

Environmental Impact Analyst, III

2301 Peger Road Fairbanks, AK 99709 | ☎: 907.451.5289 | 🖷: 907.451.5126 | ✉: kerri.martin@alaska.gov

---

Emily Grimes - 10PMEA <emily.grimes@gsa.gov> Wed, Apr 19, 2023 at 11:11 AM
To: robbie.baldwin@solvllc.com
Cc: Aaron Evanson - 10PCC <david.evanson@gsa.gov>, Richard Rachow - 10PCC <rick.rachow@gsa.gov>, Kimberly Gant - 10PCE <kimberly.gant@gsa.gov>, John Woods - PCBAB <john.woods@gsa.gov>, Kurt Ennis - PCBA-C <kurt.ennis@gsa.gov>, Kate Gill - PTA <kate.gill@gsa.gov>

Hi Robbie,

Please send an email to Kerri Martin as you did for the other Interested Parties. I will let her know that this will be coming to her soon.

I'll add her to the Alcan Stakeholders list too.

Thank you

Emily Grimes
Environmental Program Manager
GSA, PBS, Northwest/Arctic Region
1301 A Street, Suite 610
Tacoma, WA 98402
Email: emily.grimes@gsa.gov
Cell: 253-394-4026

[Quoted text hidden]

Robbie Baldwin <Robbie.Baldwin@solvllc.com> Wed, Apr 19, 2023 at 11:25 AM
To: Emily Grimes - 10PMEA <emily.grimes@gsa.gov>
Cc: Aaron Evanson - 10PCC <david.evanson@gsa.gov>, Richard Rachow - 10PCC <rick.rachow@gsa.gov>, Kimberly Gant - 10PCE <kimberly.gant@gsa.gov>, John Woods - PCBAB <john.woods@gsa.gov>, Kurt Ennis - PCBA-C <kurt.ennis@gsa.gov>, Kate Gill - PTA <kate.gill@gsa.gov>

Will do!

solv

Robbie Baldwin 703 760 4801 x124

Robbie.Baldwin@solvllc.com

www.solvllc.com

[Quoted text hidden]

Emily Grimes - 10PMEA <emily.grimes@gsa.gov> Wed, Apr 19, 2023 at 11:27 AM
To: Robbie Baldwin <Robbie.Baldwin@solvllc.com>
Cc: Aaron Evanson - 10PCC <david.evanson@gsa.gov>, Richard Rachow - 10PCC <rick.rachow@gsa.gov>, Kimberly Gant - 10PCE <kimberly.gant@gsa.gov>, John Woods - PCBAB <john.woods@gsa.gov>, Kurt Ennis - PCBA-C <kurt.ennis@gsa.gov>, Kate Gill - PTA <kate.gill@gsa.gov>

Thank you!

Emily Grimes

Environmental Program Manager
GSA, PBS, Northwest/Arctic Region
1301 A Street, Suite 610
Tacoma, WA 98402
Email: emily.grimes@gsa.gov
Cell: 253-394-4026

[Quoted text hidden]

Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov> Wed, Apr 19, 2023 at 12:07 PM
To: Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov>
Cc: "Martin, Kerri L (DOT)" <kerri.martin@alaska.gov>

Hi Kerri,

Thank you for expressing interest in this project and plans to attend the upcoming meeting. You will receive a separate email with the letter containing registration and comment information. If you do not receive the email by Friday, please let us know.

You have also been added to the list of stakeholders for this project, so you will be included on future emails to interested parties.

[Quoted text hidden]

Emily Grimes - 10PMEA <emily.grimes@gsa.gov>

Notice #P–2023–01

'David Raskin' via Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov> Fri, May 12, 2023 at 4:59 PM
Reply-To: David Raskin <davidc.raskin@me.com>
To: AlcanLPOE@gsa.gov

Please accept the attached scoping comments.

Thank you.

David C. Raskin, Ph.D.
President
Friends of Alaska National Wildlife Refuges
59975 Eider Ave
Homer, AK 99603
425-209-9009 mobile
davidc.raskin@me.com
www.alaskarefugefriends.org

Scoping comments.pdf
155K

Emily Grimes - 10PMEA <emily.grimes@gsa.gov>

Re: Alcan Land Port of Entry

1 message

Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov>   Wed, May 10, 2023 at 1:36 PM
To: Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov>
Cc: Thomas Middendorf [redacted]

Hello Thomas,

Thank you for taking the time to reach out to GSA. If we go with the off-site option, the Land Port of Entry (LPOE) would move about 4 miles away from the original location, but there are no plans to move the Port complex any closer than that. When it comes to your questions regarding Airport Operations at Northway, those should be directed to the CBP Portland field operations office which oversees all Alaskan ports of entry (https://www.cbp.gov/contact/ports/field-office/portland).

Please let us know if you have any other comments or questions regarding the proposed modernization and expansion of the Alcan Land Port of Entry.

On Thursday, April 20, 2023 at 3:17:10 PM UTC-7 Thomas Middendorf wrote:

> Hi
>
> I am a consultant for the State of Alaska looking at options for development of airports from Tok to Northway. Residents of Tok have expressed concerns with how pilots crossing the border are handled by Customs at Northway. They have expressed interest in Customs either relocating closer to Tok or providing staff at Tok, so the pilots can clear customs at the Tok Junction Airport where there are services for pilots and their airplanes. There are no services at Northway. They are also concerned about the limited hours per day Customs is available to clear pilots at Northway.
>
> Has any consideration been given to how pilots will be cleared when entering Alaska? Has any consideration been given to relocating the border station closer to Tok?
>
> Is there any more information about the proposed new port of entry besides what is published on the gsa website at Alcan Land Port of Entry | GSA
>
> Thank you
>
> Tom
>
> **Thomas Middendorf**
> Senior Aviation Planner

DOWL

(907) 562-2000 | office
[redacted]

dowl.com

Fwd: Fw: ENVIRONMENTAL REVIEW (ER) NEW POSTING NOTIFICATION: ER23/0136 - GSA Notice of Intent To Prepare an Environmental Impact Statement for the Expansion and Modernization of the Alcan Land Port of Entry in Alcan, Alaska

10 messages

Joseph Bonk - 10PPTA <joseph.bonk@gsa.gov> Mon, Apr 10, 2023 at 1:26 PM
To: Aaron Evanson - 10PCC <david.evanson@gsa.gov>, Kimberly Gant - 10PCE <kimberly.gant@gsa.gov>, Emily Grimes - 10PMEA <emily.grimes@gsa.gov>

Aaron, Kim, Emily,

I am not sure who the right person is to ask so I included all of you. Shawn from US FWS in Alaska is asking whether the Upper Tanana Villages have been contacted about the upcoming public scoping meeting.

I told him that I think they are being notified about this and about our separate Tribal outreach but that I will need to confirm this.

I know that all of those villages were on the stakeholders list that I did the initial draft of. Were these villages contacted for this virtual public scoping?

Thanks

---------- Forwarded message ---------
From: **Bayless, Shawn** <shawn_bayless@fws.gov>
Date: Mon, Apr 10, 2023 at 12:03 PM
Subject: Fw: ENVIRONMENTAL REVIEW (ER) NEW POSTING NOTIFICATION: ER23/0136 - GSA Notice of Intent To Prepare an Environmental Impact Statement for the Expansion and Modernization of the Alcan Land Port of Entry in Alcan, Alaska
To: Joseph Bonk - 10PPTA <joseph.bonk@gsa.gov>
Cc: Tammy Sadler - PTA <tammy.sadler@gsa.gov>, Keeler, Jacqueline J <jacqueline_keeler@fws.gov>

Hi Joseph-just received this from one of our planners and wondering if I can get on the original mail list? And wondering if Upper Tanana villages have been notified? This is the first I've heard of the public scoping meeting (in two weeks) and likely will not be able to attend due to previous commitments. Thanks.

Shawn Bayless
Refuge Manager
Tetlin NWR
907-883-9401

Speak the truth as you see it, or grow to despise yourself more and more-Douglas Murray

---

From: Henszey, Bob <bob_henszey@fws.gov>
Sent: Monday, April 10, 2023 10:07 AM

To: Bjornlie, Nichole L <nichole_bjornlie@fws.gov>; Bayless, Shawn <shawn_bayless@fws.gov>
Subject: RE: ENVIRONMENTAL REVIEW (ER) NEW POSTING NOTIFICATION: ER23/0136 - GSA Notice of Intent To Prepare an Environmental Impact Statement for the Expansion and Modernization of the Alcan Land Port of Entry in Alcan, Alaska

Nichole,

CPA has no concerns with the proposed upgrades to the Alcan Land Port of Entry, unless Shawn Bayless (copied) from Tetlin NWR has concerns. Tetlin NWR has a visitor center at the Port of Entry that may be impacted. There will be a virtual public scoping meeting on Wednesday, April 26th from 5-7 pm, and more can be found on this website: https://www.gsa.gov/about-us/regions/welcome-to-the-northwest-arctic-region-10/buildings-and-facilities/alaska/alcan-land-port-of-entry. The Federal Register has a bit more into too.

Bob

Robert J. Henszey, Ph.D.

Branch Manager

Conservation Planning Assistance

US Fish & Wildlife Service

101 12th Avenue, Room 110

Fairbanks, AK 99701

Phone: 907-456-0323, Fax: 907-456-0208

Bob_Henszey@fws.gov

"Water Always Wins," Dr. Who 2009.11.15

From: Bjornlie, Nichole L <nichole_bjornlie@fws.gov>
Sent: Monday, April 10, 2023 8:36 AM
To: Henszey, Bob <bob_henszey@fws.gov>
Subject: Fw: ENVIRONMENTAL REVIEW (ER) NEW POSTING NOTIFICATION: ER23/0136 - GSA Notice of Intent To Prepare an Environmental Impact Statement for the Expansion and Modernization of the Alcan Land Port of Entry in Alcan, Alaska

Hi Bob,

Here's one for your consideration.

Happy Monday,

Nichole

Nichole Bjornlie (she/her)

Conservation Planning Assistance Coordinator

Regional Military Lands Conservation Coordinator

U.S. Fish & Wildlife Service, Alaska Region

1011 East Tudor Road

Anchorage, AK 99503

Office: 907.786.3523

From: Cochon, Grace M <grace_cochon@ios.doi.gov>
Sent: Monday, April 10, 2023 8:29 AM
To: Bella, Elizabeth M <elizabeth_bella@nps.gov>; Furr, Gabriella (Bella) <bella_furr@nps.gov>; Schofield, Leah J <leah_schofield@nps.gov>; Bjornlie, Nichole L <nichole_bjornlie@fws.gov>; Sweet, Serena E <ssweet@blm.gov>; Williams, Dee M <dmwilliams@usgs.gov>; Yazzie, Harrilene J <Harrilene.Yazzie@bia.gov>
Cc: Crane, Drew <drew_crane@fws.gov>; Fox, Lisa M <lisa_fox@ios.doi.gov>
Subject: Fw: ENVIRONMENTAL REVIEW (ER) NEW POSTING NOTIFICATION: ER23/0136 - GSA Notice of Intent To Prepare an Environmental Impact Statement for the Expansion and Modernization of the Alcan Land Port of Entry in Alcan, Alaska

FYI - please send any comments directly to GSA

--

Grace Cochon

Regional Environmental Protection Specialist

U.S. Department of the Interior

Office of Environmental Policy and Compliance

1011 E. Tudor Road

Anchorage, AK 99503

Work cell: 907-227-3781

Office: 907-786-3620

grace_cochon@ios.doi.gov

From: oepchq@ios.doi.gov <oepchq@ios.doi.gov>
Sent: Monday, April 10, 2023 5:28 AM
To: Brueggeman, Louis C <louis_brueggeman@ios.doi.gov>; Alam, Shawn K <Shawn_Alam@ios.doi.gov>; Braegelmann, Carol <carol_braegelmann@ios.doi.gov>; Kelly, Cheryl L <cheryl_kelly@ios.doi.gov>; Wilson, Wenona B <wenona.wilson@bia.gov>; Yazzie, Harrilene J <Harrilene.Yazzie@bia.gov>; Gilbert, Megan A <magilbert@blm.gov>; Paulete, Francisca (Panchita) <fpaulete@blm.gov>; Montoya, Jennifer A <jamontoy@blm.gov>; ERs, FWS HQ <FWS_HQ_ERs@fws.gov>; Stedeford, Melissa <Melissa_Stedeford@nps.gov>; Runkel, Roxanne <Roxanne_Runkel@nps.gov>; Rideout, Sterling J <srideout@osmre.gov>; Allen, Christine E <ceallen@osmre.gov>; Gordon, Alison D <agordon@usgs.gov>; Janowicz, Jon A <jjanowicz@usgs.gov>; Yazzie, Harrilene J <Harrilene.Yazzie@bia.gov>; Wilson, Wenona B <wenona.wilson@bia.gov>; oepchq@ios.doi.gov <oepchq@ios.doi.gov>; Fox, Lisa M <lisa_fox@ios.doi.gov>; Cochon, Grace M <grace_cochon@ios.doi.gov>
Subject: ENVIRONMENTAL REVIEW (ER) NEW POSTING NOTIFICATION: ER23/0136 - GSA Notice of Intent To Prepare an Environmental Impact Statement for the Expansion and Modernization of the Alcan Land Port of Entry in Alcan, Alaska

This e-mail alerts you to a Environmental Review (ER) request from the Office of Environmental Policy and Compliance (OEPC). This ER can be accessed here.

To access electronic ERs visit the Environmental Assignments website: https://ecl.doi.gov/ERs.cfm. For assistance, please contact the Environmental Review Team at 202-208-5464.

Comments due to Agency by: 05/15/23

Kimberly Gant - 10PCE <kimberly.gant@gsa.gov> Mon, Apr 10, 2023 at 1:36 PM
To: Joseph Bonk - 10PPTA <joseph.bonk@gsa.gov>
Cc: Aaron Evanson - 10PCC <david.evanson@gsa.gov>, Emily Grimes - 10PMEA <emily.grimes@gsa.gov>

I have sent letters/emails to Tanana Chiefs Conference, Northway Village and Tetlin Village. I did not send anything specifically about the public notice as the plan is for direct consultation.

[Quoted text hidden]
--

Kim Gant
Regional Historic Preservation Officer (RHPO) and Regional Fine Arts Officer (RFAO)
GSA, PBS Northwest/Arctic Region
kimberly.gant@gsa.gov
253-666-0891 Cell (preferred)
253-931-7092 Office
HP IDIQ Project Request Form

'Kopec, Brett A' via Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov> Sat, Apr 15, 2023 at 4:49 AM
Reply-To: "Kopec, Brett A" <bkopec@usgs.gov>
To: "AlcanLPOE@gsa.gov" <AlcanLPOE@gsa.gov>
Cc: "Janowicz, Jon A" <jjanowicz@usgs.gov>

Brett Kopec
USGS
Administrative Operations Assistant

From: Gordon, Alison D <agordon@usgs.gov>
Sent: Friday, April 14, 2023 3:45 PM
To: Kopec, Brett A <bkopec@usgs.gov>
Cc: Janowicz, Jon A <jjanowicz@usgs.gov>
Subject: Fw: ENVIRONMENTAL REVIEW (ER) NEW POSTING NOTIFICATION: ER23/0136 - GSA Notice of Intent To Prepare an Environmental Impact Statement for the Expansion and Modernization of the Alcan Land Port of Entry in Alcan, Alaska

The USGS has no comment at this time. Thank you.

From: oepchq@ios.doi.gov <oepchq@ios.doi.gov>
Sent: Monday, April 10, 2023 9:28 AM
To: Brueggeman, Louis C <louis_brueggeman@ios.doi.gov>; Alam, Shawn K <Shawn_Alam@ios.doi.gov>; Braegelmann, Carol <carol_braegelmann@ios.doi.gov>; Kelly, Cheryl L <cheryl_kelly@ios.doi.gov>; Wilson, Wenona B <wenona.wilson@bia.gov>; Yazzie, Harrilene J <Harrilene.Yazzie@bia.gov>; Gilbert, Megan A <magilbert@blm.gov>; Paulete, Francisca (Panchita) <fpaulete@blm.gov>; Montoya, Jennifer A <jamontoy@blm.gov>; ERs, FWS HQ <FWS_HQ_ERs@fws.gov>; Stedeford, Melissa <Melissa_Stedeford@nps.gov>; Runkel, Roxanne <Roxanne_Runkel@nps.gov>; Rideout, Sterling J <srideout@osmre.gov>; Allen, Christine E <ceallen@osmre.gov>; Gordon, Alison D <agordon@usgs.gov>; Janowicz, Jon A <jjanowicz@usgs.gov>; Yazzie, Harrilene J <Harrilene.Yazzie@bia.gov>; Wilson, Wenona B <wenona.wilson@bia.gov>; oepchq@ios.doi.gov <oepchq@ios.doi.gov>; Fox, Lisa M <lisa_fox@ios.doi.gov>; Cochon, Grace M <grace_cochon@ios.doi.gov>
Subject: ENVIRONMENTAL REVIEW (ER) NEW POSTING NOTIFICATION: ER23/0136 - GSA Notice of Intent To Prepare an Environmental Impact Statement for the Expansion and Modernization of the Alcan Land Port of Entry in Alcan, Alaska

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Emily Grimes - 10PMEA <emily.grimes@gsa.gov> Mon, Apr 17, 2023 at 8:11 AM
To: Joseph Bonk - 10PPTA <joseph.bonk@gsa.gov>, Aaron Evanson - 10PCC <david.evanson@gsa.gov>, Kimberly Gant - 10PCE <kimberly.gant@gsa.gov>

Thank you Kim.

Aaron - When it comes to Bob Henszy mentioning the visitor's center at the LPOE, I know there is a visitors center miles down the road, but did not recall one being at the LPOE. Is his statement correct?

Emily Grimes
Environmental Program Manager
GSA, PBS, Northwest/Arctic Region
1301 A Street, Suite 610
Tacoma, WA 98402
Email: emily.grimes@gsa.gov
Cell: 253-394-4026

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Aaron Evanson - 10PCC <david.evanson@gsa.gov> Mon, Apr 17, 2023 at 1:49 PM

To: Emily Grimes - 10PMEA <emily.grimes@gsa.gov>
Cc: Joseph Bonk - 10PPTA <joseph.bonk@gsa.gov>, Kimberly Gant - 10PCE <kimberly.gant@gsa.gov>

Yes, that's correct; the only visitor center out there is for the Tetlin Wildlife Refuge and it's run by Fish and Wildlife Services.

[Quoted text hidden]

--

GSA U.S. General Services Administration

Aaron Evanson (he/him)
Capital Project Manager
Ph: 206.445.5876
david.evanson@gsa.gov
Out of Office: 10 April - 14 April 2023

Emily Grimes - 10PMEA <emily.grimes@gsa.gov> Mon, Apr 17, 2023 at 2:19 PM
To: Aaron Evanson - 10PCC <david.evanson@gsa.gov>

Thank you

Emily Grimes
Environmental Program Manager
GSA, PBS, Northwest/Arctic Region
1301 A Street, Suite 610
Tacoma, WA 98402
Email: emily.grimes@gsa.gov
Cell: 253-394-4026

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Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov> Tue, Apr 18, 2023 at 5:22 PM
To: Alcan LPOE Project Inbox <AlcanLPOE@gsa.gov>
Cc: "Kopec, Brett A" <bkopec@usgs.gov>, "Janowicz, Jon A" <jjanowicz@usgs.gov>

Thank you Brett.

[Quoted text hidden]

Marshall Popkin - PTA <marshall.popkin@gsa.gov> Tue, May 9, 2023 at 8:28 AM
To: Emily Grimes - 10PMEA <emily.grimes@gsa.gov>

Just going thru my emails (there are a lot!)... please make sure that all comments (even "no comments") get back to Solv for inclusion in the project record.

Thank you!
Marshall

[Quoted text hidden]

--

Marshall B. Popkin

National NEPA Project Liaison
marshall.popkin@gsa.gov
(202) 919-0026

Real Property Valuation Division
Office of Portfolio Management and Customer Engagement
Public Buildings Service
U.S. General Services Administration

Emily Grimes - 10PMEA <emily.grimes@gsa.gov> Tue, May 9, 2023 at 8:43 AM
To: Marshall Popkin - PTA <marshall.popkin@gsa.gov>

Yes, I know there are a lot of emails since you've been gone. I planned on providing everything to Solv May 16th, due to the comment period ending May 15th for Alcan.

Emily Grimes
Environmental Program Manager
GSA, PBS, Northwest/Arctic Region
1301 A Street, Suite 610
Tacoma, WA 98402
Email: emily.grimes@gsa.gov
Cell: 253-394-4026

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Marshall Popkin - PTA <marshall.popkin@gsa.gov> Tue, May 9, 2023 at 8:46 AM
To: Emily Grimes - 10PMEA <emily.grimes@gsa.gov>

Sounds good :)
[Quoted text hidden]

Transcript of Spoken Comments Received at the Alcan Public Scoping Meeting on 4/26/2023

Table 1: List of Speakers and Affiliation

Name of Speaker	Affiliation	Comment Code (If Applicable)
Emily Grimes	GSA	N/A
Aaron Evanson	GSA	N/A
Susan Sturges	Public	A5
Marcy Good	Public	P4
Leon Kolankiewicz	Solv	N/A
Robbie Baldwin	Solv	N/A

Speaker: Robbie Baldwin, Solv

00:58:56.000 --> 00:58:57.000

Susan, would you like to talk? Feel free to unmute yourself?

Speaker: Susan Sturges, EPA

00:58:57.000 --> 00:59:02.000

Thank you. Yeah, I actually don't have comments. I just have some questions. If that's okay.

Speaker: Robbie Baldwin, Solv

00:59:02.000 --> 00:59:03.000

Perfectly fine.

Speaker: Susan Sturges, EPA

00:59:03.000 --> 00:59:46.000

Okay, great. So I was curious. If you could talk a little bit about the proposal to have the land port of entry relocated. Was there, I'm just. I'm just wondering if there's just some, if there are specific if there's like attractiveness, or if what the perks are, if you will, like, what kind of made you decide to to potentially relocate the land port of entry, I'm just wondering if there's like cost savings or time savings or reduction with impacts. But I'm just trying to have a better understanding of the the decision behind including a relocated port of entry facility.

Speaker: Aaron Evanson, GSA

00:59:46.000 --> 01:01:36.000

I can take that one. That's a really good question, Susan. So when we did the feasibility, study and looked at the difference between staying on site or moving, one of the huge draws of actually moving offsite is that we can keep all of the housing onsite. We wouldn't have to stage it separately or move people out as we're trying to rebuild that housing, and also it keeps the port operations functional 24/7, without having to again build temporary facilities at the border station now or try and phase the construction differently we can start from starts from scratch, and we can build the whole thing. While everybody that is associated with the border crossing as of right now, all the officers and their family, they don't get displaced, and so building a whole a whole brand new site is actually from a phasing standpoint preferred because like I said we wouldn't have to relocate people, we wouldn't have to pause any kind of operations at the port itself, or we wouldn't have to figure out how to phase all that stuff, you know, over multiple seasons and and then we could pick up and move everybody when everything's done and then demo that existing site, and we are still in discussions with the Department of Natural Resources and everything else about how we would transition that existing site. But that's for another year. To be perfectly honest, we've got, we've got a lot of time until that's happening. So we're we have started the conversations and everything else like that. But that's the biggest thing. First is the phasing of it, and the second is just the continuity of operations for CBP themselves.

Speaker: Marcy Good, Public

01:01:36.000 --> 01:01:46.000

So does that push the project back? If there's a second site.

Speaker: Aaron Evanson, GSA

01:01:46.000 --> 01: 02:07.000

It extends the project on, on our preliminary estimates, we would be able to be done with a complete facility on on at the offsite location by about 2028, and it looks like right now, and these are very preliminary estimates, but we wouldn't be done with the current location until about 2030.

Speaker: Marcy Good, Public

01:02:07.000 --> 01:02:10.000

Got it.

Speaker: Aaron Evanson, GSA

01:02:10.000 --> 01:02:43.000

And again, that's because we would have to phase things differently. We would have to figure out how to make sure that we have the continuity of operations, bring any temporary housing, or temporary structures for these facilities while we're built rebuilding them. So it just makes it a little bit more difficult. And as some folks here might know, there's only about a 3 to 4 month building season at Alcan because of the temperatures, and because of the subarctic, you know, the climate that we have. Good question, Susan. Thank you.

Speaker: Susan Sturges, EPA

01:02:43.000 --> 01:03:00.000

No, thank you. That's helpful. And if no one does wanna speak or has other questions, I just have a couple of other questions as well. But I'll just pause for a moment. I don't, I don't want to hog up the time.

Speaker: Emily Grimes, GSA

01:03:00.000 --> 01:03:02.000

I think you're good, Susan.

Speaker: Susan Sturges, EPA

01:03:02.000 --> 01:03:28.000

Okay. Cool. Thank you. You know, I'm curious. You mentioned that you're in current discussions with co-locating operations with Canada Border Service Agency, and I was curious how that could, if that does happen, how that potentially impacts the footprint construction like, how do things change from what you currently propose?

Speaker: Aaron Evanson, GSA

01:03:28.000 --> 01:05:55.000

Sorry I was on mute. That's another great question. At this point in time, these discussions are very preliminary still, and the both Governments, Canada and the United States are talking about how that kind of policy would affect joint operations. Typically speaking, the US and Canada have shared border operations in the past, but those usually span the border, and one half of the building is built over the border itself, and one half of the building is in Canada, and one half of the building is in the United States and Canadian officers operate on the Canada side, and US Office, officers operate on the US Side. And so one that's one of the policy issues that we're going to be working out with CBSA is, what does it mean to have full-time Canadian officers operating on US soil? It's a very good question, and it's something that we've talked about. But both Canada and the US are very interested in making this a joint operation. As far as the facility itself, it's not going to change drastically. There's going to be some requirements that both CBP will have, and CBSA will have, and there might be some small amount of square footage that they can't share. But one of our focuses on this is to actually treat this as a fully co-located location. So as opposed to CBP having specific areas that are only for CBP and CBSA, having only areas that are for CBSA, we're trying to, we're trying to match those. We're trying to make sure that we're looking at this as holistically as possible and determining all of the spaces that can be shared at this point in time. We are not expecting that CBSA’s families of the officers would be moving to that location, so it would only be operational personnel that are there for a short period of time as opposed to the CBP families that are living there. The CBSA families will still live in Beaver Creek, and the officers will travel that 20 miles from Beaver Creek to Alcan to actually do their work. So hopefully. That answers your question. No problem.

Speaker: Susan Sturges, EPA

01:05:55.000 --> 01:06:12.000

Yeah, that was super helpful. Thank you. And so, yeah, and I was just entry is away from the border, this project doesn't require, like a Department of State Presidential permit, right? Or does it?

Speaker: Aaron Evanson, GSA

01:06:12.000 --> 01:07:26.000

I don't know that answer. There are. There are existing documents, and there we have some precedent for this, because there are, for example, there are US customs and Border protection officers that work out of the Vancouver Airport the Vancouver BC Airport for example. And they do what's called a preclearance. And so we're taking that precedent of the preclearance and we're actually looking to apply it towards this facility. There are limitations on that preclearance that have already been approved, you know, discussed and approved by both governments. And so we're gonna have to work through some of those. But even though this is a different avenue, because, like I said, those preclearances normally operate at airports and railroads, they haven't been applied to land ports of entry or border stations as been more normally called especially one that's fully on US soil. Like I said, we have precedents with the airports, but we need to work on that policy as far as it associates with the border station itself.

Speaker: Leon Kolankiewicz, Solv

01:07:26.000 --> 01:08:08.000

Suzanne, this is Leon here. I've I've worked on EIS's for the US Department of energy that involved looking at transmission lines coming from Canada into the United States. And so here is a major piece of public energy infrastructure crossing the border right. And yes, those did require presidential permits, and I think that's what the that was the, that was the action that was being investigated, or that was the NEPA nexus, or linkage. I don't think as Aaron was saying, I don't think this would fall into that same category as something that is exclusively on the US side of the border.

Speaker: Susan Sturges, EPA

01:08:08.000 --> 01:09:11.000

Okay, Great! Thank you! And then I think my final question is about whether or not the project requires any improvement to existing and infrastructure, like, for example, would Federal highways Administration or Alaska department of transportation get involved. Are there going to be improvements, or changes to to the highway and then I'm also curious, and I think you might have answered my question like, if it is potentially relocated, that doesn't change where you're crossing the border right? You would still just be going in the same direction. It just would be further away, or in a different location. But I was just curious about other infrastructure, and whether or not any of that would have to be improved or expanded upon or relocated. Yeah. And again, like, whether or not there are other Federal agencies besides, like the corps of engineers that would be involved in the decision and potentially doing a NEPA or being like a

Speaker: Aaron Evanson, GSA

01:09:11.000 --> 01:11:05.000

From my understanding. Susan, aside from slight variations in the highway itself, in the location or the or the current routing of the highway, there might be some changes to that, but it would be very minimal in the sense that it would be on the footprint of the of the facility itself. So we might have to reroute, you know, some entry lanes, and in order to fit one example, that I can think of right now is very slight rerouting of the highway at the border if we do stay in the current location to accommodate that new port operations building. But again, these are very preliminary design decisions. The feasibility study was in some sense is made in a vacuum because we didn't have the NEPA study to build that feasibility, study off of. So there's still a lot of exploration that we have that's associated with this and some of that is any community involvements that are required, any any input again, like you said from both State and Federal agencies. As far as as road or road bed or drainage, all that kind of stuff, the necessary improvements to be done, based off of either one of those locations. Do we still don't have the preliminary findings on environmental impacts at that old gas station. You know, that might preclude us from actually building in that location. If there's underground storage tanks that are blooming, you know, if they're leaking, we don't know that, and that's part of the NEPA study, and that all of that information a lot of that information that you asked about we'll be fleshed out through the NEPA study.

Speaker: Susan Sturges, EPA

01:11:05.000 --> 01:11:09.000

Great. Thank you for all the helpful information I appreciate it!

Speaker: Aaron Evanson, GSA

01:11:09.000 --> 01:11:33.000

Of course. Any other questions, I'm happy to field them. I'm here. Emily's here. We've got all sorts of people on.

Speaker: Robbie Baldwin, Solv

01:11:33.000 --> 01:11:51.000

I also just wanted to mention, really quick, that I dropped a link in the chat for everybody is a link to a Google form which is our online version of the comment form. Please feel free to fill it out online if you would like, it will all go to the same place. So thanks guys.

Speaker: Aaron Evanson, GSA

01:11:51.000 --> 01:11:57.000

That's great, Robbie. Thank you.

Speaker: Emily Grimes, GSA

01:11:57.000 --> 01:13:16.000

Well, I know we presented quite a bit today and in a you know, I went everybody to just soak everything in and hopefully when we get the presentation posted, you feel you wanna re-watch it again, or you can fast forward it this time. But also the handouts, hopefully those are helpful and please again, just you know, you can email email us at that AlcanLPOE@gsa.gov email address and pretty much majority of the GSA staff is on, not the majority, the team, the GSA team handling these projects are on there and will respond to you pretty quickly in email as well. But again, you know, I wanna appreciate everyone for taking the time for joining, and please do share as well with your colleagues or with your neighbors and your friends, and like I said before anybody that you feel that wasn't able to be here. Thank you. And then, so, Robbie, I wouldn't ask if you've been well, I know you were keeping track. Did anybody join after we got started since then, or pretty much everyone was on here. Just so we need to go through.

Speaker: Robbie Baldwin, Solv

01:13:16.000 --> 01:13:20.000

There were a few folks that joined a couple of slides in, but for the most part here.

Speaker: Emily Grimes, GSA (Reading Written Question from Susan Sturges)

01:13:20.000 --> 01:14:13.000

Okay, okay. And then for those that if you did join in, you know a few slides in, please let us know. Just unmute yourself if you want us to go back to any slide, and we'll gladly do that. We we ended a lot sooner than we thought we would. We have a whole hour left at least. Oh, we have a

Speaker: Robbie Baldwin, Solv

01:14:13.000 --> 01:14:18.000

I saw that give me 1 s to pull up the schedule, so I can give you the right answer.

Speaker: Emily Grimes, GSA

01:14:18.000 --> 01:14:48.000

Okay.

Speaker: Robbie Baldwin, Solv

01:15:50.000 --> 01:16:24.000

Alrighty. It is scheduled for May of 2024. No problem.

Speaker: Emily Grimes, GSA

01:16:24.000 --> 01:16:33.000

Sorry about that. I was on mute. I was just saying that with we will be staying on, but please feel free to log off.

APPENDIX G: INDEX OF COMMENTS

Commenter	Date	Name	Affiliation	Nature of comment	Comment method
P1	5/1/2023	Davyd Betchkal	Public	Light Pollution: importance of minimizing light impact	Email
P2	5/10/2023	John Brown	Public	Outside the Scope of the EIS: need for ample public restrooms	Email
P2	5/10/2023	John Brown	Public	Outside the Scope of the EIS: need for cellphone service coverage	Email
A1	4/10/2023	Shawn Bayless	Tetlin NWR	Meaningful Public Engagement: notification of project to Upper Tanana villages	Email
A2	4/18/2023	Harvey Templeton	Alaska DNR, DMLW	Request for Information: request for additional information on proposed project including project plans/maps	Email
A3	4/18/2023	Gary Mendivil	Alaska DEC	Request for Information: GIS coordinates for contaminated site search	Email
A4	4/19/2023	Kerri Martin	Alaska DOT&PF	Request for Information: public meeting and project description	Email
P3	4/20/2023	Thomas Middendorf	Public	Request for Information: any information about the proposed new port of entry beyond the details currently available on the GSA website	Email
P3	4/20/2023	Thomas Middendorf	Public	Outside the Scope of the EIS: customs for aircrafts moving to Tok	Email
A5	4/26/2023	Susan Sturges	EPA	Request for Information: why a second site?	Scoping Meeting
A5	4/26/2023	Susan Sturges	EPA	Request for Information: how does communication with CBSA affect the project?	Scoping Meeting
A5	4/26/2023	Susan Sturges	EPA	Request for Information: does a joint project between CBP and CBSA require a presidential permit or other special consideration?	Scoping Meeting
A5	4/26/2023	Susan Sturges	EPA	Request for Information: will this require collaboration between DOT/Alaska DOT to update highway?	Scoping Meeting
A5	4/26/2023	Susan Sturges	EPA	Request for Information: (cont. previous comment) if so, will there be additional NEPA consideration?	Scoping Meeting
A5	4/26/2023	Susan Sturges	EPA	Request for Information: EIS draft date	Scoping Meeting
P4	4/26/2023	Marcy Good	Public	Request for Information: whether the off-site location would result in project delays.	Scoping Meeting
P5	5/12/2023	David Raskin	Friends of Alaska National Wildlife Refuges	Recreational and Subsistence Resources: Alt. 1 impact on Airs Hill Trailhead and parking lot	Email
P5	5/12/2023	David Raskin	Friends of Alaska National Wildlife Refuges	Recreational and Subsistence Resources: impediments to accessing Tetlin by firearm-carrying visitors	Email
P5	5/12/2023	David Raskin	Friends of Alaska National Wildlife Refuges	Recreational and Subsistence Resources: boat access to Desper and Scottie Creeks	Email
P5	5/12/2023	David Raskin	Friends of Alaska National Wildlife Refuges	Recreational and Subsistence Resources: foot access to historic cabin	Email

A6	5/16/2023	Rebecca Chu	EPA	Water Resources: DEIS identify discharges to WOTUS likely to occur during construction	Email
A6	5/16/2023	Rebecca Chu	EPA	Permits: DEIS should identify permits that may need coordination with USACE or the state of Alaska, including the permits described in Section 303, 401, and 404 of the CWA.	Email
A6	5/16/2023	Rebecca Chu	EPA	Water Resources: DEIS should include a complete analysis of water resources that ensures that the project is consistent with the requirements of the CWA, and describe mitigation measures if necessary	Email
A6	5/16/2023	Rebecca Chu	EPA	Permits: DEIS identify NPDES permits for WOTUS impacts	Email
A6	5/16/2023	Rebecca Chu	EPA	Air Quality: DEIS identify construction air pollution emissions and accordance to state/federal limits	Email
A6	5/16/2023	Rebecca Chu	EPA	Air Quality: DEIS identify nearby sensitive populations	Email
A6	5/16/2023	Rebecca Chu	EPA	Climate Change: DEIS must have consideration of potential climate impacts, mitigation, and adaptation issues.	Email
A6	5/16/2023	Rebecca Chu	EPA	Biological Resources: DEIS should identify baseline, potential disturbances, mitigation options, potential invasives introduction, and post-project restoration options	Email
A6	5/16/2023	Rebecca Chu	EPA	Environmental Justice: provide disparate health effects and provide active involvement to communities	Email
A6	5/16/2023	Rebecca Chu	EPA	Meaningful Public Engagement: suggested providing robust and comprehensive public outreach and outlined strategies to do so	Email
A6	5/16/2023	Rebecca Chu	EPA	Meaningful Public Engagement: Tribal Consultation	Email
A6	5/16/2023	Rebecca Chu	EPA	Meaningful Public Engagement: Traditional Ecological Knowledge	Email
A6	5/16/2023	Rebecca Chu	EPA	Cumulative Impacts: DEIS should include an assessment of cumulative impacts associated with the proposed action	Email
A6	5/16/2023	Rebecca Chu	EPA	Biological Resources: Endangered Species	Email

APPENDIX B: PUBLIC COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT AND U.S. GENERAL SERVICES ADMINISTRATION RESPONSES

PUBLIC COMMENTS ON ALCAN LPOE DRAFT EIS AND GSA RESPONSES

INTRODUCTION

The public has a critical role in helping the U.S. General Services Administration (GSA) understand the environmental impacts of the Proposed Action analyzed in the Environmental Impact Statement (EIS) for the Alcan Land Port of Entry (LPOE) Expansion and Modernization Project. Public participation promotes transparency, facilitates better decision-making, and helps federal agencies identify data gaps and sources of potential concern regarding the environmental impacts of a proposed action.

GSA invited the public to review and comment on the Draft EIS with newspaper ads, letters to interested parties, project website, and social media posts. Newspaper ads were run in the *Fairbanks Daily News-Miner*, *Delta Wind*, and *Anchorage Daily News*, and interested party letters were mailed and emailed on February 26, 2024. The public comment period started on February 26, 2024 with the publication of a Notice of Availability that ran in the Federal Register, through April 11, 2024. GSA hosted a hybrid public meeting consisting of an in-person component in Northway, Alaska and a virtual component on Zoom on Tuesday March 12, 2024 from 6:00 to 8:00 PM Alaska Daylight Time. A total of 11 people attended the public meeting in addition to personnel from GSA, CBP, and Solv. The hearing format consisted of an approximately 1-hour presentation followed by an open comment session for the public to ask questions or provide comments on the project. The presentation provided background on the project and an explanation of the NEPA process. The alternatives and impacts analysis were presented, including mitigation measures. GSA recorded the presentation and posted it to the GSA YouTube channel and the project website at: https://www.gsa.gov/alcan.

Comments on the Draft EIS were received via mail, email, and during the public comment portion of the March 12, 2024 public meeting. A total of nine commenters submitted 60 different comments (i.e., many commenters submitted more than one comment). The comments addressed a range of issues presented in **Table 1**.

Table 1. Commenters and Comments by Subject – Draft EIS Public Comment Period

Subject	Number of Agency Commenters	Number of Public Commenters [a]	Total Number of Comments
Air Quality	1	0	4
Alternatives	1	0	2
ANILCA Section 810	2	0	6
Biological Resources	1	1	2
Climate Change	1	1	10
Consultation and Coordination	2	0	2
Cultural and Tribal Resources	0	2	3
Environmental Justice	1	0	3
NEPA Process	1	1	2
Outside the Scope of the EIS	1	1	7
Pollution	1	0	1
Proposed Action	2	4	12

Subject	Number of Agency Commenters	Number of Public Commenters [a]	Total Number of Comments
Public Outreach	0	1	1
Socioeconomic Resources	0	1	1
Water Resources	1	0	3
Wetlands	1	0	1

[a] Public commenters include individual members of the public

GSA has thoroughly considered all of the input received and has responded to the public comments in this document. Revisions to the Final EIS have been made in response to comments where appropriate.

Response To Public Comments

This section is organized alphabetically by the name of the organization or private individual that submitted a comment either verbally at the public meeting or in writing. GSA reviewed all comments and categorized them by subject, which enabled GSA to provide consistent responses to similar comments.

Each subsection below begins with the original comment submission as received by GSA. Following each comment is GSA's response.

Alaska Department of Natural Resources, Catherine Heroy

Letter Comments, 4/11/2024

ANILCA: The Alaska National Interest Lands Conservation Act (ANILCA), passed as Public Law 96-487 by Congress in 1980, applies special provisions to land management in Alaska, in part to preserve traditional and customary uses of the land, and to provide protection for subsistence users. One of those provisions is that federal actions affecting public lands must be reviewed for their impacts to subsistence uses, often referred to as an “ANILCA 810 analysis”...

After compliance with the procedural requirements of ANILCA 810, the federal agency “may manage or dispose of public lands under [its] primary jurisdiction for any of those uses or purposes authorized by this Act or other law.” (ANILCA 810(d))

> **GSA Response**: GSA has completed a Section 810 analysis in coordination with the USFWS, and the analysis has been included as an appendix to the Final EIS. GSA has shared a copy of the USFWS-approved report with the Alaska DNR.

ANILCA: The Tetlin NWR, the Tanana Chiefs Conference, and the Friends of Alaska Wildlife Refuges all provided comments indicating potential impacts, some significant, to hunting access and subsistence resources. Given this information, the GSA should consider the need to give notice and hold a subsistence hearing, under ANILCA 810, in the project vicinity. The 810 process must be completed, and the results included, prior to issuing the decision documents. The State requests an opportunity to review the draft 810 analysis when it is prepared.

> **GSA Response**: GSA has completed a Section 810 analysis in coordination with the USFWS, and the analysis has been included as an appendix to the Final EIS. The evaluation concluded that the proposed action would not result in a significant restriction of subsistence uses and needs on federal lands. Therefore, neither public hearings nor further analysis under ANILCA Section 810 is required. GSA has shared a copy of the USFWS-approved report with the Alaska DNR.

ANILCA: The Tetlin NWR may be a good source of information regarding how federal agencies prepare an 810 Analysis. If Tetlin NWR ultimately leases or transfers lands to the GSA, they will need to prepare a separate 810 Analysis before that action can be carried out.

> **GSA Response**: GSA has completed a Section 810 analysis in coordination with the USFWS Tetlin NWR, and the analysis has been included as an appendix to the Final EIS. GSA has shared a copy of the USFWS-approved report with the Alaska DNR.

ANILCA: Additionally, Section 103(b) of ANILCA requires, in the event of a minor change (defined as less than 23,000 acres) to the boundary of a Conservation System Unit designated by ANILCA, such as the Tetlin NWR, the Secretary of the Interior must provide Congress reasonable notice in writing before making any boundary adjustments. We recommend carrying out additional dialogue with the Tetlin NWR regarding the proposed boundary change. Please include information about this process in your decision documents.

> **GSA Response**: GSA is working with the Tetlin NWR and will coordinate any needed agreements with the USFWS. GSA will comply with ANILCA and all USFWS requirements related to the use of NWR lands for the proposed helicopter landing zone.

Consultation and Coordination: ADF&G manages fish and wildlife on all lands in Alaska. Maintaining access to hunting, fishing, and trapping areas around the proposed site expansion is important to ADF&G. Should the proposed project impact access to these areas we request the agencies work with ADF&G staff to provide alternative access for hunters, anglers, and trappers. ADF&G notes the GSA failed to consult with ADF&G during preparation of this DEIS. Since ADF&G is the manager of fish and wildlife populations on all lands within the State, the GSA should consult with ADF&G on future project actions.

> **GSA Response**: The proposed project would not implement any new restrictions on hunter, angler, or trapper access in the area of the LPOE. As described in Section 3.9.2 of the Final EIS, the presence of construction vehicles and equipment could temporarily affect the accessibility and quality of recreational resources during construction.
>
> GSA has updated the state agency distribution list to include the ADF&G for the Alcan LPOE Expansion and Modernization EIS project.

Pollution: DEC is responsible for protecting human health and the environment by managing the cleanup of contaminated soil and groundwater in Alaska. DEC notes that there was a contaminated site located in this area, referenced as the Seaton Roadhouse site. Information about the site and cleanup process is available at https://dec.alaska.gov/Applications/SPAR/PublicMVC/CSP/SiteReport/4446. If more contaminated sites are identified during site studies or construction of the project, additional coordination with DEC would be needed.

> **GSA Response**: See Section 3.12 of the Final EIS for a discussion of the potential effects of hazardous waste in the vicinity of the Alcan LPOE. Given the distance from the Seaton Roadhouse site to the Alcan site and DEC's determination as "Cleanup Complete", there would be no effect of contamination on the Alcan site. If additional contaminated sites are identified during project construction, GSA will coordinate with Alaska DEC.

Proposed Action: DNR has management authority for State lands (including the land, water, tidelands, and shorelands of navigable waters within the State). This authority includes management of navigable waters, tidelands, and shorelands within and adjacent to the boundaries of federal lands, including Conservation System Units created under ANILCA. DNR manages use of these lands through Generally Allowed Uses (11 AAC 96.020 subject to 11 AAC 96.025) and through commercial and recreational land use authorizations. If the project expands or shifts onto State lands or waters, additional coordination with DNR would be needed.

> **GSA Response**: GSA will coordinate with the Alaska DNR if the project expands or shifts onto state lands or waters. Such expansion is not anticipated for the project at this time.

Proposed Action: DOT&PF is responsible for maintenance and upkeep of many roadways in Alaska, including much of the Alaska Highway near and in the proposed project area. The State requests that any impacts to the highway right-of-way be coordinated with the State DOT&PF.

> **GSA Response**: GSA will coordinate with the Alaska DOT&PF if there are any impacts to the highway right-of-way. Such impacts are not anticipated for the project at this time.

AMPHIBIAN REFUGE, ERIC JOHNSON

Letter Comments, 2/27/2024

Proposed Action: Amphibian populations are declining worldwide, and amphibians are experiencing high extinction rates due to habitat loss, chytrid fungus, pollutants, pesticides, and climate change. Amphibians are the most threatened class of vertebrates.

We recommend that the Alcan Land Port of Entry Expansion and Modernization Project include renewable energy facilities to minimize climate change effects. Such facilities may include solar panels, geothermal facilities, micro-turbines, batteries, and electric-vehicle charging stations.

> **GSA Response**: As part of the modernization and expansion of the Alcan LPOE, GSA would intend to achieve certification under the Leadership in Energy and Environmental Design (LEED®) green building rating system. All proposed facility and infrastructure improvements would incorporate sustainable and climate-resilient design and would consider, where feasible, renewable energy technologies. In addition, new buildings would implement water and energy conservation measures into their design and operations. As part of the modernization and expansion of the Alcan LPOE, GSA intends to achieve certification under the Leadership in Energy and Environmental Design (LEED®) green building rating system. All proposed facility and infrastructure improvements would incorporate sustainable and climate-resilient design and would consider, where feasible, renewable energy technologies. In addition, new buildings would implement water and energy conservation measures into their design and operations.

Biological Resources: The wood frog (*Lithobates sylvaticus*) occurs in eastern Alaska and has unique physiological attributes that allows it to withstand freezing temperatures. Please conduct field surveys to determine if the wood frog is present or absent in the project area and drainages that receive stormwater runoff from the project area. If the wood frog is present, measures should be developed and implemented to minimize project effects on the wood frog.

> **GSA Response**: The existing Alcan LPOE, where most construction would occur, consists of developed and disturbed land with several buildings and impervious surfaces and limited, disturbed roadside habitat. The portion of Tetlin National Wildlife Refuge proposed for use includes a cleared area and a gravel road. Although suitable wood frog habitat is limited within the proposed project site, GSA would implement construction best management practices to minimize impacts to wildlife and to wetlands in the vicinity of the LPOE. Potential stormwater discharges would be minimized through implementation of a Stormwater Pollution Prevention Plan and would adhere to the requirements of the Alaska Construction General Permit that would be obtained prior to project initiation.

Public Outreach: Please add me to your mailing list.

GSA Response: GSA has added this commenter to the mailing list.

ENVIRONMENTAL PROTECTION AGENCY, ANDREW BACA

Letter Comments, 4/11/2024

Water Resources: The DEIS identified considerations for the development of a stormwater pollution prevention plan required under the National Pollutant Discharge Elimination System permit. The DEIS also identified that vehicle processing operations could "introduce small amounts of contaminants from leaked oil or fuel to surface waters via stormwater runoff." To address potential water quality impacts from potential discharges of pollutants to Waters of the United States (WOTUS), EPA recommends the FEIS:

- Evaluate the potential for new discharge points to groundwater from the proposed grading and leveling of the hillside and from preemptively thawing permafrost.

GSA Response: The proposed action has been modified and no longer includes grading of the hillside. The Final EIS has been updated to reflect that grading may occur on the existing LPOE property and on disturbed areas of the Tetlin NWR property south of the Alaska Highway. Grading on the Tetlin NWR property would be limited to the dirt access road and the location of the proposed helicopter landing zone.

The Final EIS has been updated and no longer suggests preemptive thawing of permafrost as a mitigation measure given the depth (360 feet) to permafrost and no anticipated effects to this resource.

Water Resources: To address potential water quality impacts from potential discharges of pollutants to Waters of the United States (WOTUS), EPA recommends the FEIS:

- Identify how potential discharges would be managed and minimized, and any potential modifications to permits.

GSA Response: As part of the design, GSA will identify specific discharge points which will enable GSA to determine the necessary management and mitigation measures to minimize potential discharges of pollutants.

Prior to construction, GSA will obtain an Alaska Construction General Permit to satisfy NPDES. A SWPPP is a required element of the Construction General Permit application, and the SWPPP will document the Best Management Practices (BMPs) to be used on the construction site to reduce or prevent the discharge of pollutants. The SWPPP will also identify where all BMPs will be installed, the site's discharge points, responsibility for implementing the SWPPP, and training and maintenance records. Please refer to Section 3.4.2.1.1 of the Final EIS for additional information.

Water Resources: To address potential water quality impacts from potential discharges of pollutants to Waters of the United States (WOTUS), EPA recommends the FEIS:

- Evaluate how the project design could prevent leaked oil or fuel from being introduced to surface waters via stormwater runoff.

GSA Response: The design will incorporate stormwater BMPs, in compliance with federal, state, and local laws to minimize the introduction of leaked oil or fuel to surface waters via stormwater runoff. Please refer to Section 3.4.2.1.1 of the Final EIS for additional information.

Environmental Justice: EPA appreciates that GSA evaluated an action alternative that incorporated feedback from Tribes and indigenous populations to minimize impacts to communities with EJ concerns. The DEIS identifies disproportionate impacts to Tribes and indigenous populations under Alternative 1, as the presence of Alcan LPOE, as well as the establishment of the international border, results in subsistence impacts through continued access restrictions to traditional and modern fishing camps. EPA recommends the FEIS address the disproportionate impacts identified in the DEIS in accordance with Executive Order 14096, Revitalizing Our Nation's Commitment to Environmental Justice for All and the Council on Environmental Quality's (CEQ) guidance, Environmental Justice: Guidance Under the National Environmental Policy Act (CEQ EJ Guidance).

> **GSA Response**: GSA will continue to consult with Alaska Native Villages and Alaska Native Corporations with interests in the project area regarding potential changes that could affect access to nearby fishing camps. Please refer to Section 3.7.2 of the Final EIS for a discussion of impacts of the existing LPOE on communities with EJ concerns.

Environmental Justice: EPA recommends the FEIS include conducting meaningful engagement with impacted communities, as described in Promising Practices for EJ Methodologies in NEPA reviews and EO 14096, to develop specific mitigation measures that address the disproportionate impacts identified in the DEIS.

> **GSA Response**: GSA consulted with Northway in preparation of the EIS. GSA is open to further consultation if requested by the TCC or Northway.

Environmental Justice: EPA recommends the FEIS include collaborating with impacted communities to develop additional mitigation measures to address these identified potential harms. An example of potential mitigation includes providing training on violence prevention and reporting regarding violence towards indigenous women. EPA is available to provide support in responding to this recommendation.

> **GSA Response**: All contractors employed by GSA would be subject to a background check and only passing candidates would be allowed to work on the project, per Section 3.7.2.1.2 of the Final EIS. GSA will reach out to EPA regarding this recommendation.

Air Quality: EPA notes that rural Alaska may demonstrate unique circumstances that can bring reliance on certain fossil fuel types. EPA recommends the FEIS clarify the reason for Alcan LPOE utilizing high sulfur diesel fuel in its generators and boilers. EPA acknowledges that Alcan LPOE has upgraded its generator engines to Tier 3 engines, which emit lower PM relative to engines built in the late 1980s to mid-1990s.

> **GSA Response**: The Final EIS has been updated to reflect that the LPOE uses low sulfur diesel fuel in its generators and boilers. This change occurred following the development of the Feasibility Study that was used to produce the Draft EIS.

Air Quality: While several factors complicate the implementation of technologies to further reduce sulfur dioxide and other criteria pollutant emissions from high sulfur diesel in rural Alaska, fuel switching to low sulfur diesel and the adoption of renewables is already widespread in rural Alaska establishments. EPA recommends the FEIS:

- Consider options to reduce criteria pollutant emissions, as discussed in greater detail in the Routine Emissions section of this document.

> **GSA Response**: The Final EIS has been updated to reflect that the LPOE uses low sulfur diesel fuel in its generators and boilers. This change occurred following the development of the Feasibility Study that was used to produce the Draft EIS.

Air Quality: EPA recommends the FEIS:

- Indicate whether any significant modifications are planned for the generators and boiler engines to clarify compliance with New Source Performance Standards, as requirements for the adoption of low sulfur fuel for new, modified, or reconstructed engines may apply.

  GSA Response: The Final EIS has been updated to reflect that the LPOE uses low sulfur diesel fuel in its generators and boilers. This change occurred following the development of the Feasibility Study that was used to produce the Draft EIS.

  Any Modifications to the generators and boilers would be coordinated with the State of Alaska regarding permits and compliance with New Source Performance Standards.

Air Quality: EPA recommends the FEIS:

- Discuss planned best management practices during the first year of construction to reduce exposure of residents to construction air emissions.

  GSA Response: BMPs and mitigation measures can be found in Table 3.16-1 of the Final EIS. Additionally, examples of construction BMPs have been added to Section 3.14.3 of the Final EIS. These could include spraying water to minimize dust emissions, limiting idling times of construction equipment, using low-emission construction machinery and equipment, and powering equipment and vehicles with low sulfur diesel.

Climate Change: CEQ recently published interim guidance, effective immediately, to assist federal agencies in assessing and disclosing climate change impacts during environmental reviews in response to EO 13990 on *Protecting Health and the Environment and Restoring Science to Tackle the Climate Crisis*. CEQ directs agencies to use this interim guidance to inform the NEPA review for all proposed actions and may use it for evaluations in the process, as agencies deem appropriate, such as informing the consideration of alternatives or helping address comments raised through the public comment process. EPA recommends the FEIS apply the interim guidance as appropriate, to ensure robust consideration of potential climate impacts, mitigation, and adaptation issues.

> **GSA Response**: GSA has added content to Section 3.13 and Appendix G to address CEQ's guidance and EO 13990.

Climate Change: Alaska is on the frontlines of climate change. EPA acknowledges the DEIS considers permafrost stability in their construction plans, and recommends the FEIS consider resilience strategies to mitigate any additional potential climate effects as applicable. Recent guidance that provides a framework for incorporating risks into design and best practices to enhance resilience may provide additional guidance in this consideration.

> **GSA Response**: Please reference Section 3.3.2.1.3 of the Final EIS which determines there would be no expected impacts on the underlying permafrost from Alternative 1. The Final EIS includes BMPs such as constructing insulated foundations, which would be used to protect permafrost in the area of analysis.

Climate Change: The DEIS attempts to disclose carbon dioxide (CO_2) equivalents using a calculation methodology based on NO_x (nitrogen oxide compounds) and CO (carbon monoxide) emission rates reported in the generator technical reports by multiplying metric tons of NO_x and CO with nitrous oxide (N_2O) and CO_2 global warming potentials, respectively. EPA notes that while NO_x and CO can have important implications for local air quality and human health, they are not strong greenhouse gases. Additionally, NO_x and CO are distinctly different chemical compounds from N_2O and CO_2. For these reasons, NO_x and CO should not be used to compute CO_2 equivalency.

GSA Response: GSA has updated the carbon dioxide (CO_2) equivalency (CO_2e) analysis. Carbon monoxide (CO) and nitrogen oxides (NO_x) were removed from the calculations. The new methodology calculates metric tons of carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) by multiplying the fuel consumption rate by the annual runtime and the GHG Factor in fuel oil No. 2 using EPA's emissions factors for GHG inventories. Then, the metrics tons of each GHG were converted to metric tons of CO_2e using AR6 100-year Global Warming Potential (GWP). The three CO_2e totals were summed to determine the total metric tons of CO_2e contributed by generators and boilers. This methodology follows the recommendations and guidance provided by EPA in the email from April 11, 2024. Further details and calculations are provided in Appendix G-1 of the Final EIS.

Climate Change: Although CO_2 emission rates are not reported in the generator technical sheets, diesel generators (and boilers) emit CO_2. An ideal combustion process would only produce CO_2 and water vapor (H_2O), but in reality, combustion engines exhaust a variety of gases including CO_2, unburned hydrocarbons (HC), CO, NO_x, PM, methane (CH_4), N_2O, and others. Because the current emission estimates are incorrect, EPA recommends the FEIS include corrected emission estimates of CO_2 equivalents from routine Alcan LPOE generator and boiler GHG emissions.

GSA Response: GSA has updated the CO_2e analysis and corrected the GHG emission estimates from routine Alcan LPOE generators and boilers. The corrected emissions estimate includes the metric tons of CO_2, CH_4, and N_2O produced by generators and boilers and converts each estimate to metric tons of CO_2e. See response to the previous comment above for an explanation of the analysis. Further details and calculations are provided in Appendix G-1 of the Final EIS.

Climate Change: EPA also suggests the FEIS include foreseeable construction emissions anticipated for Alternative 1 (e.g., concrete and steel materials, mobile construction emissions, etc.). EPA is available to support any questions related to GHG estimation.

GSA Response: GSA has incorporated construction-related emission calculations into Appendix G-2 and discusses the potential impacts in Section 3.13.2 of the Final EIS.

Climate Change: EPA notes that the DEIS compares the LPOE's yearly operating emissions to U.S. and Alaska total emissions. This comparison diminishes the importance and magnitude of the LPOE's emission footprint and inappropriately draws a comparison between LPOE generator/boiler emissions with disparate sectors (e.g., agriculture, waste, etc). The greenhouse gas equivalencies calculator used in the DEIS may not provide an accurate comparison in this specific case, as Alaska energy consumption is distinct from many cities in the contiguous U.S. that provide data for the tool. Instead, the social cost of greenhouse gases (SC-GHG) may help better contextualize GHG emissions from Alcan LPOE.

GSA Response: GSA has incorporated the social cost of greenhouse gas emissions to Appendix G3 and discusses it in the analysis in Section 3.13.2 of the Final EIS. The comparison of the LPOE's yearly operating emissions to U.S. and Alaska total emissions provides context for the emissions totals. The importance or magnitude of the LPOE's yearly operating emissions may not be understood if that data is presented by itself; a comparison is provided to help the reader understand what these totals mean. It is appropriate to estimate the yearly LPOE operating emissions, then compare those totals on a regional (Alaska) and national (U.S.) scale since emissions from all entities across all these geographic areas contribute to climate change on a global scale. This demonstrates how the LPOE emissions are only a small fraction of the total emissions that contribute to global climate change, an important distinction to make before discussing potential impacts from the alternatives. Similarly, the greenhouse gas equivalency calculator is another tool used to provide context. These calculations and comparisons are described as estimates in Section 3.13.1 and are not intended to provide a specific comparison for energy consumption between Alaska and contiguous U.S. cities.

Climate Change: CEQ updated its NEPA guidance on Consideration of Greenhouse Gas Emissions and Climate Change in part to help enable agencies to evaluate pathways that could avoid or reduce climate change-related effects. The guidance includes best practices for quantifying direct and indirect emissions and computing the social cost of greenhouse gases (SC-GHGs). EPA has developed updated estimates of the SC-GHG which reflect the best available science for estimating the social value of changes in GHG emissions. EPA is available to further support the analyzing and incorporating SC-GHG into the FEIS.

GSA Response: Section 2.1 of the Final EIS describes the sustainability elements that are being evaluated for incorporation into Alternative 1. This includes consideration of renewable energy sources.

Climate Change: Consistent with EO 14008, *Tackling the Climate Crisis at Home and Abroad*, EPA recommends the FEIS to consider ways Alcan LPOE can diversify its energy sources to both reduce carbon emissions and save taxpayer dollars given high fuel costs in Alaska.

- For example, integrating solar can substantially reduce energy costs for rural establishments in Alaska, as recently demonstrated by solar arrays installed by Northway Village (who saw energy savings at 37% with solar and battery storage systems). Additional rural locations recently integrated solar such as Tanana Chiefs Conference, the Native Village of Hughes, and NANA Regional Corporation. EPA suggests the FEIS evaluate renewable options for Alternative 1 that can ultimately reduce energy costs, future construction costs, and GHG emissions.

GSA Response: Section 2.1 of the Final EIS describes the sustainability elements that are being evaluated for incorporation into Alternative 1. This includes consideration of renewable energy sources.

Climate Change: EPA recommends the FEIS disclose its plans for the procurement of construction materials (e.g., steel, concrete, etc.) with lower embodied emissions. Additional guidance that may assist in this endeavor includes:

- The Department of Energy released a building decarbonization blueprint strategy in April 2024 that provides specific guidance federal agencies can use to minimize embodied life cycle emissions and accelerate onsite emissions reduction.
- Sustainable products and services, including lightly used surplus items, are linked below.

GSA Response: Section 2.1 of the Final EIS describes the sustainability elements that are being evaluated for incorporation into Alternative 1. GSA will adhere to the Implementation of the Facilities Standards for the PBS (P100) and associated 2022 Addendum in facilities design, which establishes standards and criteria for GSA-owned facilities.

Consultation and Coordination: The DEIS notes the project may require the potential acquisition of easements on up to 2.5 acres from Tetlin Wildlife Refuge for the purposes of Alcan LPOE expansion. The DEIS notes the conserved habitat will be converted to developed land. EPA recommends the FEIS include a summary of outreach and coordination with Tetlin Wildlife Refuge to ensure that impacts are minimized.

GSA Response: As noted in Section 3.2.1 of the Final EIS, the up to 6.5 acres of Tetlin NWR land proposed for a use permit is mostly cleared of trees, containing bare ground and a dirt road. Therefore, proposed changes to the site would not impact high quality habitat or undisturbed lands. GSA has coordinated with the Tetlin NWR.

Max Frey

Public Meeting Comment, 3/12/2024

Proposed Action: Question about the RFP process for this project post EIS, will the GSA be pursuing a 2-step design build method for awarding the design?

> **GSA Response**: GSA's response during the public meeting is summarized as follows: As of right now, GSA is considering a two-step design build process. There will be a request for qualifications and then a request for proposals.

Northway, Gary Thomas

Public Meeting Comment, 3/12/2024

Socioeconomic Resources: Gary Thomas: And my question is, can you specify what local hire is? To me, local hire is like Northway [Inaudible due to technical issues].

Clarified by Aaron Evanson due to audio issue: The question was about local hire and Gary had mentioned that it was specific, his specific question was, basically he considers local hire to be Northway.

> **GSA Response**: GSA's response during the public meeting is summarized as follows: For GSA's purposes, the definition of local hire would be the Southeast Fairbanks Census Area. As GSA progresses through the procurement of the project, GSA has specific Small Business Administration (SBA) and HUBzone requirements to follow. The procurement process has not yet been finalized. GSA will continue updating Northway on the status of the procurement process, especially since they are a cooperating agency.

Northway, Lorraine Titus

Public Meeting Comments, 3/12/2024

Cultural and Tribal Resources: And I just want to make a comment that I'm just really thankful that, you know, the decision was made to keep the border at the same location. Because I was kind of part of the ones that really didn't want to see, you know, it moved because of our cultural lands and stuff that we use for hunting, berry picking, subsistence use and all that so I'm very grateful that you know, everybody listen to us and, you know, listened to our concerns about all this and … I just, I think just really appreciate that, you know everything went well to where the border was going to stay at the same location. Thank you.

> **GSA Response**: Thank you for your comment.

Proposed Action: I'm kind of anxious to see the floor plan as to what's going to happen there.

> **GSA Response**: GSA is committed to stakeholder engagement and will continue to coordinate as project designs are developed.

Tanana Chiefs Conference, Robert Sattler

Public Meeting Comments, 3/12/2024

NEPA Process: But, NEPA issues that have come to the mind for me and with regard to this project. But really, Lorraine and other people here locally have sort of the precedent on their views and perspectives on this project. And I tend to continue to collaborate with Lorraine through the process and to say, you know, really, what that meeting we had sort of led to getting Northway recognized as a cooperating agency in this project and I wanted to say for me as a professional at TCC, I appreciate the GSA effort to do that. To get the Northway community involved in this project. I'll come back to that toward the end.

> **GSA Response**: Thank you for your comment.

Cultural and Tribal Resources: So, several things. One, you know, TCC provided some comments previously. There's been one long term issue there in land access. There's a native allotment that was applied there, where the custom station is. It's certainly reconcilable. I just want to recognize that as an ongoing issue. I don't think that GSA could do anything unless they have some surplus property and maybe do a land exchange of some sort, but nobody's pursued that. But I don't think it's really a feasible outcome, but it’s something to take into consideration.

> **GSA Response**: GSA has become aware of this concern via consultation with the TCC and Northway. Please refer to Section 3.6.1.5 of the Final EIS for further discussion of this topic.
>
> GSA is open to further consultation if requested by the TCC or Northway. At this time, a land exchange is outside the scope of this project.

Cultural and Tribal Resources: Something the Tanana Chiefs through consulting, but the Northway commented on and some other professional anthropologists are some of the access issues around the station. There were some subsistence camps, white fish camps in the area. It's already been mentioned in the presentation here that there have been some issues about access to those subsistence camps. Lorraine could comment a lot more – I’m not going to ask her to do that here at this meeting. But that's one issue to keep in mind.

> **GSA Response**: GSA has completed a Section 810 analysis in coordination with the USFWS; the 810 analysis considers subsistence camp access near the LPOE. The proposed action would not change current access to subsistence camps. The Section 810 analysis has been included as an appendix to the Final EIS.

Out of Scope: Considering the history of the Northway people here with the traditional lands, ancestral lands, this beautiful country here. You know, one of the subjects that's come up a couple of times now in discussions, is in the design of the new station there perhaps ought to be, maybe not just some, but a substantive effort into considering some kind of an interpretative center, you know, that could elaborate on the Alaska Native history in this beautiful country. And their just sort of their distinguished existence in this boreal forest. Really remarkable story about the Alaska native people, but also it could also include the historical aspects of the construction of the Alaska Highway. Which in itself, we all know is a remarkable, remarkable engineering feat that took place in the mid-1940s. It’s left some contaminated site issues today we're all aware of but, you know, really a remarkable engineering feat. But another issue that could be really emphasized is just the survey of the 141st longitudinal border between Canada and the US. And that, that survey team that did that work is really remarkable. Story of establishing the border between Canada and the U.S.

> **GSA Response**: GSA will continue to consult with TCC, Northway, and the USFWS to look for ways to provide additional, meaningful, mutually agreeable interpretation panels at the existing educational kiosk location at the border. There may also be opportunities during the design of the buildings or the Art in Architecture process to incorporate visual representations of Athabascan culture.

Out of Scope: One of the things to tell you, I was trying to get an electrical line to Northway from Tok. And, the people at TCC have made comments about potentially extending that electrical line, if it's ever established, up to the U.S. custom station.

> **GSA Response**: Adding an electrical line to the LPOE is outside the scope of this project.

Climate Change: Two more things for climate change. I think beyond just the climate aspects of the facility, the footprint of the facility. People I talk to continually discuss that, with climate change, that there will be more people moving to Alaska. In general, the customs station and maybe you've seen some trends of that. People moving up to Alaska to escape the heat from the mid-continental states. So I suggest you use that as a demographic factor in your further analysis.

> **GSA Response**: The Final EIS analyzes the proposed project's effects on climate change and climate change's effects on the project in Section 3.13 Climate Change and evaluates demographics in Section 3.8 Socioeconomics.

Out of Scope: Then the last thing which I mentioned to Lorraine, I know she stepped out here. We know from what you said here today and the conversations with Aaron, that the facility here will involve a major federal contractor here at the border for several years. And these villages in the Upper Tanana, they have little projects in village infrastructure that end up, you know, they get funding, but the majority of their funding ends up going into mobilizing and demobilizing the projects. So with this major federal contractor here at the border, I suggest you explore opportunities about perhaps integrating some of the work at the border with some maybe small community projects that would really attribute some relief, in the sense of environmental justice or infrastructure, to improving the human environment here in the Tanana subregion of the TCC area. Don't get me wrong, I'm not suggesting you rebuild a village, nothing like that. Although I think what you're doing is basically like building a new village up here at the border [Inaudible due to technical issues].

> **GSA Response**: Funding for the proposed project was approved by Congress through the Bipartisan Infrastructure Law and is limited in scope to the Alcan LPOE.

Proposed Action: Yes, so the project that you have proposed here, is this a unique project within the portfolio, like have you done? Obviously you work with other remote custom stations, but does this project pose some rather significant challenges compared to others around the country or is it sort of a routine thing? A routine project? I mean, there's some unique circumstances for sure. Have Northway connected with you to design, or to generate a design. You know, Tok was sympathetic to some of their interests. But yet, it is a pretty big facility and you know you're obviously modernizing it for customs people, for their, not convenience, but their quality of life so to speak.

> **GSA Response**: GSA's response during the public meeting is summarized as follows: This project aims to fulfill CBP's mission requirements, enhance the quality of life for CBP staff and for the public, and meet requirements moving forward in the future. The current facility was first finished in 1969 and needs to be updated. CBP's mission has changed since the original building was built, so GSA also needs to make sure that CBP has the necessary facilities in order to meet their mission. The Alcan LPOE project does have some unique circumstances due to the remoteness of the area, the joint tenancy with the Canadian Border Service Agency (CBSA), the limited skilled labor force in the immediate vicinity, the short season for building, and the presence of housing at the LPOE. Alcan is one of only two LPOEs on the entire northern border that have housing facilities. However, the magnitude of the project is not necessarily larger than some of the other ongoing LPOE projects.

Out of Scope: So clear, single design, do you anticipate a warm tunnel that the trucks go into, like the middle of the winter across here, the friends of mine that cross here at fifty below zero. Lorraine could probably tell all kinds of stories about that. Maybe that's something I'll suggest, a warm tunnel for personal cars to go through in the middle of January.

GSA Response: The current project design does not include a warm tunnel, and that was not identified as a need by CBP.

US Fish and Wildlife Service, Shawn Bayless

Public Meeting Comments, 3/12/2024

ANILCA: One is the lack of a Section 810 analysis under NEPA. I don't know if you're aware, those need to happen under Title VIII of ANILCA. I would look into that. I can help out with that if need be, but that's important, even though, with, with the new alternative there's not as much of an impact as alternative two was. So there's a lot less. But you still, we still have to do an 810 analysis. It's basically determine what impacts the federal project will have on subsistence hunting and gathering and fishing. And there's a, there's a way to do that, called a Section 810 analysis. So I would recommend that as well as everything else in NEPA.

GSA Response: GSA has completed a Section 810 analysis in coordination with the USFWS, and the analysis has been included as an appendix to the Final EIS.

Proposed Action: I've read the EIS and it mentions acquisition of Fish and Wildlife Service lands. So, when you say acquisition, I need to know what do you mean by that? Is that a transfer, a deed transfer, or is that an easement, a right of way? It makes a big difference in how I'm going to comment.

GSA Response: GSA will negotiate a use permit with the Tetlin NWR and will coordinate any needed agreements with the USFWS. GSA will comply with ANILCA and all USFWS requirements related to the use of NWR lands.

Proposed Action-6: I've never heard of an easement or right of way that does so much to fish and wildlife service property where you're basically destroying the topography of the property to make it happen. So, I'm going to have to do a compatibility determination to determine if we can do that. There's never been one like this, so my kneejerk reaction is this is probably not going to be compatible with the mission of the refuge system. So, just so you know, I am going to comment on that, in the written form.

GSA Response: GSA will continue to coordinate with the USFWS as the design is further developed.

Wetlands: 0.3 wetlands, wetland acres. Where are those located in relation to the current [inaudible]? Will we be able to take a look at that?

GSA Response: GSA's response during the public meeting is summarized as follows: Based on GSA's current knowledge, the 0.3 acres of wetlands are not located on the Tetlin National Wildlife Refuge property. GSA is currently conducting a wetland delineation for the property to identify and confirm the location of wetlands on the site. GSA's projects require a hundred-foot buffer zone between development and any potential or delineated wetland.

The Final EIS analyzes the project's effects on wetlands in Section 3.5.2.1.3, and the locations of wetlands in the vicinity are illustrated on Figure 3.5-1.

Out of Scope: The other thing, and Bob mentioned the, you know, like some kind of an interpretative place; we have a kiosk at right at the border, that I recommend, and I'd like to include the Upper Tanana Athabascans, and all kinds of stuff that we can throw in there, but also I would like to see some kind of, if we did do that, include a description of what aquatic invasives can do [inaudible]. That's a big deal. We have a team there all summer long, inspecting boats and things like that. But the people come in, they pull into the kiosk, and if it's a covered, all-weather kiosk, they can get out, stretch their legs, have a bathroom there – instead of going in the weeds like they do now – and then they could read all about aquatic invasives that, the effects of that to the [inaudible].

> **GSA Response**: GSA will continue to consult with TCC, Northway, and the USFWS to look for ways to provide additional, meaningful, mutually agreeable interpretation panels at the existing educational kiosk location at the border. GSA is not able to provide any additional services or covered structures.

Letter Comments, 3/29/2024

NEPA Process-2: One question: why wasn't the Refuge, or the Fish and Wildlife Service Regional Office, also invited to serve as a 'cooperating agency' for your planning effort along with the Native Village of Northway? Had that occurred, much of what we need to do in accordance with NEPA to address your stated need for Refuge lands could have been accomplished concurrently.

> **GSA Response**: GSA has coordinated and will continue to coordinate with the USFWS as the design is further developed.

Proposed Action: The DEIS is unclear how 'acquisition' of Refuge lands will be accomplished. Possible options, as described last year during a conference call with our Realty staff, include land exchange (Alaska National Interest Lands Conservation Act (ANILCA, Section 1302 (h)) or a right-of-way permit (ROW) (ANILCA, Title XI and 50 CFR 29). However, the Fish and Wildlife Service has very limited authority to dispose of refuge land under ANILCA. The other option for disposal authority exists under 16 U.S.C. 6688 but is very limited and applicable only to acquired lands.

> **GSA Response**: GSA will negotiate a use permit with the Tetlin NWR and will coordinate any needed agreements with the USFWS. GSA will comply with ANILCA and all USFWS requirements related to the use of NWR lands.

Proposed Action: Proposed access to the proposed helipad from the LPOE is obvious based upon your plan map (Figure 2.1-1 in the DEIS), but less obvious for the proposed indoor firing range which will be located further south into the proposed 'acquisition' area. Will the indoor firing range, and access to it, also be cleared, blasted, and leveled to the same lower elevation of the helipad? Or will it be built atop the existing cleared area (locally referred to as the Aires Hill trailhead), which will require a stairway of some kind to climb 40-50' to the existing cleared and level area?

Clarification of the three-dimensional juxtaposition of the two projects, including various views, would be appreciated.

> **GSA Response**: The helicopter landing zone would be accessed via the existing dirt road, which would be improved as part of the proposed project. There would be no additional clearing or blasting on USFWS land. The firing range would be constructed on GSA property. The Final EIS has been updated to reflect these changes.
>
> GSA has coordinated and will continue to coordinate with the USFWS as the design is further developed.

Proposed Action: The Aires Hill trailhead is a relatively level, cleared 4 ½-acre area which is road-accessible from the highway and is approximately 200 yards due south of the LPOE station. It was historically used by the LPOE as an undeveloped, informal helicopter landing zone, a landfill, and a firing range. Through informal discussions with GSA and CBP staff last year, this area was identified by the Refuge Manager to be the best alternative for an official, FAA-approved helipad. As such, please provide an explanation why the proposed, highly destructive Alternative 1 is currently the only option in the DEIS.

GSA Response: There would be no additional clearing or blasting on USFWS land. The Final EIS has been updated to reflect these changes.

GSA has coordinated and will continue to coordinate with the USFWS as the design is further developed.

ANILCA: ANILCA (Public Law 96-487)

While subsistence is discussed in several areas of the DEIS, I'd encourage you to review Title 8 of ANILCA, specifically Section 810, to understand and appreciate our obligation and procedure to evaluate the effect(s) of any proposed use, occupancy, lease or permit on subsistence uses and needs.

GSA Response: GSA has completed a Section 810 analysis in coordination with the USFWS, and the analysis has been included as an appendix to the Final EIS.

Proposed Action: Once the 810 analysis is completed with a negative finding of same, the Refuge Manager will then be required to determine if the use is appropriate and, if so, further determine whether the use is compatible with the purposes of Tetlin Refuge specifically, and the National Wildlife Refuge System generally, to wit: The term 'compatible use' means a wildlife-dependent recreational use or any other use of a refuge that, in the sound professional judgment of the Director, will not materially interfere with or detract from the fulfillment of the mission of the System or the purposes of the refuge (PL 105-57).

For the specific purposes of the preferred alternative in the DEIS, the Refuge Manager must determine whether the following uses or activities are appropriate and compatible:

1) Clearing, blasting, excavating, leveling and grading an as yet known amount of land, including a 40-50' high hillside and;
2) Construction and exclusive use and operation of a helipad and indoor rifle range.

GSA Response: GSA has completed a Section 810 analysis in coordination with the USFWS, and the analysis has been included as an appendix to the Final EIS.

There would be no additional clearing or blasting on USFWS land. The firing range would be constructed on GSA property. The Final EIS has been updated to reflect these changes.

GSA has coordinated and will continue to coordinate with the USFWS as the design is further developed.

Alternatives: We strenuously recommend GSA abandons the proposal to clear, blast, excavate and level refuge lands adjacent to the Alaska Highway and instead consider a ROW Alternative ('Alternative 3') which includes a long-term ROW from the Refuge to construct an FAA-approved helipad on refuge lands at the north end of the existing cleared, relatively level Aires Hill trailhead with the understanding and assurance the ROW will not hinder or restrict public access to the trailhead.

Refuge and Realty staff will be more than happy to assist in this endeavor. We understand the access road may need to be widened, improved, and maintained in the future. Discussions of an MOU for that purpose would be appropriate.

GSA Response: There would be no additional clearing or blasting on USFWS land.

GSA has coordinated and will continue to coordinate with the USFWS as the design is further developed.

Alternatives: Finally, we recommend GSA explore and coordinate with Alaska Department of Transportation (AK DOT) to develop an area large enough for the indoor shooting range adjacent to the LPOE and within the AK DOT ROW. Generally, the ROW on the south side of the Alaska Highway extends

300’ south of the centerline, which was intended to accommodate future Trade and Manufacturing sites along the Alaska Highway.

> **GSA Response**: The firing range would be constructed on GSA property. The Final EIS has been updated to reflect this change.
>
> GSA has coordinated and will continue to coordinate with the USFWS as the design is further developed.

Out of Scope: Existing gazebo on the international border east of the LPOE: a) Install large, covered, educational kiosk educating travelers of the threats posed by invasive flora and fauna, as well as history of the Alaska Highway and history of US Customs/CBP in Alaska; b) Remove existing, dated and dilapidated welcome sign(s) and replace with a collaborative design including considerations of the state of Alaska, history of the Alaska Highway and LPOE and the Upper Tanana Athabascan people; c) Install vaulted toilets, serviced by the Refuge, to eliminate the unsightly and unacceptable alternative to travelers… d) Install well-illuminated, appropriate-sized American, Alaska and Canadian flags.

> **GSA Response**: GSA will continue to consult with TCC, Northway, and the USFWS to look for ways to provide additional, meaningful, mutually agreeable interpretation panels at the existing educational kiosk location at the border. GSA is not able to provide any additional services or covered structures.

Out of Scope: Collaborate with FWS to design and establish a wildlife and invasives inspection station/area at or near the LPOE, including RV space for Law Enforcement and Invasive Inspectors.

> **GSA Response**: USFWS will continue wildlife and invasives inspections at or near the LPOE. Coordination between CBP and USFWS will continue to ensure uninterrupted operations.

US Fish and Wildlife Service, Travis David

Public Meeting Comment, 3/12/2024

Biological Resources: Travis David: Is there a plan as to how we are going to [Inaudible due to technical issues].

Clarified by Aaron Evanson due to audio issue: Travis asked the question about the phasing of the facility itself, like the construction. During that phasing of those activities, it would be very possible for invasive species to come in, especially for mostly flora, to establish itself on the disturbed land and Travis's question is if we are, if we have plans in place to bring people in or to actually make sure that those invasive species do not you know, do not flourish in that disturbed area that's not yet developed.

> **GSA Response**: GSA's response during the public meeting is summarized as follows: GSA has not yet developed plans for the prevention of invasive species; however, that is part of the BMPs that will be developed through the permitting and design process. The implementation of BMPs will be further developed as GSA continues through the process and gets a better understanding of the massing of the site and the phasing process for the project.
>
> Potential BMPs to minimize introduction and establishment of invasive species are identified in the Final EIS in Section 3.5 Biological Resources.

APPENDIX C: MEMORANDUM OF UNDERSTANDING BETWEEN THE U.S. GENERAL SERVICES ADMINISTRATION AND THE NATIVE VILLAGE OF NORTHWAY

Memorandum of Understanding
Between
The U.S. General Services Administration (GSA)
And
The Native Village of Northway

Concerning Establishing a Cooperating Agency Relationship and Preparation of the Environmental Impact Statement for the ALCAN Land Port of Entry (LPOE)

I. **INTRODUCTION:** This Memorandum of Understanding (MOU) establishes a Cooperating Agency (CA) relationship between the U.S. General Services Administration (GSA) and **the** Native Village of Northway (Northway) for the purpose of preparing the Environmental Impact Statement (EIS). The GSA will serve as the lead federal agency initiating an EIS to determine the potential environmental effects resulting from the expansion and modernization of the Land Port of Entry (LPOE) project, hereinafter referred to as the "Project". The GSA acknowledges that the Northway Village Council has special expertise applicable to the EIS effort, as defined at 40 CFR 1508.15 and 1508.26. With this MOU, the Native Village of Northway will become a cooperating agency (CA) in development of the EIS in accordance with 40 CFR 1501.8 of the Council on Environmental Quality's Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA). This MOU describes responsibilities and procedures agreed to by thee Northway Village Council as a Cooperating Agency and GSA (the Parties).

II. **PURPOSE:** The purpose of this MOU is to provide a framework for the terms of cooperation between, and the roles and responsibilities of, GSA and the Northway Village Council, with respect to the preparation of the EIS.

III. **OBJECTIVES:** Both parties have mutual interests in actions and activities at the Alcan LPOE that may impact natural, cultural, historical, and economic resources important to the Native Village of Northway. The primary objective of this MOU is to ensure the Parties communicate, cooperate, and coordinate efforts regarding the EIS in an efficient and timely manner at the appropriate levels of government.

The objectives of this MOU are to:

A. Designate Northway Village Council as a Cooperating Agency in the EIS process.
B. Establish a mutually agreed upon framework of cooperation and coordination between GSA and the Northway Village Council.
C. Establish a point of contact within GSA and the Northway Village Council to facilitate effective coordination of efforts between the Parties.
D. Establish mutually agreed upon procedures, standards, and protocols for the successful completion of the EIS in a fair, timely, and efficient manner.

IV. **AUTHORITIES:**

A. The GSA and the Northway Village Council enter into this MOU under the authority of, and in compliance with, the following acts:e

1. National Environmental Policy Act (42 U.S.C § 4321 - 4347), which applies to Federal decisions and actions that may significantly impact the quality of the human environment, including permits and/or approvals by the GSA within the EIS Planninge Area

V. RESPONSIBILITIES & PROCEDURES:

A. The GSA has primary responsibility for completing the EIS and meeting related requirements of NEPA. The GSA shall ensure that the EIS includes information needed to address the Federal compliance requirements of the GSA.

B. GSA commits to involve Northway Village as a CA in the EIS preparation, and ensure incorporation of their input to the maximum extent possible as required by NEPA.

C. Northway Village commits to serve as CA in the project evaluation and EIS preparation.

D. Northway Village commits to provide input to GSA to identify and mitigate environmental, cultural, social, or economic impacts to Tribal resources resulting from the proposed project.

E. The Northway Village Council shall be provided by the GSA the opportunity for early review of documents. When early review of documents occurs, the Northway Village Council agrees to adhere to 43 C.F.R. § 46.225(d) and commits to maintain the confidentiality of NEPA-related documents during the period prior to public release by GSA of any NEPA documents, including drafts.

F. Throughout the planning process GSA and the Northway Village Council shall invite each other to participate in meetings regarding the status of the EIS.

G. The Northway Village Council shall assist the GSA in coordinating, scheduling, and publicizing public meetings, virtually or in Northway Village regarding the EIS.

H. GSA shall consult with the Northway Village Council during the development of the EIS and at the following stages of the planning process provide to the Northway Village Council:

1. Early review of the Public Draft EIS
2. Meet with the Northway Village Council to summarize GSA's treatment of their comments in the Final EIS.
3. Meet with the Northway Village Council after release of the Final ROD to summarize final decisions and any changes resulting from protests.

VI. ADMINISTRATION

A. This MOU neither alters, nor affects, the rights of the Northway Village Council under federal law, nor does it negate the Northway Village Council's option to request a government-to-government consultation at any time, conduct independent reviews of, or to object to, any aspect of the EIS.

B. This MOU does not alter any other written agreements between the parties.

C. Nothing in this MOU shall be construed as affecting the authorities of either party or as binding beyond their respective authorities.
D. This MOU shall not obligate either party to expend funds or require the parties to obligate or expend funds in excess of available appropriations.
E. This MOU is neither a fiscal nor a funds obligation document. Any endeavor involving reimbursement or contribution of funds between the parties to this MOU will be handled in accordance with applicable federal laws, regulations, and procedures.
F. Any information furnished to the GSA under this agreement is subject to the Freedom of Information Act (FOIA 5 U.S.C. §552) except as otherwise agreed upon by the parties, and so long as the information is not subject to the FOIA.
G. Either party may propose modifications to this MOU. Any modification shall be made by mutual consent of the parties in the form of an amendment, signed and dated by both parties.
H. This MOU in no way restricts the parties from participating in similar activities or arrangements with other agencies, governments, organizations, or individuals.
I. This MOU shall become effective upon signature of both parties and shall be reviewed annually or sooner if requested by either party.
J. The MOU shall expire upon the GSA's issuance of a Record of Decision, unless extended by written agreement of the parties to this MOU.
K. Either party may terminate this MOU in writing, in whole or in part, at any time before the date of expiration by giving 30-days written notice to the other party.

VII. DISPUTE RESOLUTION

The Northway Village Council and GSA will strive to reach consensus in all decisions, actions, and processes contemplated by the MOU. The parties will attempt to resolve any dispute arising under this MOU at the lowest possible level on a government-to-government basis between properly authorized representatives of the parties who have the authority to resolve the dispute in question.

Disputes may be raised by either party to this MOU. The affected parties will attempt to resolve any dispute by good faith discussions at the appropriate government level. A party may raise any matter not resolved at this level to a higher-level official or another party. If it has the authority to do so, a party will delay a final decision on the unresolved matter until this process has had the opportunity to take place within a reasonable amount of time.

VIII. PRINCIPAL CONTACTS

Individuals listed below are authorized to act in their respective capacities on matters related to this MOU. Notice to the parties shall be deemed effective if delivered in writing, electronically or otherwise, to the individuals named herein.

For Northway Village:
Darrell Kasse

nvtca@aptalaska.net

For the General Services Administration:
Kimbery Gant
kimber1y.gant@gsa.gov

XIV. EFFECTIVE DATE AND Termination

This MOU is in effect as of the date of the last signature below and will expire on the earlier of 10/1/2024, or issuance of a Record of Decision, pursuant to the EIS. Any party to this MOU may terminate its participation in this MOU by providing written notice of its termination to the other party.

X. JUDICIAL REVIEW

Nothing in this MOU shall affect any otherwise available review of agency action. This MOU is intended only to facilitate preparation of a joint EIS and does not create any right, benefit, or legal obligation, substantive procedural, enforceable at law or equity against the GSA or Northway Village.

XI. AUTHORIZED REPRESENTATIVES

By the signatures below, each party certifies that the individuals listed in this document as representatives of the individual parties are authorized to act in their capacities for matters related to this MOU.

In witness thereof, the parties hereto have executed this MOU as of the latest date written below.

Northway Village

By: ______________________ Date: 12/19/2023

General Services Administration

By: DocuSigned by: 58765E64E64D482 Date:. 12/20/2023

Lisa Pearson
Regional Commissioner
Public Buildings Service
Northwest Arctic Region

APPENDIX D: HYDROLOGY & HYDRAULICS REPORT

Hydrology & Hydraulics Report:

National Environmental Policy Act (NEPA) Reviews for the Development of the Land Port of Entry in Alcan, Alaska

Prepared for:

Alcan Land Port of Entry

U.S. General Services Administration

Solv Order No.: 47PA0323F0008

Submitted: May 2024

AtkinsRéalis

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AEP	annual exceedance probability
cfs	cubic feet per second
DEM	digital elevation model
FEMA	Federal Emergency Management Agency
FIPS	Federal Information Processing Standards
GCS	Geographic Coordinate System
HEC-RAS	Hydrologic Engineering Center River Analysis System
HUC	Hydrologic Unit Codes
IFSAR	interferometric synthetic aerial radar
LPOE	Land Port of Entry
NLCD	National Land Cover Database
NAD 83	North American Datum of 1983
NAVD 88	North American Vertical Datum of 1988
PRISM	Parameter-Elevation Regressions on Independent Slopes Model
SIR	Scientific Investigation Report
SWE-ELM	Shallow Water Equations with the Eulerian-Lagrangian Method
SFHA	Special Flood Hazard Areas
2D	two-dimensional
U.S.	United States
USACE	U.S. Army Corps of Engineers
GSA	U.S. General Services Administration
USGS	U.S. Geological Survey
WSELs	water surface elevations
WBD	Watershed Boundary Dataset

1.0 INTRODUCTION

The hydrologic and hydraulic analyses summarized in this report support the assessment of flood risk and hazards at the Alcan Land Port of Entry (LPOE) for the U.S. General Services Administration (GSA). The hydraulic analyses for the study area were performed using the U.S. Army Corps of Engineers (USACE) Hydrologic Engineering Center River Analysis System (HEC-RAS) Version 6.4.1. The analyses include pseudo-steady two-dimensional (2D) hydraulic modeling to estimate new flood elevations and corresponding flood inundation extents and water surface elevations for the 1- and 0.2-percent annual exceedance probability (AEP) events (also referred to as the 100- and 500-year events, respectively).

1.1 STUDY AREA

The study area is located in Eastern Alaska at and surrounding the Alcan LPOE (Figure 1). Desper, Scottie, and Little Scottie Creeks pass through the study area. Alaska Route 2 crosses the floodplains of these three creeks. The Alcan LPOE lies on the upstream side of Alaska Route 2. The land cover throughout the watershed primarily consists of boreal forests, emergent floodplain vegetation, relict stream channels, ponds, and lakes. The study area extends into the Yukon Territory in Canada.

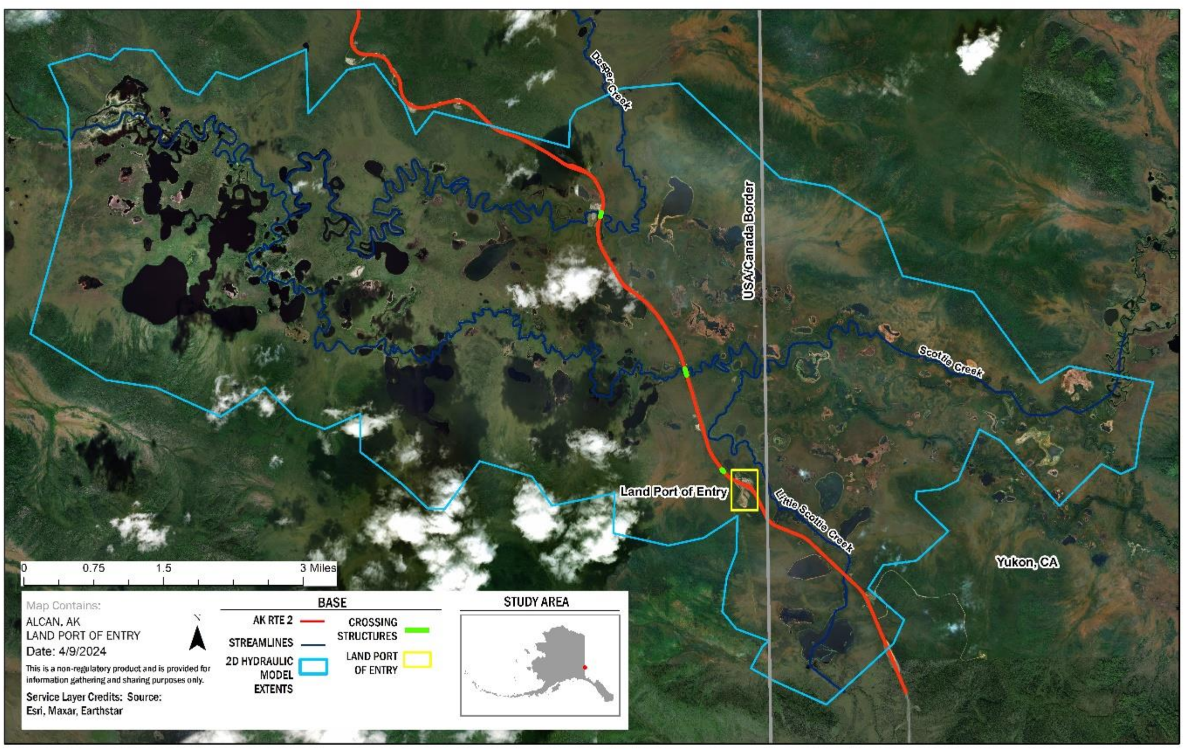

Figure 1. Location of study area

1.2 FLOODING HISTORY

During the site visit on November 16th, 2023, LPOE staff Caleb Whiteaker reported that the greatest observed flooding seen in the past eight years occurred in June of 2023. The water surface elevations for this event were reported to be high enough for flood waters to enter the tree line of the boreal forest north of the site. However, the volumetric discharge of this flood event was not recorded. During regular high flow conditions, flood waters are also reported to fill the pond adjacent to the site (to the northwest).

1.3 EXISTING STUDIES

No existing hydraulic studies are known to have been conducted at the site. There are no Special Flood Hazard Areas (SFHAs) prepared by the Federal Emergency Management Agency (FEMA) into which this study can be tied.

2.0 HYDROLOGIC ANALYSIS

When stream gage data is not available to complete a peak flow frequency analysis, peak flow estimates from the most recent U.S. Geological Survey (USGS) regional regression equations are appropriate for base flood elevation determination. No stream gage stations are located along Desper, Little Scottie, or Scottie Creek for a direct flow frequency analysis, so peak flow estimates were calculated using the equations documented in the USGS Scientific Investigations Report 2016-5024 (Curran et al., 2016).

2.1 PEAK DISCHARGE CALCULATION LOCATIONS

The hydrologic analysis includes peak discharge calculation points at the LPOE site, at the confluence of Little Scottie Creek, as well as at the crossing of Scottie and Desper Creeks just north of the facility (Figure 2). The additional calculation points for the northern streams were calculated to consider the scenario that the floodplain from the larger streams would also cause flooding along Little Scottie Creek near the LPOE facilities.

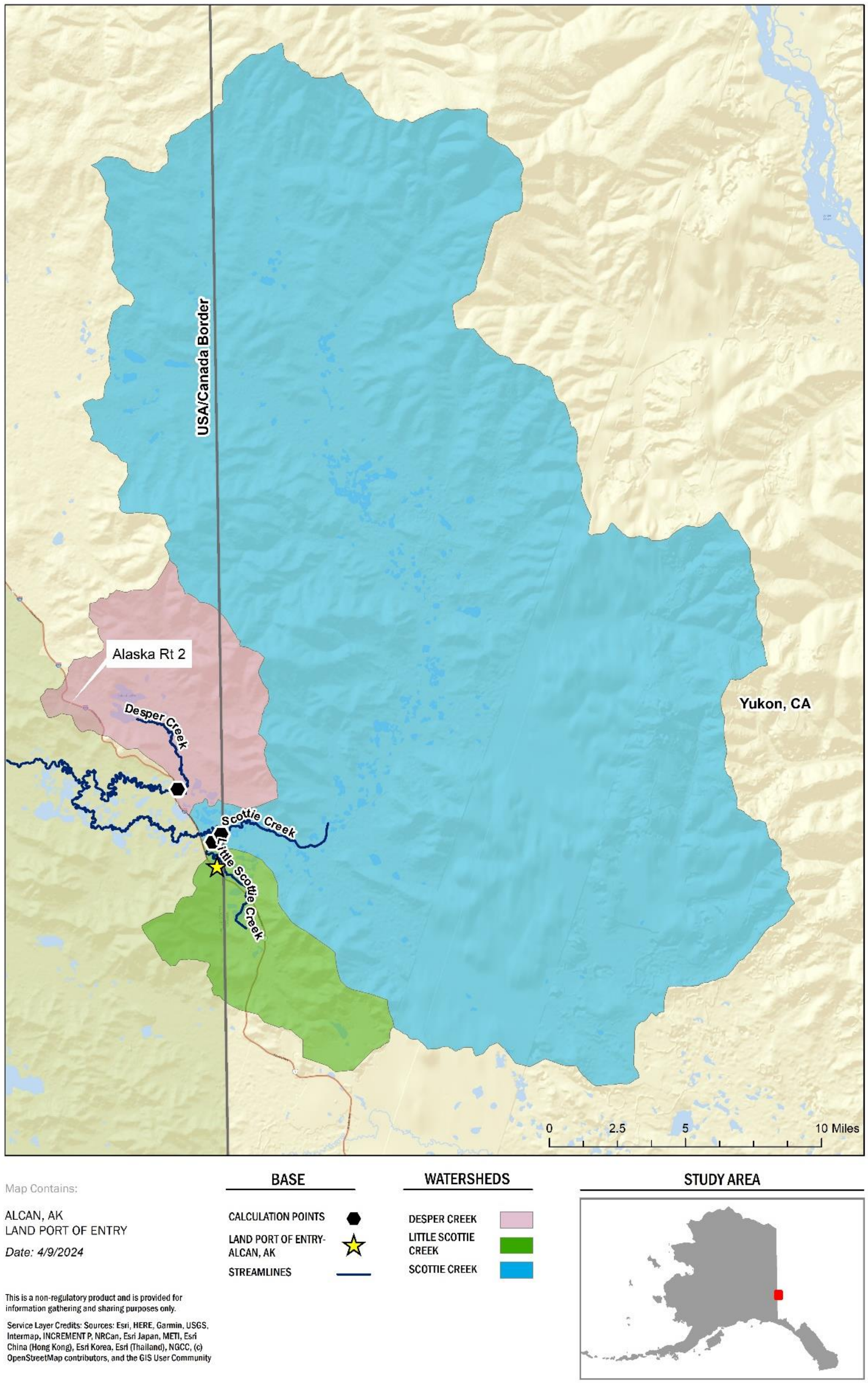

Figure 2. Watershed map

2.2 METHODOLOGY

No stream gage data were identified within the study watershed nor within similar watersheds near the project site so stream gage analysis could not be performed. A rain-on-grid analysis was not completed due to a lack of available calibration data and uncertainty in the critical processes driving the peak flood events. Due to the large scale of the overall drainage area (569.8 square miles), a single uniform rainfall event over the entire drainage area is unlikely. Without stream data, it was also unknown if flood events are primarily caused by rainfall, snowmelt, or rain on snow events. To estimate peak discharges in this study, regression analysis was performed under FEMA's recommendations to use regression equations when they are applicable to the stream and stream gage data is not available. The Alaska regression equations were applicable to the streams in this study and were also updated recently (2016).

The applicable regional regression equations for estimating peak discharges on unregulated streams are described in USGS Scientific Investigation Report (SIR) 2016-5024 (Curran et al., 2016), *Estimating Flood Magnitude and Frequency at Gaged and Ungaged Sites on Streams in Alaska and Conterminous Basins in Canada, Based on Data through Water Year 2012*. The following regression equation was used to compute peak discharges and is found in Table 7 of SIR 2016-5024:

$$Q = a(AREA)^b(PRECIP)^c$$

where:

Q is peak discharge in cubic feet per second (cfs),
AREA is total drainage area in square miles,
PRECIP is the basin average mean annual precipitation in inches, and
a, b, & c are equation constants.

The equations are valid for drainage areas between 0.4 and 1,000mi^2 and for precipitation values between 8 and 280 inches.

Regression equation constants and the average standard error of the prediction are provided in Table 1.

Table 1. Regression Equation Parameters and Average Prediction Errors

Annual Exceedance Probability	a	b	c	Average Standard Error of Predication (%)
50%	0.944	0.836	1.023	70.8
10%	4.01	0.775	0.865	69.2
4%	6.53	0.755	0.816	71.2
2%	8.79	0.743	0.787	72.8
1%	11.4	0.732	0.764	74.6
0.2%	18.7	0.712	0.721	81.9

2.3 INPUT PARAMETERS

Peak flow estimates based on the regional regression equation have been determined based on the total drainage area and mean annual precipitation. Both the drainage area and precipitation parameters for the identified watersheds were within the appropriate range identified in the report.

The drainage areas for the watersheds were based on the Watershed Boundary Dataset (WBD) Hydrologic Unit Code 12 (HUC-12) with manual refinements based on the available topographic data. The WBD maps the full areal extent of surface water drainage for the U.S. (and conterminous basins in Canada) using a hierarchical system of nesting hydrologic units at various scales. A HUC-12 watershed is a more local sub-watershed level that captures tributary systems. Manual refinements were used to limit the HUC-12 boundaries to only include drainage area for the project area. The drainage areas are shown in Figure 2.

The second input parameter for the regression equations is the mean annual precipitation. The SIR 2016-5024 report notes that it is recommended to use the same datasets used for the regression equation determination when calculating peak flows at non-gage locations. The recommended data sources are documented in Table 2 of the USGS report. As the drainage area for the project site includes primarily areas within Canada, the Parameter-elevation Regressions on Independent Slopes Model (PRISM) 1961-1990 (Pacific Climate Impacts Consortium, 2024) dataset was used to determine the average base annual mean precipitation. While the dataset is dated, the USGS report specifically notes concerns about using future rainfall datasets. Based on the report guidance, additional evaluation of the mean precipitation value for more recent years was not completed.

2.4 PEAK FLOW ESTIMATES

Table 2 summarizes the results of the regression equation peak flow estimates based on the drainage area and average annual mean precipitation for each calculation point.

Table 2. Summary of the parameters and resulting peak flows identified for the floodplain analysis.

Location	Drainage Area (sq mi)	Mean Annual Precipitation (inches)	Percent chance exceedance in flow (ft^3/s)					
			50 %	10 %	4 %	2 %	1 %	0. 2 %
Scottie Creek upstream Alaska Route 2	569.8	14.35	2,899	5,489	6,910	7,979	9,077	11,695
Little Scottie Creek upstream Alaska Route 2	33.9	12.88	245	561	751	900	1,059	1,451
Desper Creek upstream Alaska Route 2	44.3	12.68	302	681	908	1,085	1,273	1,736

To account for the additional drainage area downstream of Alaska Route 2 but within the hydraulic model, the peak flow was increased by 2% along the reach upstream of the Desper confluence and downstream of the highway. This additional flow was based on the regression equation results for total upstream drainage area.

2.5 PEAK FLOW HYDROGRAPH

Due to the potential for a large amount of flood storage in the combined Scottie and Little Scottie watersheds, a sensitivity analysis was completed to estimate the impact of modeling a hydrograph with a limited volume compared with modeling a constant peak flow assumption for the floodplain analysis. An inflow hydrograph with a shape common for a rainfall event was used for one scenario and the other scenario included a pseudo-steady state assumption with a constant peak flow. The results showed the peak flow at Alaska Route 2 was reduced by approximately 30% in the unsteady scenario compared with the peak flows from the regression analysis. However, the reduced peak flow in the unsteady scenario showed little impact on the resulting maximum water surface elevation at the project site compared with the pseudo-steady scenario. The maximum water surface elevation at the project site only decreased by 0.55 feet in the unsteady scenario compared with the pseudo-steady scenario. As the peak water surface elevations are not significantly sensitive to the inflow hydrograph, the constant peak flow assumption (pseudo-steady hydrograph) was selected for this study.

3.0 HYDRAULICS METHODOLOGY AND MODELING

3.1 METHODOLOGY

A two-dimensional (2D) hydraulic model was developed in the Hydrologic Engineering Center's River Analysis System (HEC-RAS) version 6.4.1 from the USACE to estimate the flood risk and hazard for the study area. The floods for the 1- and 0.2-percent AEP were simulated in this hydraulic model. Results were taken where peak discharge values for these floods were held constant (pseudo-steady conditions). Within the hydraulic model, 2D hydraulic computations were performed at cells along a grid which spans the floodplain in two dimensions. The definition of the topography, 2D computational mesh grid, hydraulic structures (e.g., bridges and culverts), terrain roughness (Manning's "n"), flow (discharge) conditions in and out of the model, simulation options, and other factors influence the results.

3.2 TOPOGRAPHY

A digital elevation model (DEM) was derived from interferometric synthetic aerial radar (IFSAR) terrain raster data published by the USGS. On the U.S. side of the border, IFSAR data from 2015 had a horizontal resolution of approximately 5 meters. Across the border in Canada within the model bounds, IFSAR data published in 2013 had a resolution of 2 arcseconds (approximately 60 meters). The terrain rasters from both sides of the border were reprojected from Geographic Coordinate System North American Datum of 1983 (GCS NAD 83) to North American Datum of 1983 (2011) State Plane Alaska 2 Federal Information Processing Standards 5002 Feet (NAD 83 (2011) State Plane Alaska 2 FIPS 5002 Feet). In this reprojection, the horizontal and vertical units were converted from meters to feet. The vertical datum is the North American Vertical Datum of 1988 (NAVD 88). These terrain rasters were then mosaicked, clipped, and imported into HEC-RAS. At culverts, the elevations of the terrain at inlets and outlets of the culverts were lowered based on observations during the site visit and the nearby channel terrain elevations.

3.3 SITE VISIT

Engineers from AtkinsRéalis visited the site on November 16, 2023. The channel, floodplain, and surrounding areas were visually assessed. Relevant bridge and culvert data were measured and collected. Bridge and culvert data are discussed further in section 3.4.2 Hydraulic Structures. A formal land survey was not performed.

3.4 TERRAIN MODELING APPROACH

3.4.1 2D Domain

The model domain extents were set far enough downstream of the LPOE facilities to adequately set inflow and outflow boundary conditions far enough away from the site to avoid boundary condition effects. The model domain extends from the LPOE facilities by approximately 4, 2, 7.5, and 4 miles to the north, south, east, and west, respectively. The total model domain covers an area of roughly 27,000 acres.

The background computational mesh consisted of 400-foot by 400-foot cells with smaller cells sizes set along break lines. The refinement break lines enforced two sets of cells with approximately 100-foot spacing and a third set of cells with 200-foot spacing on either side of each line. These break lines aligned and refined the computational cells along features in the terrain, such as stream centerlines and regions of localized high ground, that exert increased control on flow patterns.

3.4.2 Hydraulic Structures

Three hydraulic structures were added to the model based on aerial imagery, data collected during the site visit, and data from the State of Alaska Geoportal. To the northwest of the LPOE, a 58-inch diameter steel pipe culvert passes under Alaska Route 2 (Figure 3). Further north along Alaska Route 2, Bridge No. 0501 passes flows from Scottie Creek (Figure 4). The State of Alaska Geoportal lists the span of Bridge No. 0501 as 126 feet, which is consistent with measurements made during the site visit. The bridge deck elevation was estimated from the terrain data. The low chord elevation was estimated from measurements made in the field and the terrain data. A 12-foot span corrugated metal pipe arch culvert (listed as Bridge No. 7084 in the State of Alaska Geoportal) passes flows from Desper Creek under Alaska Route 2 (Figure 5 and Figure 6). The alignment of the culverts for modeling was verified with aerial imagery. These hydraulic structures were modeled as 2D area connection bridges and culverts. Computational cells along the 2D area connections were oriented along the connections using break lines. For Bridge No. 0501 on Scottie Creek, the break line was enforced at 20-foot cell spacing for two sets of cells on either side of the line. During the site visit, large woody material was seen partially blocking the upstream opening of Bridge No. 7084 (culvert) at Desper Creek as seen in Figure 6. Additional sensitivity runs were completed with the Desper Creek culvert completely removed from the model to represent a complete blockage of the culvert. The main model runs were made with the Desper Creek culvert included and unblocked.

Figure 3. Steel pipe culvert near Alcan Land Port of Entry

Figure 4. Bridge No. 0501 at Scottie Creek looking downstream

Figure 5. Bridge No. 7084 (culvert) at Desper Creek downstream opening

Figure 6. Bridge No. 7084 (culvert) at Desper Creek with woody material blocking upstream opening

3.4.3 Land Cover and Manning's n-Value Roughness Coefficient

Manning's n-value roughness coefficients are used in the model to represent the spatially varied resistance to flow across the model domain. Land cover raster data sourced from the National Land Cover Database (NLCD) was used to delineate Manning's roughness regions on the U.S. side of the border (MRLC, 2019) and 2020 Land Cover of Canada (Canada, 2020) on the Canadian side. Manning's roughness values were derived from the recommended ranges for the NLCD dataset from the HEC-RAS 2D User's Manual (USACE, 2024). Engineering judgement based on aerial imagery and the site visit was used for the final selection. Manning's n-value roughness coefficients were assigned to each land use category for the 2016 NLCD data (Table 3) and the 2020 Land Cover of Canada data (Table 4) with NLCD land use equivalents. Refinement of the roadway roughness was manually added to the model and set to the Manning's n-values corresponding to the developed, open area land use. Further delineations of roughness regions within the stream channels were not included, as these would reduce the overall floodplain roughness, producing less conservative results at the project site. Note that "conservative" in this context means resulting in higher water surface elevations. For a sensitivity analysis of the model, additional model runs with the maximum Manning's n-values recommended by the NLCD were completed to represent the most conservative roughness conditions.

Table 3. Manning's n Roughness Coefficients for NLCD 2016 Dataset

NLCD Land Use Description	Manning's n-Value	Max Manning's n-Value
Open Water	0.0375	0.05
Developed, Open Space	0.04	0.05
Developed, Low Intensity	0.09	0.12
Barren Land	0.0265	0.03
Deciduous Forest	0.15	0.2
Evergreen Forest	0.12	0.16
Mixed Forest	0.14	0.2
Dwarf Shrub	0.0375	0.05
Shrub/Scrub	0.115	0.16
Grassland/Herbaceous	0.0375	0.05
Sedge/Herbaceous	0.0375	0.05
Woody Wetlands	0.0975	0.15
Emergent Herbaceous Wetlands	0.0675	0.085
Unclassified (Deciduous Forest)	0.15	0.2
No Data (Woody Wetlands)	0.0975	0.15

Table 4. Manning's n Roughness Coefficients for 2020 Land Cover of Canada Dataset

Canada Land Use Description	NLCD Equivalent Land Use Description	Manning's n-Value	Max Manning's n-Value
Cultivated Crops	Evergreen Forest	0.12	0.16
Palustrine Scrub-Shrub Wetland	Woody Wetlands	0.0975	0.15
Estuarine Forested Wetland	Woody Wetlands	0.0975	0.15
Developed - Open Space	Developed, Open Space	0.04	0.05
Estuarine Emergent Wetland	Open Water	0.0375	0.05

3.5 BOUNDARY CONDITIONS

Upstream boundary conditions were set as inflow boundary conditions at Scottie, Little Scottie, and Desper Creek in addition to an inflow downstream of U.S. Highway 2. The inflow boundary conditions increase linearly over 12 hours from the 50-percent AEP flow (2-year event) and maintain peak flow value over 6.5 days to achieve pseudo-steady flow conditions. To maintain a conservative approach, peak flow values were modeled as coincident events at all inflow boundaries for both the 1- and 0.2-percent AEP event scenarios. Flow depths at these boundary conditions were computed as the normal depth conditions based on the flow values and local bed slopes to approximate the energy grade slope at these boundaries. Outflow conditions were set to a near zero energy grade slope based on the terrain slope and were also computed using normal depth conditions.

3.6 SIMULATION OPTIONS

The diffusion wave equations were selected to optimize model runtime and efficiency. As a sensitivity analysis, runs utilizing the shallow water equations with the Eulerian-Lagrangian Method (SWE-ELM) were conducted to compare results with those of the diffusion wave equations. It was found that the SWE-ELM runs resulted in negligible differences in the modeled water surface elevations (WSELs). The timestep utilized Courant conditions with a possible maximum timestep of eight minutes and a minimum of 3.75 seconds to maintain model stability and negligible mass continuity error values.

Initial conditions were set for one week of model time to "wet" the model before the actual model scenario was run. The initial conditions ramp up from zero flow to the 50-percent AEP flow over ten percent of the initial conditions time and maintain the 50-percent AEP flow value until the end of the initial conditions. The model conditions at the end of the initial conditions simulation were then used as the initial conditions of the 1- and 0.2-percent AEP scenarios.

4.0 RESULTS AND DISCUSSION

The inundation results are shown locally near the LPOE in Figure 7 and across the entire study area in Figure 8. The results of the hydrologic and hydraulic analyses indicate that the lowest built structures (e.g., wastewater treatment structures) at ground level on the site are at approximately 41 feet and 40.5 feet above the predicted 1- and 0.2-percent AEP water surface elevations, respectively. The water surface elevations for the 1-percent, 1-percent +2 feet, 1-percent +3 feet, and 0.2-percent AEP events parallel to the furthest upstream bounds of the LPOE facility are included in Table 5. The floodplain appears to be relatively flat and has significant storage from ponds, lakes, and relict channels. Thus, the significant increase in volumetric flow between the 1- and 0.2-percent AEP events is spread over a large area, and the water surface elevation does not increase significantly between the events. The maximum Manning's sensitivity scenarios showed that increasing the estimated roughness significantly also had minimal effects on the water surface elevations near the site with only about a 0.5-foot increase for both the 1- and 0.2-percent AEP events. The Desper Creek culvert complete blockage sensitivity runs resulted in an approximate increase in water surface elevation of 0.05 and 0.02 feet for the 1- and 0.2-percent AEP events, respectively.

Table 5. Water surface elevations parallel to upstream bounds of LPOE facilities

AEP Event	Water Surface Elevation (ft NAVD 88)
1-Percent AEP	1842.50
1-Percent AEP + 2 ft	1844.50
1-Percent AEP + 3 ft	1845.50
0.2-Percent AEP	1842.95

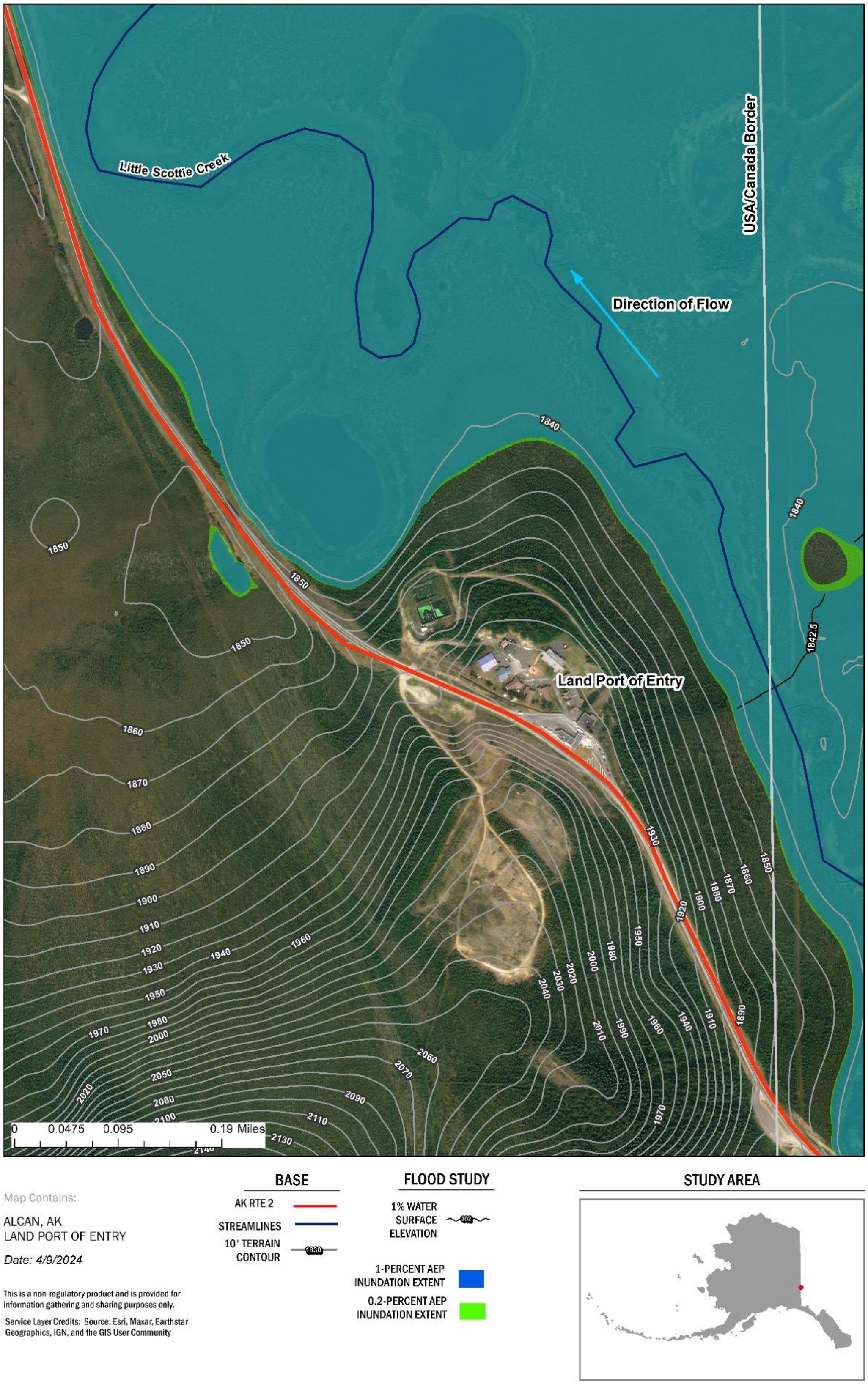

Figure 7. Local site inundation map

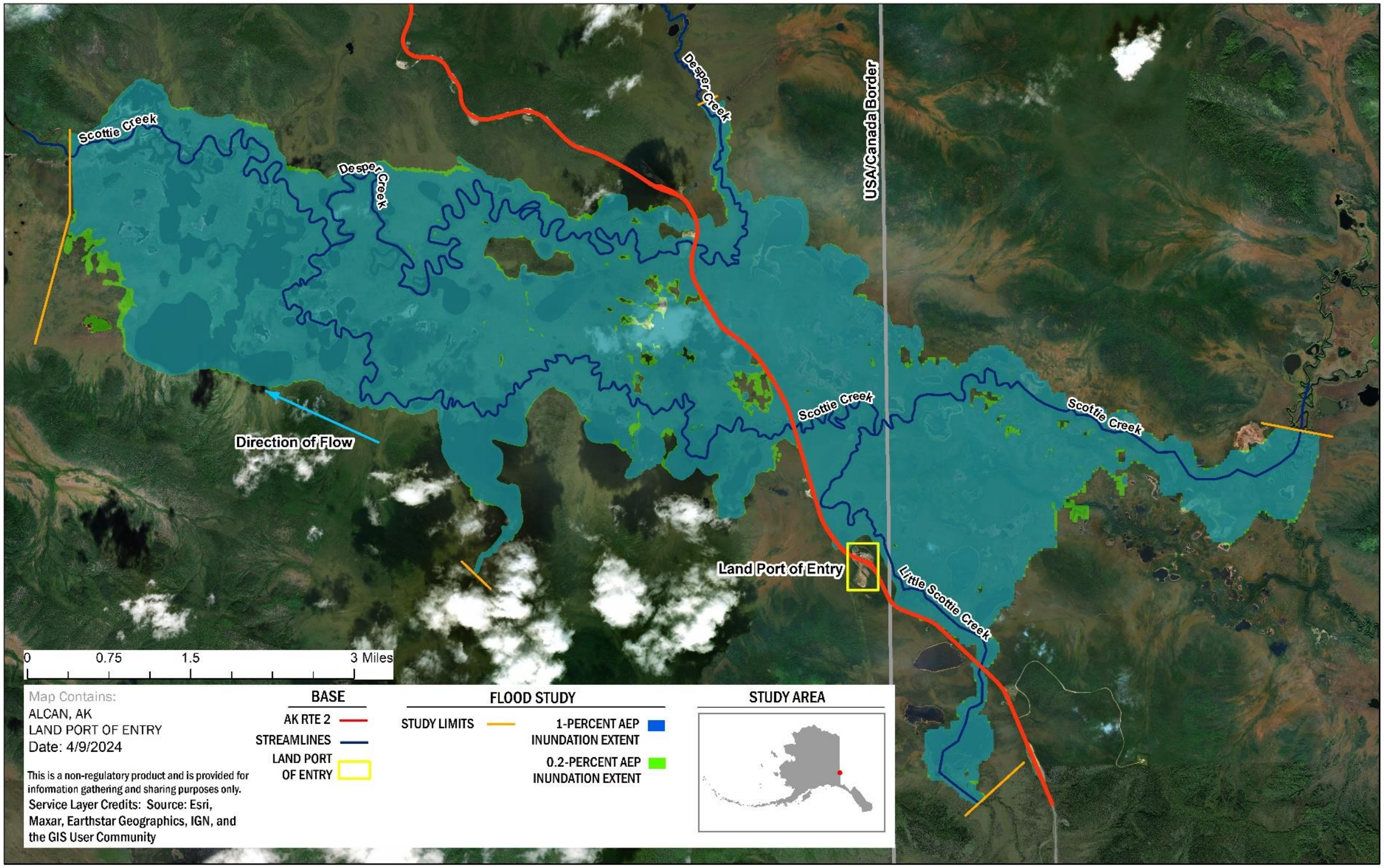

Figure 8. Overall extents inundation map

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APPENDIX E: PHASE I CULTURAL RESOURCES REPORT

PHASE I CULTURAL RESOURCES SURVEY FOR THE ALCAN LAND PORT OF ENTRY EXPANSION AND MODERNIZATION PROJECT

January 2024

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PHASE I CULTURAL RESOURCES SURVEY FOR THE ALCAN LAND PORT OF ENTRY EXPANSION AND MODERNIZATION PROJECT

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RESTRICTED NOTICE

The locations of cultural resources given in this report are provided to facilitate environmental, engineering, and cultural resource management planning efforts only. Under the provisions of the Alaska Historic Preservation Act, Archaeological Resources Protection Act, and the National Historic Preservation Act, site location information is restricted; disclosure of such information is exempt from requests under Federal and State freedom of information laws. This report is not a public document. It is intended for release to Solv, LLC, General Services Administration, U.S. Customs and Border Protection, Village of Northway, U.S. Fish and Wildlife Service, Alaska Office of History and Archaeology and State Historic Preservation Officer, and other appropriate parties only. This Project was carried out on State of Alaska land under State Cultural Resource Investigation Permit 2023-63 and Tetlin National Wildlife Refuge land managed by the U.S. Fish and Wildlife Service under Permit 23-101(R).

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ACRONYMS, ABBREVIATIONS, AND INITIALISMS

ac. .... Acre(s)
ACC .... Alaska Commercial Company
A.D. .... Anno Domini
AHRS .... Alaska Heritage Resources Survey
ANILCA .... Alaska National Interest Lands Conservation Act
APE .... Area of Potential Effect
ARC .... Alaska Road Commission
ARRC .... Alaska Railroad Corporation
ASME .... Alaska State Medical Examiner
AST .... Alaska State Troopers
ASTt .... Arctic Small Tool tradition
ASU .... Archaeological Survey Unit
B.P. .... Before Present
CBP .... Customs and Border Protection
CFR .... Code of Federal Regulations
cm .... Centimeter(s)
cmbgs .... Centimeters Below Ground Surface
DE .... Determined Eligible
DNE .... Determined Not Eligible
DOI .... Department of Interior
DOT&PF .... Department of Transportation and Public Facilities
FLN .... Feature Line
FPT .... Feature Point
ft. .... Foot (feet)
GPS .... Global Positioning System
GSA .... General Services Administration
ha .... Hectare(s)
ID .... Identifier
in. .... Inch(es)
km .... Kilometer(s)
LPOE .... Land Port of Entry
m .... Meter(s)
mi. .... Mile(s)
MP .... Milepost
MTRS .... Meridian Township Range Section
n. .... Number
N/A .... Not Applicable
NAB .... Nabesna Quadrangle
NAGPRA .... Native American Graves Protection and Repatriation Act
NCC .... Northern Commercial Company

NCP............................Non-contributing Property
NDE ....No Determination of Eligibility
NLUR.........................Northern Land Use Research, Inc.
NLURA......................Northern Land Use Research Alaska, LLC
NHPA.........................National Historic Preservation Act
NRHP.........................National Register of Historic Places
OHA...........................Office of History and Archaeology
Project........................Alcan Land Port of Entry Expansion and Modernization Project
RAC ....Russian American Company
RS 2477......................Revised Statute 2477 of the Mining Act of 1866
SOI.............................Secretary of the Interior
SPT.............................Survey Point
STP.............................Shovel Test Pit
TA ....Test Area
TBRC.........................Territorial Board of Road Commissioners
TP...............................Test Point
TNSDS.......................True North Sustainable Development Solutions
TNWR........................Tetlin National Wildlife Refuge
U.S. ....United States
USGS .........................U.S. Geological Survey
WWII ....World War II

1 INTRODUCTION

The United States (U.S.) General Services Administration (GSA) and U.S. Customs and Border Protection (CBP) propose to conduct ground-disturbing activities associated with the proposed Alcan Land Port of Entry Expansion and Modernization Project (Project) on the U.S.-Canada Border in Alaska. The Project proposes two Alternatives — Alternative 1 and Alternative 2 — for a new, upgraded Land Port of Entry (LPOE), to include on-site housing and ancillary support facilities. The Project is classified as a Federal Undertaking subject to Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations in the Code of Federal Regulations (CFR) (36 CFR Part 800). To comply with the NHPA, the Project must consider its potential to affect historic properties[1] within the Project Area of Potential Effect (APE).

Solv, LLC contracted Northern Land Use Research Alaska, LLC (NLURA) to provide a cultural resources survey and reporting, including recommendations regarding the Project's potential to affect historic properties. NLURA Project Archaeologist Kate Yeske, M.A., R.P.A. completed a desktop assessment for the Project which included a review of previous reports, surveys, and consultation documents to identify cultural resources and historic properties within the Project Study Area (Study Area)[2] (Yeske 2023).

Following the desktop assessment, NLURA was contracted to conduct a Phase I (Identification)/II (Evaluation) cultural resources survey (as defined by the Office of History and Archaeology [OHA] in Historic Preservation Series No. 11, revised 2019 [ADNR 2019]). NLURA conducted fieldwork from August 14-24, 2023, during which 49.65 acres (ac.) (20.09 hectares [ha]) were surveyed within the APE.

Phase I survey was completed for Alternative 1, and no cultural resources were identified. Phase I survey was completed for Alternative 2, which resulted in the identification of two new Alaska Heritage Resource Survey (AHRS) [3] sites — one prehistoric site (NAB-00626) and one trail originally documented under Revised Statute 2477 of the Mining Act of 1866 (RS 2477) (NAB-00625). Phase II documentation was initiated for these sites, but GSA dismissed Alternative 2 as an option and therefore Phase II documentation was not completed as part of the cultural resources survey for Alternative 2. In total, NLURA excavated 21 shovel test pits, four of which were positive for cultural material. This report fulfills the permit reporting stipulation for State Cultural Resource Investigation Permit 2023-63 and U.S. Fish and Wildlife Service Permit 23-101(R).

1.1 Report Organization

This report presents the results of the Phase I cultural resources survey for the Project. The Project location is provided in Section 2. Research and field methods are detailed in Section 3. The cultural context of the Project is provided in Section 4, which includes a discussion of previous cultural resource investigations conducted in the vicinity of the Project and known AHRS sites identified within ½ mile

[1] Historic properties are defined as cultural resources eligible for listing in the National Register of Historic Places (NRHP).
[2] The Project Study Area was defined for the purposes of the desktop assessment. The Study Area is a broader, buffered area based on the APE.
[3] The AHRS is a restricted-access statewide inventory of Alaska's reported historic, prehistoric, and archaeological resources captured within an online database. The database is maintained by the State of Alaska Department of Natural Resources, Office of History and Archaeology under the authority of AS 41.35.070(a).

(mi.) (0.8 kilometers [km]) of the Project APE. Field results are presented in Section 5. Determinations of eligibility are covered in Section 6. Section 7 provides a summary and recommendations. References cited are listed in Section 8.

2 PROJECT LOCATION & DESCRIPTION

2.1 Project Location

The Project is located on the U.S.-Canada border at Alcan, Alaska (Table 1, Figure 1). The Project originally proposed two Alternatives — Alternative 1 and Alternative 2 — for a new, upgraded LPOE, to include on-site housing and ancillary support facilities.

Table 1. Project location.

Location	USGS Quadrangle	MTRS	Area	Landowner
Alternative 1	Nabesna C-1	C010N023E25	57.05 ac. (23.1 ha)	GSA and Fish and Wildlife Service
Alternative 2	Nabesna C-1	C010N023E02 C010N023E03 C010N023E10 C010N023E11	37.45 ac. (15.16 ha)	State Patent or Tentative Approval

Table notes:
Locational data from Department of Natural Resources and Bureau of Land Management
Landowner data from Bureau of Land Management General Land Status
ac. = acre(s)
ha = hectare(s)
MTRS = Meridian Township Range Section
USGS = United States Geological Survey

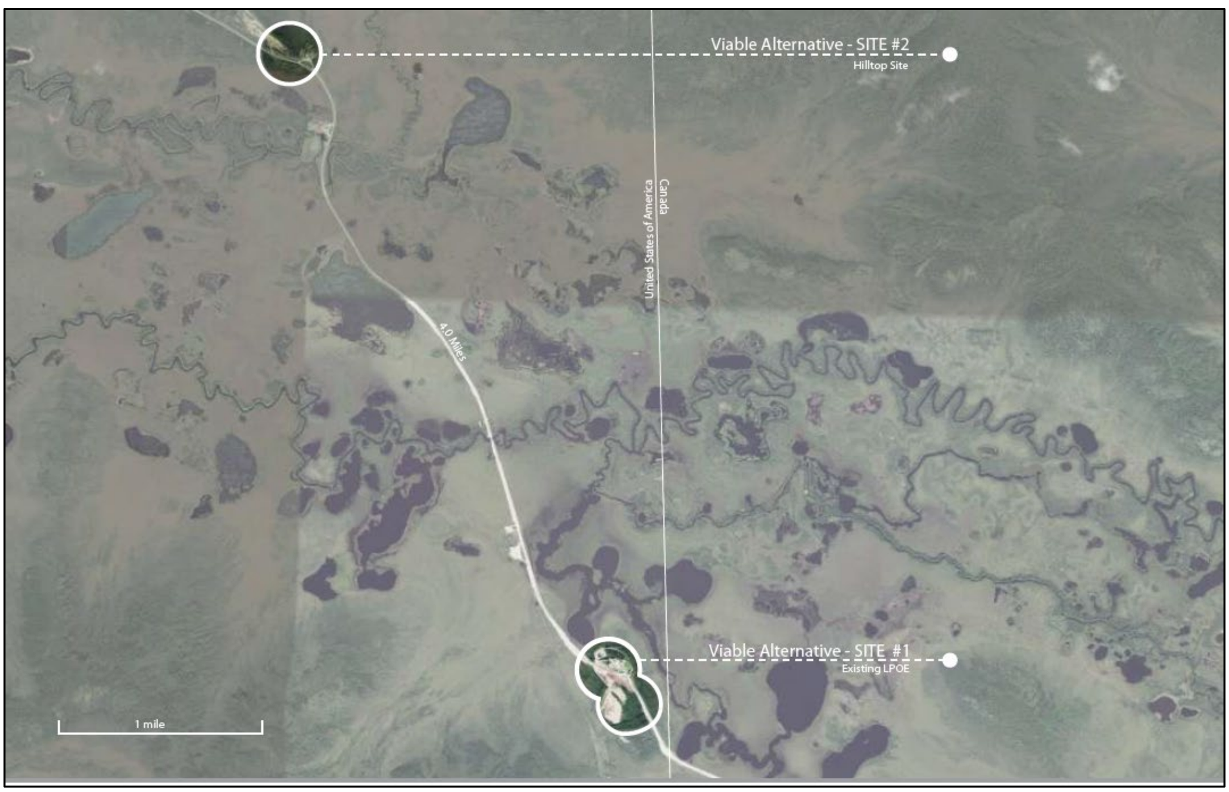

Figure 1. Alternative 1 and Alternative 2 locations (Smith 2019).

2.2 Project Description

Alternative 1 proposes to build the new facility on the current developed LPOE site. The current Alcan LPOE and Housing facility is located at Milepost (MP) 1221.8 on the Alaska Highway and was placed into service in 1972. The proposed facility upgrades at Alternative 1 include new construction and reusing, renovating, or repurposing existing infrastructure and core buildings. The current extent of upgrades is approximately 26.74 ac. (10.82 ha). New construction includes:

- port building;
- off-site temporary housing; and
- ancillary buildings (i.e., helipad, indoor firing range).

Existing infrastructure that will be reused, renovated, or repurposed includes:

- port building;
- housing;
- service building;
- wastewater treatment system; and
- main generators and basic core utilities.

Alternative 2 is a hillside site approximately 4.4 mi. (7 km) from the border. Facility components for Alternative 2 would include a main port building, a service building, a wastewater lagoon, a firing range, a community/health and wellness building, a playground, and housing. The new facility would require development of approximately 22.91 ac. (9.27 ha). Alternative 2 is no longer under consideration as a potential site for the Project.

For the purposes of the desktop assessment review, NLURA developed a Study Area by creating a ½-mi. (0.8-km) buffer around each Alternative.

2.3 Project APE

The Project APE was originally defined as the current Alcan LPOE Border Station Complex (Alternative 1) and the new acquisition property (Alternative 2), totaling 49.65 ac. (20.09 ha) (Figure 2 and Figure 3). GSA revised the APE after fieldwork commenced to focus only on Alternative 1. The current APE (Alternative 1) consists of 26.74 ac. (10.82 ha) on federal land. To fulfill permit requirements, this report will include field results from both Alternative 1 (APE) and Alternative 2.

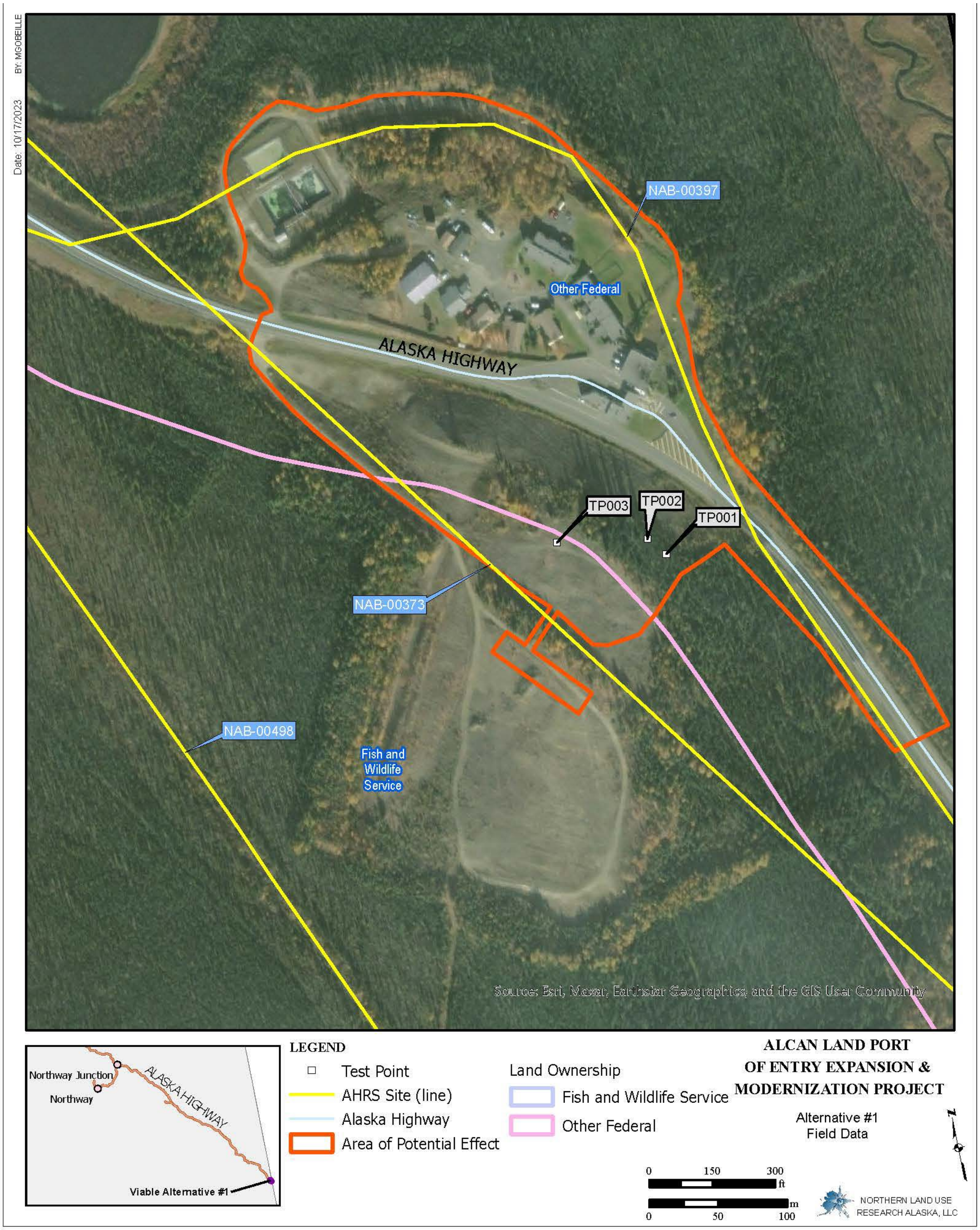

Figure 2. Alternative 1 (APE) survey results.

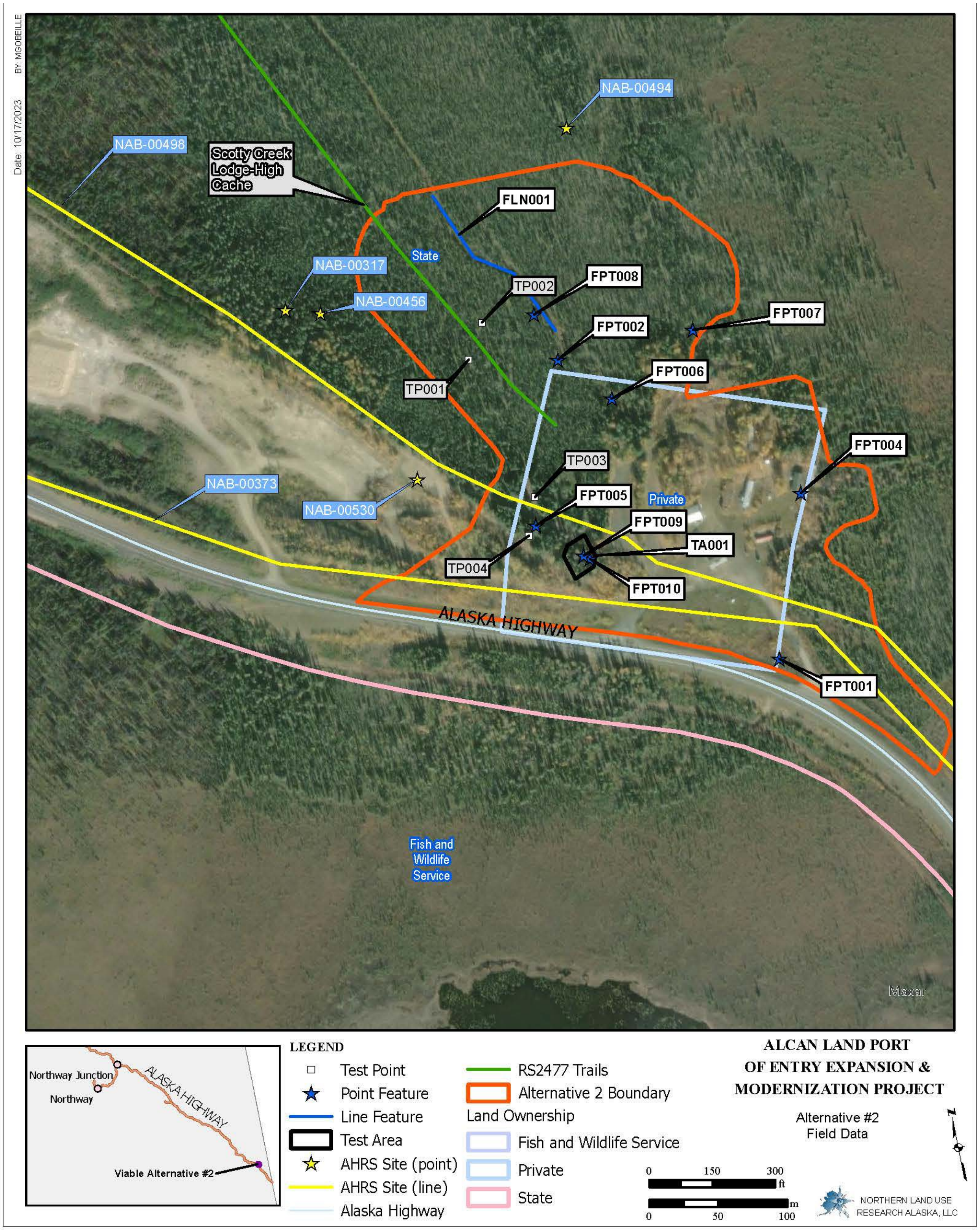

Figure 3. Alternative 2 survey results.

3 Methods

3.1 Research Methods

Prior to conducting fieldwork, NLURA completed a desktop analysis to identify known cultural resources and historic properties within the Study Area. Research included a literature search and review of the AHRS and the National Register of Historic Places (NRHP) online database. NLURA also consulted the RS 2477 Historic Trails Database and associated files (ADNR 2011) to obtain information on historic trails within or adjacent to the Study Area, as well as technical reports and unpublished documents that pertain to previous archaeological investigations in the Project vicinity. Research results were presented in a Desktop Assessment (Yeske 2023) which indicated that two previously identified cultural resources were located within the Project APE at Alternative 1 and three were located at Alternative 2, and one additional previously identified cultural resource was within ½ mi. (0.8 km) of the Project APE at Alternative 1 and six were near Alternative 2 (Figure 2, Figure 3, Table 4, Table 5). The assessment included a recommendation for a cultural resources survey of the APE, not including areas previously developed at Alternative 1, supplemented with subsurface testing in high potential, non-high potential, and disturbed areas at the discretion of an archaeologist who meets the Secretary of the Interior (SOI)'s Professional Qualification Standards (48 Federal Register 44738) for archaeology.

3.2 Field Survey Methods

Field survey was completed as a Phase I (Identification) survey per OHA guidelines (Historic Preservation Series No. 11) (OHA 2019). Phase I projects locate cultural resources within an undertaking's APE that may be eligible for the NRHP.

General landscape characteristics that indicate high to moderate prehistoric and historic archaeological site potential for the Project include the following: well drained and stable terrain, topographical rise in a level terrain such as terraces, ridges and moraines, areas adjacent to lakes, areas adjacent to resources such as tool material, marine resources, concentration of plants of known ethnographic use etc., and proximity to known cultural resource site(s) (SRB&A 2013). Low potential areas for prehistoric and historic archaeological sites include poorly-drained areas such as wetlands, active river floodplains or islands, areas of steep incline, areas where ground surface and the subsurface natural stratigraphy have been heavily disturbed or destroyed, and recently dried lakes or stream beds (SRB&A 2013).

Phase I survey of the survey area involved an intensive pedestrian survey. Intensive pedestrian survey of the survey area included visual inspection of the ground surface to identify the presence or absence of cultural artifacts, features, and sites. Intensive pedestrian survey was conducted while walking transects, spaced approximately 33 feet (ft.) (10 meters [m]) apart. Intensive pedestrian survey was supplemented with subsurface testing (shovel test pits [STP]) at the discretion of the SOI-qualified archaeologist at locations of high potential, non-high potential, and disturbed areas to show a sampling of stratigraphy and varied environmental conditions.

The Phase II survey involved collecting sufficient information to complete a determination of eligibility for any sites located within the APE during the Phase I survey. The type and amount of additional information gathered would vary by site type.

Typical prehistoric surface features for this area include semi-subterranean house pits, caches, middens, and artifacts such as stone tools and tool manufacturing debris (flakes), pottery, antler and wood tools, and faunal remains. Historic surface features include but are not limited to, the remains of domestic and commercial buildings (log or frame construction), outhouses, fish camps, trails, docks, roads, and trash dumps. Typical surface historic artifacts to expect include cans, construction materials, heavy equipment pieces, vehicle (snowmobile, dog sled, four-wheeler) parts, airplane and boat parts, trapping and fishing equipment, fuel drums, wood burning stoves, dog houses, and domestic items.

The identification of a location for subsurface testing is based on the presence of surface artifacts or features, the identification of a high potential location, and the potential for intact, undisturbed soil. Subsurface testing involved excavating an STP with a shovel and trowel and screening the soil through 1/8-inch (in.) (0.3-centimeter [cm]) mesh. Test pits measured 20 x 20 in. (50 x 50 cm) and were terminated at the water table, sterile soil, bedrock, or a depth of 3.3 ft. (1 m).

Survey documentation included photographs, note taking, and collecting Global Positioning System (GPS) locational data. GPS data was collected utilizing a Stonex receiver connected via Bluetooth to a Samsung Galaxy Tab S6 Lite tablet running Field Maps for ArcGIS software. Unique identifiers (ID) were assigned for each point, line, and area recorded in Field Maps during survey using a combination of a prefix (Table 2) followed by a sequential number.

Table 2. GPS ID descriptions.

ID Prefix	Type	Description
SPT	Survey Point	Point recorded at a location where information was gathered during survey that is not attached to a potential cultural resource (e.g., begin or end of survey transect, potential test area, site datum)
PHT	Photo Point	Point recorded at the location where a photograph was taken
FPT	Feature Point	Point recorded at the location of a potential cultural resource (e.g., artifact, object, structure, culturally modified tree)
FLN	Feature Line	Line recorded along the length of a linear potential cultural resource (e.g., trapline, trail, road)
FAR	Feature Area	Polygon recorded around a group of associated potential cultural resources (e.g., artifact scatter, can scatter, group of culturally modified trees)
TP	Test Point	Point recorded at the location of a subsurface test (e.g., shovel test pit, soil probe)
TA	Test Area	Polygon recorded around an area where subsurface testing was conducted

Table notes:
GPS = global positioning system
ID = identifier

The information gathered during the Phase I/II survey is presented in Section 5.

4 CULTURAL CONTEXT

4.1 Interior Alaska Cultural Context – Prehistory and Protohistory

Over the years, Interior Alaska cultural chronologies have been proposed, rethought, expounded, refined, updated, and redefined as new archaeological sites yield[ed] new "type" artifacts and new (and sometimes conflicting) radiocarbon age estimates (Bacon and Holmes 1987; Cook 1969; Dixon et al. 1985; West 1971; West and West 1996). Various archaeological culture names (e.g., "traditions," "complexes," and "phases") have been assigned to artifacts that appeared similar and dated to within a particular time frame. However, despite the increase of archaeological data, developing a regional prehistoric framework for Interior Alaska has been hampered by an abundance of shallow and poorly dated sites in relation to a few deeply stratified, well-dated sites. Despite the efforts of a few large survey projects and excavations over the past 60 years, Interior Alaskan cultural history is still at an early baseline stage of development and level of understanding (Potter 2011).

4.1.1 American Paleoarctic Tradition (13,200 to 8,000 B.P.)

The American Paleoarctic Tradition, which dates between 13,200 before present (B.P.) and 8,000 B.P., connects lithic technologies between Alaskan and Northeastern Eurasian Sites (Anderson 1970; Rainey 1939). This tradition identifies type artifacts such as microblades and microcores, bifacial points, large bifacial cores and tools, endscrapers, burins made on flakes, and other expedient tools produced on macroblades. From this tradition, two regional variants, the Nenana Complex and Denali Complex, have been discovered.

The Nenana Complex (12,500 to 10,000 B.P.) is known for its hallmark tear-drop-shaped Chindadn points and knives, triangular points, lanceolate points, burins, end and side scrapers, and lack of microblade technology. The discovery of new sites and further analysis placed this complex slightly older than the Denali Complex (Hoffecker 1996; Hoffecker et al. 1996). The earliest sites dating to this complex are located along the middle Tanana River and southeast of Fairbanks. These sites are identified as Healy Lake Village (XBD-00020), Broken Mammoth (XBD-00131), Mead (XBD-00071), and Swan Point (XBD-00156) (Holmes 1996, 2001; Holmes et al. 1996). Faunal remains from Broken Mammoth and Swan Point include large and small terrestrial animals, waterfowl bones, eggshells, and freshwater fish scales (Yesner 1994). The deepest cultural zone at the Broken Mammoth site also produced bone tools made of mammoth ivory used over 11,000 years ago (Holmes 1996). Chindadn points were initially identified and named at the Healy Lake site south of Delta Junction (Clark, D. W. 1981; Cook 1969; Cook 1996; Dixon 2006). The next earliest sites of this complex are located along the Nenana River and adjacent to the Study Area: Moose Creek (component I), Panguingue Creek (component I), and Walker Road (Goebel et al. 1996; Pearson 1999). At the head of the Teklanika River, the Owl Ridge site (component I) is also attributed to the Nenana complex (Graf and Bigelow 2011).

Artifacts attributed to the Denali Complex (12,300 to 8,000 B.P.) include bifacial biconvex knives, lanceolate bifaces, end scrapers, large blades and blade-like flakes, prepared microblade cores, core tablets, microblades, Donnelly burins, burin spalls, and notched river cobbles. Several known sites are attributed to the Denali complex located west of Paxson in the Tangle Lakes Archaeological District and in the upper Susitna River drainage — all in overlook settings, presumably for mammal watching.

Currently, the Dry Creek site (HEA-00005), located along the Nenana River southwest of Fairbanks, is the earliest known Denali complex site in the Interior. In the Tanana River Valley (well east of the 2016 Project study area), the Swan Point (XBD-00156), Gerstle River, Chugwater (FAI-00035), and Healy Lake (XBD-00020) sites contain Denali complex components. The Campus site (FAI-00001) in Fairbanks, while producing confusing dates at times, appears to contain occupations that fall late in this complex (Anderson 1984; Cook 1969; Dixon 2006; Dumond 1984; Pearson and Powers 2001; West and West 1996). Denali complex sites along the Nenana River include Dry Creek (component II), Moose Creek (component II), and Panguingue Creek (component II) (Goebel et al. 1996; Hoffecker and Powers 1996; Pearson 1999). Farther west and at the head of the Teklanika River, the Owl Ridge (component II) (FAI-00091), Teklanika West (HEA-00001), and Teklanika East (HEA-00002) sites are also attributed to the Denali complex (Graf and Bigelow 2011).

4.1.2 Northern Paleoindian Tradition (11,300 to 8,500 B.P.)

The Northern Paleoindian tradition is a relatively new archaeological concept and as yet lacks a clear definition in Central Alaskan prehistory. Northern Paleoindian tradition sites are uncommon in the Interior. Artifacts associated with this tradition include large lanceolate projectile points, end and thumbnail scrapers, and spurred gravers. Known sites include the Jay Creek Ridge site, with Folsom-like points, on the upper Susitna River; the Owl Ridge site (component I) on the upper Teklanika River, which contains a possible tent ring; the Panguingue Creek site (component I) on the Nenana River, which contains lanceolate points; and the Carlo Creek and Eroadaway sites on the upper Nenana River, which date to this period and contain projectile points and bifaces, but lack microblades (Bowers and Reuther 2008; Dixon 2006; Holmes 1988; Phippen 1988). Recently, scholars have argued that this pattern is happening more broadly throughout central Alaska and has been named the Mesa Complex (Hoffecker 2011).

4.1.3 Northern Archaic Tradition (6,000 to 2,000 B.P.)

The often-cited key diagnostic difference between Northern Archaic tradition technology and earlier archaeological culture traditions is the presence of side-notched points (Anderson 1968b, a; Esdale 2008). Further, this tradition is differentiated by the shift in exploitation of upland caribou hunting as compared to more lowland resources with the Denali Complex (Ackerman 2004; Wilson and Rasic 2008). Within the Interior, south of the Koyukuk River Basin, a large number of sites containing notched points have been found south and west of the Elliot, Richardson, and Denali highways (e.g., Lake Minchumina, Clear Creek, Wood River Butte, and Tangle Lakes archaeological districts; and the Tanana Flats and Donnelly Dome areas), compared to only a handful of notched point sites that have been found in the vicinity of the proposed Study Area. Interior sites that have been identified as having Northern Archaic tradition components and that are reported at five Nenana Valley localities include: Dry Creek (component IV) (dated between 3,400 and 4,700 B.P.), the Panguingue Creek site, the Usibelli site, and Moose Creek (component IV). Other sites have components that date within the Northern Archaic tradition time range but lack notched point artifacts.

4.1.4 Arctic Small Tool Tradition (4,500 B.P. to 900 A.D.)

Following the Northern Archaic Tradition, beginning roughly 4,500 years ago, is a prehistoric culture known as the Arctic Small Tool tradition (ASTt) (Irving 1964), known for its tiny, finely-flaked stone tools. The original ASTt definition has been expanded to include later cultures such as Choris, Norton, and Ipiutak, extending the ASTt time period to about A.D. 900. This dramatic change in stone tool technology from the earlier Northern Archaic may mark the introduction of the bow and arrow, and it is interpreted by many archaeologists as the original Eskimo people along the coasts of Alaska. However, the nature of the continuity and cultural relationship between late ASTt Ipiutak and ancestral Yupik and Iñupiat peoples has not been clearly established (Gerlach and Hall 1988). Shaw (1998) hypothesizes that the first permanent inland occupation of the Yukon-Kuskokwim Delta probably occurred around 2,000-1,500 B.P. as a result of tundra wetland exploitation. However, the dearth of dated sites in the Interior makes it difficult to test this hypothesis.

4.1.5 Dene Tradition (2,000 B.P. to 1880 A.D.)

The Dene Tradition dates from 2,000 years ago to circa A.D. 1880 and chronologically follows the Northern Archaic tradition. The transition from ASTt to Dene has been marked by cultural material change from abundant lithic artifacts (although stemmed projectile points are present in assemblages) to a predominance of organic materials, bone and antler for projectile points and tools, and native copper artifacts such as awls, projectile points, knives, and scrapers (Shinkwin 1979; Shinkwin and Aigner 1979). Other cultural material items include stone slab and boulder flake tools, grooved adzes, and, occasionally, preserved birch bark tray baskets.

The Dene Tradition is the prehistoric culture attributed to the ancestors of the current and indigenous northern Dene Indians of Alaska. These sites are characterized by housepit and cache features associated with flaked and ground stone, bone, and antler artifacts. In the protohistoric sites, Euroamerican artifacts may be mixed in with these assemblages, particularly iron and glass trade beads and other forms of glass. Later in time, moving into the protohistoric and historic periods, sites also show a shift from pit houses to log cabins containing even more Euroamerican goods.

Traditional Dene settlement patterns were based on small family groups practicing a subsistence lifestyle. This lifestyle focused on the procurement of fish (both anadromous and freshwater) and terrestrial game. Contact with Euroamericans began to change that way of life through the introduction of a cash economy, beginning with the fur trade (Pitts 1972; Simeone 1995). The first introductions of Euroamericans into the Yukon and Tanana River areas began in the mid-1800s with fur traders and missionaries. This was followed quickly by government exploration and, later, prospecting and the gold rush.

After the introduction of Euroamerican trade goods (circa A.D. 1700s), the ingenuity of the Dene can be seen in the various ways metal weapons, tools, and containers were used and reused. Site types identified during most of this period in the Interior consist of short-duration camps. Some of these were reoccupied multiple times. During the last 150 to 200 years, log cabin villages began appearing at former seasonal camp locations (Clark, A. M. 1981; Dixon 1985; National Park Service 1998).

Much of the work at Dene Tradition sites in Alaska comes from excavations outside of the Nenana Valley; the exception is the Nenana River Gorge site, located close to the Parks Highway bridge crossing near

Moody. This site best represents the prehistoric Dene period in the Interior setting. The two prehistoric components of this site were deposited between ca. A.D. 1500 and 1685. Pottery is rarely associated with Interior Alaska sites, but several potsherds were found in the prehistoric component at the Nenana River Gorge site, along with copper tools, wood and bone tools, pecked and ground stone tools, and heavy flake tools (Plaskett 1977; Reuther 2009). To the west of this area, the Lake Minchumina site provides an excellent example of the seasonal trade routes following inland and marine resources (Holmes and Gudgel-Holmes 1988).

4.1.6 Interior Alaska Historic Period Context

Russian exploration of southern Alaska began in 1741-1742 with the government-supported Bering and Chirikov expeditions to map the coastlines of Alaska. The early exploration and initial settlement of southern Alaska began along coastal zones and moved into the interior regions along relatively easy transportation corridors, such as wide rivers and valleys. With the lack of support after 1743 from the Russian government for expeditions to the Americas, the exploration and establishment of trading and settlements were primarily left to smaller endeavors by privately funded entrepreneurs. In the 1770s through the 1790s, several British, Spanish, and Russian expeditions ventured into the Cook Inlet area along the coastal zones and larger rivers of Southwestern Alaska. A more permanent Euroamerican presence and settlement in Alaska began as the Russians established fur trade outposts in the 1780s (Black 2004).

4.1.6.1 Russian Fur Trade and Missionization in Alaska (1760 to 1867 A.D.)

Establishing the Russian fur trading outposts, agricultural colonies, and missions in the 1760s and 1800s brought sizable quantities of European trade goods and more widespread influences from Euroamerican cultural practices. The modern fur trade in Alaska primarily began with early Russian fur traders spreading eastward along the Aleutian Archipelago, reaching Cook Inlet and Kodiak Island by the 1780s. By the late 1790s, both the Lebedev-Lastochkin Company and its rival, the Shelikov-Golikov Company, had established trading posts in Cook Inlet at the present-day sites of Tyonek, Kasilof, and Kenai (Antonson and Hanable 1992b; Black 2004; Znamenski 2003). The Russian American Company (RAC) was charted in 1799, essentially creating a state-sanctioned monopoly for exploiting resources and the fur trade in Alaska. The traditional seasonal round changed to accommodate fur harvesting and some natives became middlemen and traders, but fur harvesting and providing food for hunters and Russian personnel was not always voluntary (Clark 1984; Townsend 1981; Yesner and Holmes 2000).

Russian Orthodox missionaries followed traders into the Cook Inlet and the middle and upper Kuskokwim regions. These missionaries, and later Moravian churchmen, were centered at trading posts and had to travel extensively to meet with their parishioners.

4.1.6.2 American Fur Trade, Trapping, and Hunting in Alaska (1867 to Present)

The United States (U.S.) purchased Alaska from Russia in 1867, and the Hutchinson-Kohl Company immediately purchased the RAC's assets. Soon reorganized with Williams-Haven as the Alaska Commercial Company (ACC), the new company continued operating many of the old Russian posts, closed others, opened new posts of its own, and began to operate in the territory as a de facto government (Antonson and Hanable 1992a). Smaller trading outfits were also established, such as those by C.D. Ladd, the Shirpser, Haritinoff and Company, and the Western Fur and Trading Company, in the Beluga-Tyonek area (Bacon et al. 1983). The Great Depression of the 1930s brought a swift drop in fur prices, which severely curtailed fur farming and trapping, but trapping has survived in Alaska to the present day as part of the subsistence lifestyle of bush residents. By 1940, the Northern Commercial Company (NCC) bought the ACC's Alaska interests, and by 1942, the ACC was dissolved (Antonson and Hanable 1992a).

Hunting, fishing, and guiding are enduring elements of Alaska's historical identity and economic prosperity, and activists have been highly influential in local and national politics. Many of Alaska's early hunting guides were market hunters who were put out of business by the Alaska Game Laws of 1902, 1908, 1912, and 1925, which outlawed their earlier profession. After 1912, guides had to be licensed to operate in Alaska, and obtaining this professional certification was difficult. An aspiring guide had to have several years of experience in an informal apprenticeship with an established guide and then underwent a rigorous testing program administered by the Alaska Game Commission. Only individuals known to be excellent bushmen committed to wildlife conservation and of good character were granted a license. In addition, Alaska's early-day hunting guides were officially deputized wildlife enforcement agents charged with arresting poachers and bringing them to the authorities (Cassidy and Titus 2003).

4.1.6.3 Exploration in American Period (1898 to 1930 A.D.)

With gold-seekers flooding into the far north after the Klondike River, Yukon Territory gold discovery of 1897, the U.S. Geological Survey (USGS) began to send a series of exploratory expeditions to Alaska.

An expedition led by A.H. Brooks in 1902 is the first written account of a traverse from the Pacific drainage to the Tanana-Yukon drainage (Brooks 1911). Several non-government expeditions also passed through the Nenana Valley area and, as early as 1902-1903, an expedition assessing the feasibility of a railroad route was undertaken. Years later, the first major topographic and geological study of the Broad Pass occurred in 1913 by Bagley and Moffitt (Moffitt 1915). This reconnaissance work led to the construction of the Alaska Railroad Corporation (ARRC) in 1915.

The Tanana and Nenana River regions were explored at the beginning of the twentieth century for their potential to yield mineral resources. The Bonnifield Mining District, established in 1903, includes the Tanana Valley lowlands south of Fairbanks between the Tanana River and the northern foothills of the Alaska Range, and from the Nenana River to the west to the Delta River in the east. Interest in the Bonnifield district began shortly after the major gold strike in Fairbanks in 1903. Prospecting continued along the major creeks, and by 1906 placer gold was being actively mined on the Totatlanika River, the Tatlanika River, Gold King Creek, and Portage Creek. Small-scale placer mining began on Moose Creek in 1909 and in other places along the district's western edge as the new railroad improved transportation into the region (Brooks 1923). By 1930, only 25 men were actively mining various creeks in the district (Moffitt 1933).

Lode prospecting for gold began in 1908; however, lode deposits in the area did not yield significant amounts of gold until 1931. The primary property producing lode gold was the Liberty Bell Mine located on Eva Creek 11 mi. (17.7 km) from the Ferry railroad station (Moffitt 1933). A wagon road built by the Alaska Road Commission (ARC) in the 1920s connected the railroad station at Ferry to the rest of the district. Other minerals mined in the district included silver and lead (Smith 1941).

The development of the coal industry began shortly after the railroad was in operation. Gold miners first exploited coal from the region, using it as a heat source in their cabins. USGS geologists explored the Bonnifield Region for extensive coal sources, finding the best and most easily accessible exposures along Healy, Lignite, and California creeks.

Settlement of the Healy area began in 1903 when three prospectors, Andrew Dragvich, “Papa” Popovich, and John Calvin, established a camp at the mouth of Lignite Creek. The three provided services to prospectors and homesteaders from their camp, with Dragvich eventually opening a roadhouse. In 1920, coal mining began in earnest on Healy Creek. A.E. “Cap” Lathrop of Fairbanks and two partners from Nenana established the Healy River Coal Company and mining community of Suntrana several miles up Healy Creek (*Usibelli Coal Miner* 1993). A spur line of the railroad ran 4 mi. (6.4 km) up the creek to Suntrana, allowing coal to be easily transported to Fairbanks (Smith 1941). A population of 125 persons was reported for the Healy-Lignite area in 1945, with most of the community working in the coal industry (Wahrhaftig et al. 1951). A few railroad employees and their families lived in Healy. The population at the Lignite station north of Healy was 10, consisting of people living in the roadhouse and a few nearby cabins. In 1971, the residents of Healy began migrating to the western side of the Nenana River after constructing the Parks Highway. Today, Usibelli Coal Mine is the major coal-producing company on both Healy and Lignite creeks.

4.1.7 Transportation in Alaska (1905 to Present)

Transportation in early-day Alaska was generally an arduous affair, involving long distances and several different modes of transport to get from point A to point B. River transport was more efficient during the summer than overland travel, but it was not without its chronic problems and, additionally, was only possible between June and September, as the rivers were locked in ice between October and May. Prior to the development of aviation, accessing important mining areas proved difficult, and the ARC cut foot and dogsled trails and built shelter cabins, gravel wagon roads, horse pack trails, and highways all over the territory.

4.1.7.1 Alaska Road Commission

While the ARC was a federal agency (first under the Department of War, then, after 1932, under the Department of the Interior [DOI]), the Alaska Territorial Board of Road Commissioners (TBRC) was formed in 1917 by the territorial government. This meant that after 1917 there were actually two road and trail construction agencies operating in Alaska, though the TBRC functioned primarily to contribute territorial funds to shore up the budget of the federal ARC. Also, in 1917, the ARC began building a series of shelter cabins along Alaska’s trails. Shelter cabins were open to all travelers, free of charge, and their importance increased as the roadhouse business began to collapse due to the advent of aviation. The ARC continued as the territory’s primary road and trail building agency until 1956, when they were absorbed by the Department of Agriculture’s Bureau of Public Roads (Mead & Hunt 2014; Naske 1986).

4.1.7.2 The Alaska-Canada Highway and ALCAN Land Port of Entry

The Alaska-Canada Highway (or ALCAN) stretches approximately 1,520 mi. (2,446 km) from Montana to Alaska through British Columbia and the Yukon Territory. It was constructed in 1942 as part of the war effort during World War II (WWII). The Army Air Force provided support during construction along this

Northwest-Staging Route in a series of airstrips along the route. These allowed planes to be flown along the highway en route to Russia as part of the Lend-Lease Program (Mooney 2005).

The community areas of Northway and Beaver Creek were established during highway construction. The areas had been used by Native Americans and First Nations Peoples and were important focal points during highway construction, as the route followed many traditional trails that connected the communities (Mooney 2005).

Prior to the 1940s, Native residents lived traditionally and slowly increased use of western goods and services. During the 1940s, the war effort and highway construction and maintenance were central to the local economy, and this continued through the 1950s and 1960s. Additionally, local government, tourism, and mining gained economic importance. The existing LPOE was completed in 1972 and further contributed to the local economy. As of 2005, much of the population was involved in maintaining government services and infrastructure, as well as management, professional services, sales, extraction, and transportation (Mooney 2005).

U.S. Customs operated near the border after the completion of the highway, relocated to Tok in 1948, and moved to the current LPOE when it was completed in 1971. A cultural resources investigation completed in 2005 found that the LPOE property did not contain any significant historic structures, and no prehistoric cultural materials were located (Mooney 2005).

4.2 Cultural Resource Investigations Located in the Study Areas

The desktop review identified 14 cultural resource investigations (Table 3) conducted in or dealing with resources located in the Study Areas.

Table 3. Previous surveys in the Study Areas.

Date	Project	Description	Citation
2002	Results of the 2001 Phase I Cultural Resources Survey of the Proposed Alaska Gas Pipeline Project Area, Southern Route	NLUR conducted Phase I cultural resources surveys for the majority of the southern route alignment for the proposed Alaska Gas Pipeline Project, including from the Robertson River to the Canadian Border.	(Potter et al. 2002)
2005	An Archaeological Survey of The ALCAN Land Port of Entry (ALC LPOE) 42.95 Acres	Intensive pedestrian survey and shovel testing of 42.95 ac. (17.38 ha) was conducted at the ALCAN LPOE between Tok, Alaska and Beaver Creek, Yukon Territory.	(Mooney 2005)
2007	Evaluation of Buildings & Structures at the Land Ports of Entry in Alaska	Survey and evaluation of historic-age (pre-1960) buildings and structures at the four LPOEs in Alaska.	(Belfast et al. 2007)
2007	Haines-Fairbanks Pipeline Formerly Used Defense Site	This report provides an assessment of effect for an undertaking along the Haines-Fairbanks Pipeline Formerly Used Defense Site and a determination of eligibility for the Haines-Fairbanks Pipeline	(Grover 2007)
2007	Cultural Resources Survey for Alaska Highway MP 1222-1235 Rehabilitation Project Near the Yukon-Alaska Border	NLUR completed a survey of the Alaska Highway between the Yukon-Alaska border and MP 1235.	(Neely 2007)

Date	Project	Description	Citation
2009	Results of the 2008 Phase I Cultural Resources Survey of the Proposed Denali Gas Pipeline Project Area: Big Delta to the Canadian Border	NLUR completed a survey of the proposed pipeline route from Big Delta to the Canadian border for Denali-The Alaska Gas Pipeline, LLC. Both of the Alternatives are within the 2-mi. (3.2-km) pipeline corridor.	(Potter et al. 2009)
2012	Phase I Cultural Resources Overview and Survey Report for the Alaska Pipeline Project, Prudhoe Bay to the Alaska, United States-Canada Border, 2010-2011	The 2010-2011 field seasons covered 27.6 mi. (44.4 km) of survey between Tok and the U.S.-Canada border, and 45 previously and newly recorded prehistoric, protohistoric, and historic sites were located within the survey segment.	(Higgs et al. 2012)
2016	2015 Report of Cultural Resources Investigation of Lots 1 and 2 of US Survey 5127 Located at Milepost 1223 of the Alaska Highway within the Tetlin National Wildlife Refuge	TNSDS monitored activities during contaminants investigation and performed a cultural resources investigation as part of USFWS purchase of property at Alaska Highway MP 1223. Two sites (The Alaska Highway Telephone and Telegraph and the Haines-Fairbanks Pipeline Linear Feature) and five cabin complexes were inventoried. No shovel tests were conducted.	(Meinhardt et al. 2016)
2016	Reconnaissance Level Survey and Testing of the Alaska Highway Passing Lane Project, DOT&PF Project 60632, Located between the Canadian Border and Delta Junction, Alaska	In 2015, OHA's ASU conducted a reconnaissance level survey with limited testing of 12 potential passing lane locations and 12 material sites on the Alaska Highway for the DOT&PF.	(Conley et al. 2016a)
2016	Reconnaissance Level Cultural Resource Investigation of the Alaska Highway Milepost 1235-1268 and Six Proposed Material Sites, DOT&PF Project #0A11014/Z607520000	In 2015, OHA's ASU conducted a reconnaissance level survey with limited testing of MP 1235-1268 of the Alaska Highway for DOT&PF. Six material sites were investigated.	(Conley et al. 2016b)
2020	National Register Evaluation of the Scottie Creek Acquisition on the Tetlin National Wildlife Refuge located two miles west of the Alaska/Yukon Border Crossing, Alaska	TNWR acquired the Scottie Creek Acquisition in 2015. TNWR planned to remove derelict buildings and debris from the land, mitigate contaminated soils, and develop it for tourism and environmental education. TNWR submitted this NRHP evaluation for the extant buildings, and for a historic district. This evaluation proposes the Thompson Homestead Cabin is eligible for the NRHP with local significance.	(Corbett 2020)
2020	Alcan Border Station Complex Determination of Eligibility for Inclusion in the National Register of Historic Places	The Alcan Border Station Complex is located at milepost 1221.8 on the Alaska Highway and was completed in 1972. In this report, it was recommended not eligible for inclusion in the NRHP due to loss of integrity.	(Wark et al. 2020)

Date	Project	Description	Citation
2021	Letter Report Re: Alaska Highway MP 1222-1227 Resurfacing	Alaska DOT&PF presented a finding of no historic properties adversely affected for the proposed resurfacing of the Alaska Highway between MP 1222 and 1227.	(McKinney 2021)
2021	An Ethnohistory of the Chisana River Basin	The Chisana River basin is part of the ancestral homelands of the indigenous *Dineh* who occupy the lands astride the Alaska-Yukon border in the area of the Alaska Highway. This report documents the indigenous *Dineh* use of the Upper Tanana River borderlands with a focus on the Chisana River basin.	(Easton 2021)

Table notes:
Source: AHRS, accessed May 30, 2023
ASU = Archaeological Survey Unit
DOT&PF = Department of Transportation and Public Facilities
LPOE = Land Port of Entry
MP = Milepost
NRHP = National Register of Historic Places
NLUR = Northern Land Use Research, Inc.
OHA = Office of History and Archaeology
TNSDS = True North Sustainable Development Solutions
TNWR = Tetlin National Wildlife Refuge

4.3 Known AHRS Sites Located in the Study Areas

A review of the AHRS identified four AHRS sites within the Study Area for Alternative 1 (Table 4) and nine AHRS sites and one RS 2477 trail within the Study Area for Alternative 2 (Table 5, Table 6).

Table 4. AHRS sites located in the Study Area for Alternative 1.

AHRS No.	Site Name	Description	NRHP Eligibility	Approximate Distance from Alternative 1
NAB-00373	Alaska Military Highway Telephone and Telegraph Line	Land-based communications system, connected Alaska to contiguous states, followed route of original Alaska Highway, determined eligible for NRHP under Criterion A in 2008	DE	located in Alternative 1
NAB-00397	Alaska Highway Segment	2000-ft. (610-m) abandoned segment of original 1942 alignment of Alaska Highway, determined not eligible for NRHP in 2008	DNE	located in Alternative 1
NAB-00498	Haines-Fairbanks Pipeline Linear Feature	40-mi. (64-km) segment of military fuel pipeline, completed in 1955 and discontinued in 1973, 8-in. (20-cm) diameter steel pipe with smaller branches to pump stations, includes 50-ft.- (15-m-) wide corridor, pipeline runs along surface and subsurface, segment from Alaska Highway MP 1222-1227 determined not eligible for NRHP in 2021	DNE	66 ft. (20 m)
NAB-00610	Alcan Border Station Complex	Consists of the Border Station Building, Service Building, and Quarters Building constructed in 1970-1972 and nine buildings added since then; determined not eligible for NRHP in 2020	DNE	located in Alternative 1

Table notes:
Source: AHRS, accessed May 30, 2023, and November 10, 2023
AHRS = Alaska Heritage Resources Survey
APE = Area of Potential Effect
cm = centimeter(s)
DE = Determined Eligible
DNE = Determined Not Eligible
in. = inch(es)
ft. = foot (feet)
km = kilometer(s)
m = meter(s)
mi. = mile(s)
MP = milepost
NAB = AHRS-designated prefix for Nabesna quadrangle
NRHP = National Register of Historic Places

The information presented below is from individual AHRS cards.

With the advent of World War II (WWII), the U.S. government wanted to establish a land-based communications system connecting Alaska to the rest of the contiguous states, providing support to airfields in Alaska known as the Northwest Staging Route, which coincided with the construction of the Alaska Highway through Canada to Alaska. The Alaska Military Highway Telephone and Telegraph Line (NAB-00373) followed the route of the original Alaska Highway, providing a communication connection from Edmonton, Alberta, to Fairbanks in 1943.

The Alaska Highway Segment (NAB-00397) consists of a 2000-ft. (610-m) segment of the original 1942 alignment of the Alaska Highway. Approximately 1400 ft. (426 m) of the south section remains unchanged despite the construction of various buildings. However, no outstanding features are retained from its original design due to road improvements over the years.

The Haines-Fairbanks Pipeline Linear Feature (NAB-00498) was primarily used to provide fuel to military bases in the interior of Alaska. It was completed in 1955 and discontinued in 1973. The pipeline is composed of a 50-ft-wide (15-m-wide) corridor containing primarily 8-in. (20-cm) diameter steel pipes with smaller feeder pipes that branch off to pump stations, plus several ancillary infrastructure features associated with the pipeline.

The Alcan Border Station Complex (NAB-00610) consists of the Border Station Building, Service Building, and Quarters Building, which were constructed in 1970-1972, as well as nine buildings that were added to the complex since then. The site was determined not eligible for the NRHP in 2020, as many changes and additions to the complex resulted in the loss of integrity needed to demonstrate its significance.

Table 5. AHRS sites located in the Study Area for Alternative 2.

AHRS No.				**Approximate**
NAB-00020	NAB-00020	Surface flakes and chert biface fragment	NDE	910 ft. (277 m)
NAB-00317	NAB-00317	Two surface flakes found at gravel source and an obsidian flake with retouch found in gravel pit	NDE	41 ft. (12 m)
NAB-00373	Alaska Military Highway Telephone and Telegraph Line	Land-based communications system, connected Alaska to contiguous states, followed route of original Alaska Highway, determined eligible for NRHP under Criterion A in 2008	DE	located in Alternative 2
NAB-00438[1]	Sanford Cabin Site	Mid- to late- 20th century cabin site with domestic trash dumps activity areas associated with local Athabascan inhabitants, residence was occupied from the late 1950s to the early 1970s, contains collapsed cabin, food and beverage cans, glass jars, bottles, privy hole, chair, and other domestic artifacts.	NDE	2,446 ft. (745 m)
NAB-00456	NAB-00456	19 x 32 ft. (6 x 10 m) concentration of food cans, jars, bottles, and WWII-period U.S. Army ceramics	NDE	30 ft. (9 m)
NAB-00494	NAB-00494	Subsurface lithic scatter of basalt flakes	NDE	421 ft. (128 m)
NAB-00495	NAB-00495	Surface lithic scatter of two gray chert flakes and one obsidian flake	NDE	897 ft. (273 m)
NAB-00498	Haines-Fairbanks Pipeline Linear Feature	40-mi. (64-km) segment of military fuel pipeline, completed in 1955 and discontinued in 1973, 8-in. (20-cm) diameter steel pipe with smaller branches to pump stations, includes 50-ft.- (15-m-) wide corridor, pipeline runs along surface and subsurface, segment from Alaska Highway MP 1222-1227 determined not eligible for NRHP in 2021	DNE	located in Alternative 2

AHRS No.	Site Name	Description	NRHP Eligibility	Approximate Distance from Alternative 2
NAB-00530	Scottie Creek Scraper Trap	Seven scraper traps were installed along the Haines-Fairbanks Pipeline to clean the line, only the concrete slab foundations for this trap remain, determined to be a non-contributing property within a district in 2016	NCP	located in Alternative 2

Table notes:
Source: AHRS, accessed May 30, 2023
[1]Site description in Denali Gas Pipeline Report (Potter et al. 2009)
AHRS = Alaska Heritage Resources Survey
APE = Area of Potential Effect
cm = centimeter(s)
DE = Determined Eligible
DNE = Determined Not Eligible
in. = inch(es)
ft. = foot (feet)
km = kilometer(s)
m = meter(s)
mi. = mile(s)
MP = milepost
NCP = Non-contributing Property
NDE = No Determination of Eligibility
NRHP = National Register of Historic Places
WWII = World War II

The information provided below is from individual AHRS cards.

NAB-00020 consists of surface flakes and a chert biface fragment. It is located approximately 15 ft. (4.5 m) from a survey stake directly adjacent to a section of the Haines pipeline. Previous site history indicated that the surface artifacts were collected. The site was not found by crews in 2011 during Alaska Pipeline Project (APP) pedestrian survey.

NAB-00317 was located in 2001 on the west side of a large material source gravel pit that was probably used for constructing and maintaining portions of the Alaska Highway. In 2011, during an APP survey, crews revisited the area and located surface artifacts on a dirt road leading to Scottie Creek Lodge.

With the advent of WWII, the U.S. government wanted to establish a land-based communications system connecting Alaska to the rest of the contiguous states, providing support to airfields in Alaska known as the Northwest Staging Route, which coincided with the construction of the Alaska Highway through Canada to Alaska. The Alaska Military Highway Telephone and Telegraph Line (NAB-00373) followed the route of the original Alaska Highway, providing a communication connection from Edmonton, Alberta, to Fairbanks in 1943.

According to the Cultural Resources Site Form (Potter et al. 2009), the Sanford Cabin Site (NAB-00438) is located on a Native Allotment approximately 820 ft. (250 m) east of the Border City Service station on the Alaska Highway and the Haines-Fairbanks pipeline access corridor. The cabin represents a mid- to late-20th century local Athabascan residence. The cabin has collapsed, but the material remains show a dateable pattern of activity and use of the area.

NAB-00456 was documented in 2008 as part of the Denali Gas Pipeline Project. It consists of a dense concentration of food cans, jars, bottles, and WWII-era U.S. Army ceramics. It is located west of the

Scottie Creek Services station on the Alaska Highway, on the northern margin of a gravel borrow source pit in a forested area north of the former Haines-Fairbanks pipeline corridor.

NAB-00494 was located in 2011 by an APP survey crew. It consists of a small lithic scatter on a slight rise near the base of a ridge overlooking the Desper Creek valley. The location provides limited viewsheds to the east and is densely vegetated.

NAB-00495 was found during investigations conducted by an APP crew in 2011. It consists of a small lithic scatter located on a slope at Scottie Creek Hill, between a gravel pit cut bank and the tree line. The crew found three flakes on the surface, relocated 15 past shovel pits, and put in seven additional test pits, which were negative. The location would provide a limited viewshed and some shelter from north and west winds.

The Haines-Fairbanks Pipeline Linear Feature (NAB-00498) was primarily used to provide fuel to military bases in the interior of Alaska. It was completed in 1955 and discontinued in 1973. The pipeline is composed of a 50-ft-wide (15-m-wide) corridor containing primarily 8-in. (20-cm) diameter steel pipes with smaller feeder pipes that branch off to pump stations, plus several ancillary infrastructure features associated with the pipeline.

The Scottie Creek Scraper Trap (NAB-00530) consists of seven scraper traps installed along the Haines-Fairbanks Pipeline, which were used to clean the lines during the transmission of different fuels. All features of the Scottie Creek Traps have been removed, but the concrete slabs remain. Soils around the foundations were heavily disturbed, and remedial contractors in 2007 and 2016 sampled the site for contamination.

The Department of Natural Resources defines RS 2477 trails as public rights-of-way, similar to an easement. The single RS 2477 trail documented by NLURA during field survey extends into the boundary of Alternative 2 (Table 6).

Table 6. RS 2477 trail located in the Study Area for Alternative 2.

RS 2477 Trail No.	Site Name	Description	Approximate Distance from Alternative 2
RST 1586	Scotty Creek High Cache Trail	Originates off the Alaska Highway at Scotty Creek Lodge and terminates at High Cache. The trail is approximately 5 mi. (8 km) long.	located in Alternative 2

Table notes:
km = kilometer(s)
mi. = mile(s)
RS 2477 = Revised Statute 2477 of the Mining Act of 1866

5 Survey Results

Phase I/II survey of the Project APE occurred on August 14-24, 2023. NLURA Project Archaeologist Kate Yeske, M.A., R.P.A. conducted the survey along with John Hemmeter, Brooke Schwaderer, and Daniel Monks. The APE for both alternatives is located on the north side of the Alaska Highway. NLURA conducted a pedestrian survey of the APE with 100% coverage of areas not previously disturbed by development of the Alcan Land Port of Entry. The survey area consisted of mostly flat areas, some wetland areas, and some points of higher elevation with good viewsheds and well-drained soils. The vegetation in the APE included black spruce, birch, alder, willow, aspen, fireweed, grasses, low bush cranberry, high bush cranberry, mosses, Labrador tea, and other various low scrub.

5.1 Alternative 1 Survey Results

5.1.1 Pedestrian Survey Results

NLURA conducted pedestrian survey at 10-m intervals in Alternative 1. NLURA did not observe any cultural materials in Alternative 1. See Figure 4 through Figure 8 for representative overview photos of the APE at Alternative 1. See Figure 9 and Figure 10 for recent photos of the Alaska Military Highway Telephone and Telegraph Line (NAB-00373).

5.1.2 Subsurface Testing Results

NLURA identified three locations for shovel testing in Alternative 1 (Table 7). All shovel tests excavated by NLURA were negative for cultural material.

Table 7. Shovel test pits excavated in Alternative 1.

STP	Level	Depth (cmbgs)	Munsell Color	Texture/Description	Cultural Materials
TP001	I	0-8	10YR2/2 (Very Dark Brown)	Organic layer	N/A
	II	8-28	10YR5/2 (Grayish Brown)	Silt loam with many roots	N/A
	III	28-40	10YR2/1 (Black)	Wet silty loam with angular cobbles	N/A
TP002	I	0-15	10YR3/2 (Very Dark Grayish Brown)	Organic duff layer	N/A
	II	15-18	7.5YR2.5/1 (Black)	Silt	N/A
	III	18-21	10YR4/3 (Brown)	Silt loam	N/A
	IV	21-33	7.5YR2.5/1 (Black)	Silt with large cobbles	N/A
TP003	I	0-12	2.5Y4/4 (Olive Brown)	Silt with angular, poorly sorted gravels and cobbles	N/A

Table notes:
Test pits measured 20 x 20 in. (50 x 50 cm)
Soil color was assigned based on Munsell Color (2000) color charts.
Cmbgs = centimeters below ground surface
N/A = not applicable
STP = shovel test pit
TP = test point

Figure 4. Overview from SPT002, view North (NLURA photograph).

Figure 5. Overview from SPT006, view South (NLURA photograph).

Figure 6. Overview from SPT017, view North (NLURA photograph).

Figure 7. Overview from SPT014, view East (NLURA photograph).

Figure 8. Overview from SPT016, view East (NLURA photograph).

Figure 9. The Alaska Military Highway Telephone and Telegraph Line (NAB-00373) (NLURA photograph).

Figure 10. The Alaska Military Highway Telephone and Telegraph Line (NAB-00373) (NLURA photograph).

5.2 Alternative 2 Survey Results

5.2.1 Pedestrian Survey Results

Pedestrian survey in the APE at Alternative 2 consisted of walking transects spaced at 10-m intervals (Figure 11). Eleven locations of cultural resources were recorded during pedestrian survey of the APE at Alternative 2 (Table 8, Figure 3). These were recorded as feature points and feature lines. The feature points recorded included materials that were either modern or isolated historic-aged material that was not significant (Figure 12, Figure 13). The feature line FLN001 was a segment of RST 1586 (an RS 2477 trail) that was recorded with an updated location and photos, as the original coordinates were incorrect (Figure 14).

Table 8. Feature points and feature lines recorded in Alternative 2.

ID	Description
FPT001	Marker (Property Corner)
FPT002	Marker (Property Corner)
FPT003	Marker (Property Corner)
FPT004	Building
FPT005	Can (Hills Bros.)
FPT006	Equipment (Bulldozer Blade)
FPT007	Auto
FPT008	Box
FPT009	Wood
FPT010	Can
FLN001	RST 1586 (RS 2477 trail)

Table notes:
FLN = feature line
FPT = feature point
ID = identifier
RS 2477 = Revised Statute 2477 of the Mining Act of 1866

5.2.1.1 NAB-00625: Feature line FLN001 (RS 2477 trail RST 1586)

NAB-00625 (feature line FLN001) is a 440-ft. (134-m) segment of RST 1586 located within Alternative 2. NLURA conducted pedestrian survey of the location provided by the Department of Natural Resources and did not observe any indications of a trail. Therefore, when the actual trail was identified during pedestrian survey 154 ft. (47 m) to the east of the reported location, its verified location was recorded as feature line FLN001 (Figure 14). In addition, NLURA documented this segment of trail as an AHRS site because of its potential association with known prehistoric and historic AHRS sites in the immediate proximity (NAB-00317 and NAB-00456).

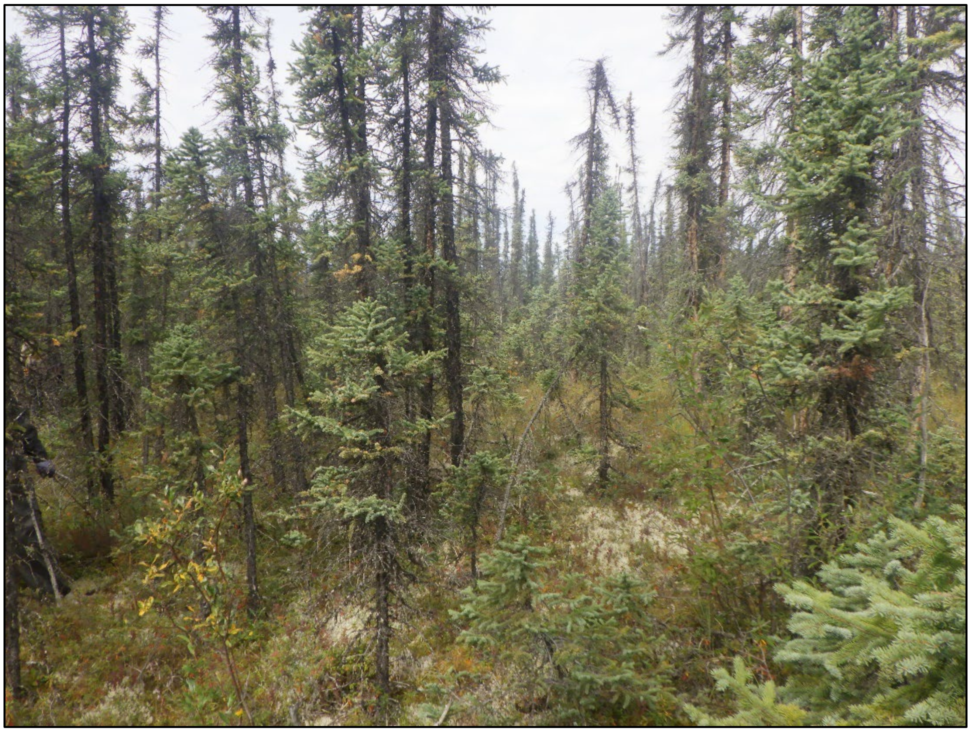

Figure 11. Overview from SPT011, view West (NLURA photograph).

Figure 12. Overview of FPT005, plan view (NLURA photograph).

Figure 13. Overview of FPT007, view North (NLURA photograph).

Figure 14. Overview of FLN001 from PHT002, view North (NLURA photograph).

5.2.2 Subsurface Testing Results

NLURA identified eighteen locations for shovel testing in Alternative 2 (Table 9). Four shovel tests were positive for cultural material and 14 shovel tests were negative. TP005 (Figure 22 through Figure 29, Figure 17) was the first positive shovel test excavated at Alternative 2. NLURA excavated radial tests from TP005 (TP006 through TP018). NLURA recorded this testing location as test area TA001 (Figure 18 through Figure 21, Figure 15, Figure 16).

Table 9. Shovel test pits excavated in Alternative 2.

STP	Level	Depth (cmbgs)	Munsell Color	Texture/Description	Cultural Materials
TP001	I	0-8	10YR6/1 (Gray)	Organics and silt	N/A
	II	8-20	10YR2/1 (Black)	Saturated silt loam	N/A
	III	20-30	10YR4/2 (Dark Grayish Brown)	Silt loam. Terminated at standing water.	N/A
TP002	I	0-10	10YR5/3 (Brown)	Dry root mat	N/A
	II	10-20	10YR2/1 (Black)	Very wet silt loam. Terminated at standing water.	N/A
TP003	I	0-5	10YR3/2 (Very Dark Gray Brown)	Silt and organics	N/A
	II	5-20	2.5Y4/4 (Olive Brown)	Silt	N/A
	III	20-101	5Y4/2 (Olive Gray)	Silt. Soil probe to 225 cmbgs showed no color or texture change.	N/A
TP004	I	0-12	10YR3/2 (Very Dark Gray Brown)	Organics and silt	N/A
	II	12-20	7.5YR6/6 (Reddish Yellow)	Silt	N/A
	III	20-43	10YR4/4 (Dark Yellowish Brown)	Silt	N/A
	IV	43-51	10YR4/2 (Dark Grayish Brown)	Silt	N/A
	V	51-53	7.5YR3/2 (Dark Brown)	Silt loam	N/A
	VI	53-100	10YR4/1 (Dark Gray)	Compacted silt	N/A
TP005	I	0-3	10YR2/2 (Very Dark Brown)	Root mat	FS01
	II	3-7	10YR2/2 (Very Dark Brown)	Organics and silt	FS01
	III	7-40	10YR5/3 (Yellowish Brown), 10YR3/4 (Dark Yellowish Brown), 10YR4/3 (Brown), 2.5Y4/3 (Olive Brown), 10YR3/3 (Dark Brown)	Mottled silt loam and silt	FS02, FS03
	IV	40-100	2.5Y4/2 (Dark Grayish Brown)	Silt	N/A
TP006	I	0-18	10YR3/2 (Very Dark Grayish Brown)	Organics and silt	N/A
	II	18-36	10YR4/4 (Dark Yellowish Brown)	Silt	N/A
	III	36-59	10YR4/2 (Dark Grayish Brown)	Silt	N/A

STP	Level	Depth (cmbgs)	Munsell Color	Texture/Description	Cultural Materials
	IV	59-81	10YR5/2 & 10YR3/2 (Very Dark Grayish Brown & Grayish Brown)	Silt	N/A
	V	81-103	10YR5/2 (Grayish Brown)	Silt	N/A
TP007	I	0-20	10YR5/4 (Yellowish Brown)	Mica/Gravely Sandy	N/A
	II	20-35	10YR4/3 & 10YR6/3 (Brown & Pale Brown)	Mottled silt	N/A
	III	35-55	10YR3/3 (Dark Brown)	Silt	N/A
	IV	55-107	10YR4/1 & 10YR3/2 (Dark Gray & Very Dark Grayish Brown)	Silt	N/A
TP008	I	0-3	10YR3/2 (Very Dark Grayish Brown)	Root mat	N/A
	II	3-14	2.5Y5/3 (Light Olive Brown)	Silt loam with poorly sorted angular gravels and cobbles.	N/A
TP009	I	0-64	10YR3/2 (Very Dark Grayish Brown)	Root mat with decomposing wood	N/A
	II	64-88	10YR3/3 (Dark Brown)	Silt	N/A
	III	88-102	2.5Y3/2 (Very Dark Grayish Brown)	Silt	N/A
TP010	I	0-16	10YR4/2 (Dark Grayish Brown)	Organics and silt	N/A
	II	16-30	10YR3/6 (Dark Yellowish Brown)	Silt	N/A
	III	30-106	10YR4/2 (Dark Grayish Brown)	Silt	N/A
TP011	I	0-15	10YR2/2 (Very Dark Brown)	Organics and silt	N/A
	II	15-28	10YR4/3 (Brown)	Silt	FS04, FS05, FS06
	III	28-47	10YR4/2 & 10YR3/4 (Dark Grayish Brown & Dark Yellowish Brown)	Mottled silt	FS06
	IV	47-103	10YR4/2 (Dark Grayish Brown)	Silt	N/A
TP012	I	0-33	10YR2/2 (Very Dark Brown)	Root mat and moss layer	N/A
	II	33-49	10YR3/4 (Dark Yellowish Brown), 10YR3/4 (Dark Yellowish Brown), 2.5Y4/3 (Olive Brown)	Mottled silt and silt loam	N/A
	III	49-103	2.5Y4/2 (Dark Grayish Brown)	Silt	N/A
TP013	I	0-11	10YR2/2 (Very Dark Brown)	Root mat	FS07
	II	11-44	2.5Y6/3 (Light Yellowish Brown), 10YR3/3 (Dark Brown), 10YR3/4 (Dark Yellowish Brown), 2.5Y3/3 (Dark Olive Brown)	Mottled silt	FS07, FS08, FS09, FS10

STP	Level	Depth (cmbgs)	Munsell Color	Texture/Description	Cultural Materials
	III	44-10	2.5Y4/2 (Dark Grayish Brown)	Silt	N/A
TP014	I	0-10	10YR3/1 (Very Dark Gray)	Silt	N/A
	II	10-40	10YR4/2 & 10YR3/4 (Dark Grayish Brown & Dark Yellowish Brown)	Silt	N/A
	III	40-109	10YR4/2 (Dark Grayish Brown)	Silt	N/A
TP015	I	0-15	10YR4/2 (Dark Grayish Brown)	Organics and silt	N/A
	II	15-39	10YR4/3 & 10YR5/4 (Brown & Yellowish Brown)	Mottled silt	N/A
	III	39-103	10YR4/1 (Dark Gray)	Silt	N/A
TP016	I	0-9	10YR2/2 (Very Dark Brown)	Root mat	N/A
	II	9-41	10YR6/4 (Light Yellowish Brown), 10YR5/4 (Yellow Brown), 10YR4/4 (Dark Yellow Brown), 2.5Y4/3 (Olive Brown)	Mottled silt loam and silt	FS11
	IIIa	68-72	10YR2/2 (Very Dark Brown)	Possible paleosol	FS12
	IIIb	41-103	2.5Y4/2 (Dark Grayish Brown)	Silt	FS12
TP017	I	0-20	10Y3/1 (Very Dark Gray)	Silt	N/A
	II	20-39	10YR4/4 (Dark Yellowish Brown)	Silt	N/A
	III	39-52	10YR3/2 (Very Dark Grayish Brown)	Silt	N/A
	IV	52-105	10YR4/1 (Dark Gray)	Silt	N/A
TP018	I	0-10	10YR2/2 (Very Dark Brown)	Root mat and silt	N/A
	II	10-48	10YR6/3 & 10YR5/4 (Pale Brown & Yellowish Brown)	Mottled silt	N/A
	III	48-107	10Y4/2 (Dark Grayish Brown)	Silt	N/A

Table notes:
Test pits measured 20 x 20 in. (50 x 50 cm)
Soil color was assigned based on Munsell Color (2000) color charts.
cmbgs = centimeters below ground surface
FS = field specimen
N/A = not applicable
STP = shovel test pit

5.2.2.1 NAB-00626: Test area TA001

NAB-00626 (test area TA001) was located near the southeastern edge of a hillside that overlooked the flats and an unnamed lake in the Tetlin National Wildlife Refuge to the south. Vegetation primarily consisted of black spruce, with birch, low bush cranberry, Labrador tea, and moss. Typical stratigraphy consisted of a dark brown root mat overlying a dark brown layer of silt with some organics. This was followed by a thick mottled silt layer, and shovel test pits terminated around 1 m in dark grayish brown silts.

NLURA identified fourteen lithic artifacts in four test pits (TP005, TP011, TP013, and TP016) within TA001 (Table 10). Thirteen of the artifacts were debitage and one was a core fragment (FS10, Figure 31). The most common technological flake types identified were edge preparation flakes (n=5, 38.5%). Other technological flake types recovered were non-diagnostic (n=3, 23.1%), bifacial shaping flakes (n=2, 15.4%), pressure flakes (n=2, 15.4 %), and one flake (FS04.01, Figure 30) flaked using a bipolar reduction method (n=1, 7.6%). Raw material types identified in the collected debitage were chert (n=6, 46.1%), andesite (n=5, 38.5%), and obsidian (n=2, 15.4 %). Most of the debitage was complete (n=7, 53.9%), with the remainder composed of proximal flakes (n=3, 23.1%), medial flakes (n=2, 15.4%), and distal flakes (n=1, 7.6%).

The one core fragment was obsidian and had major areas of cortex. The platforms were not prepared or oriented, and the fragment appeared to be from decortication and preparation from a raw obsidian cobble (Andrefsky 2005).

With such a limited sample size, any suggested conclusions from the lithic assemblage are at best provisional. The limited sample also suggests that technological organization was primarily based on refining preforms towards but not completely to their final form (Andrefsky 2005; Prentiss 2001; Surovell 2012). This conclusion is partially challenged by the core fragment, which was likely produced from a raw cobble early in the preparation process.

Table 10. FS log of artifacts recovered from test area TA001.

STP	Depth (cmbgs)	FS	Lot Count	Description
TP005	0-5	01	1	One Chert Flake
TP005	15-20	02	2	Two Chert Flakes
TP005	20-25	03	1	One Chert Flake
TP011	15-21	04	2	Two Andesite Flakes
TP011	21-25	05	1	One Andesite Flake
TP011	25-30	06	1	One Andesite Flake
TP013	10-15	07	2	One Chert and One Obsidian Flake
TP013	20-25	08	1	One Chert Flake
TP013	20-25	09	1	One Obsidian Flake
TP013	30-35	10	1	One Obsidian Core Fragment
TP016	35-40	11	1	One Andesite Flake

Table notes:
cmbgs = centimeters below ground surface
FS = field specimen
STP = shovel test pit

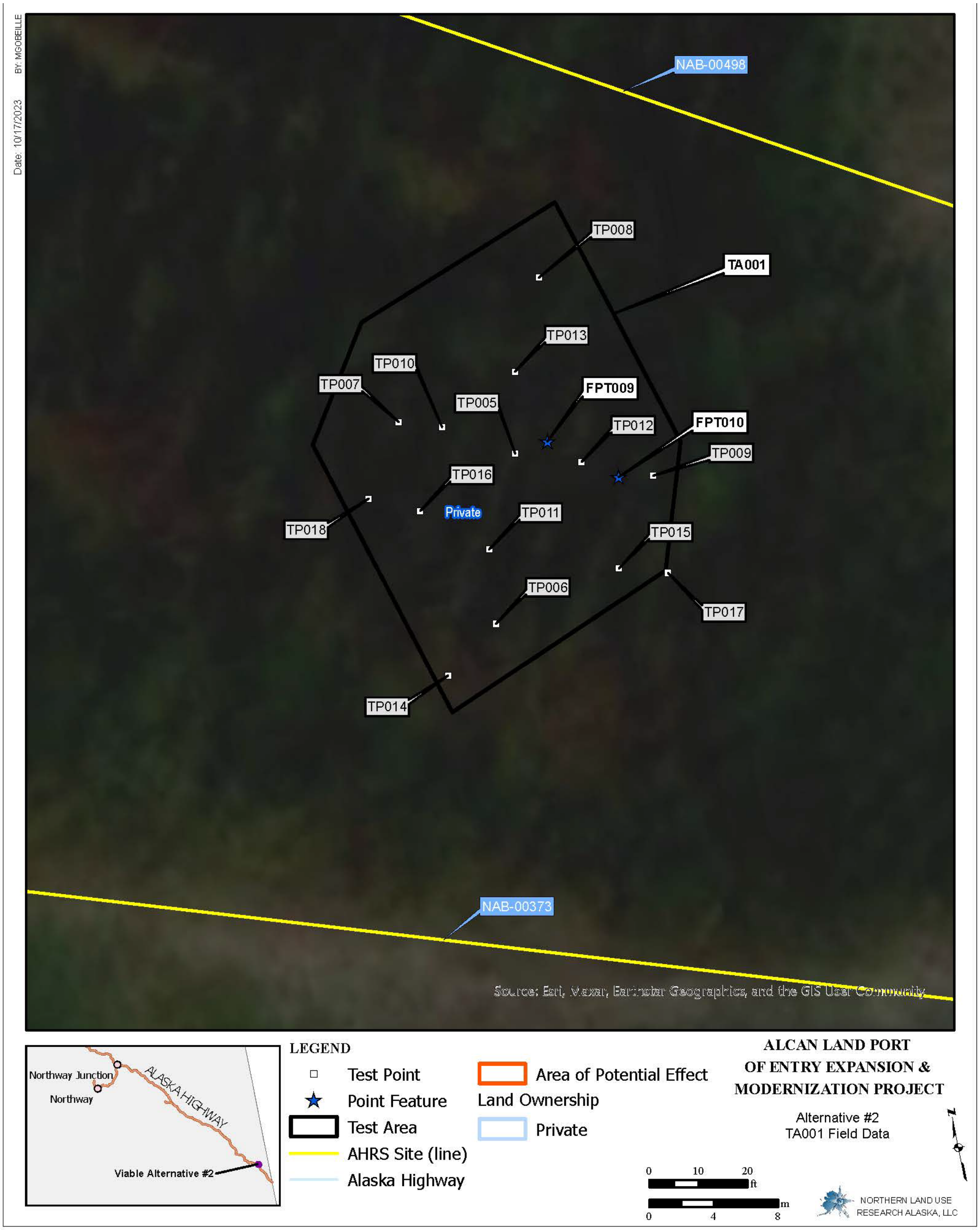

Figure 15. Test area TA001 in Alternative 2.

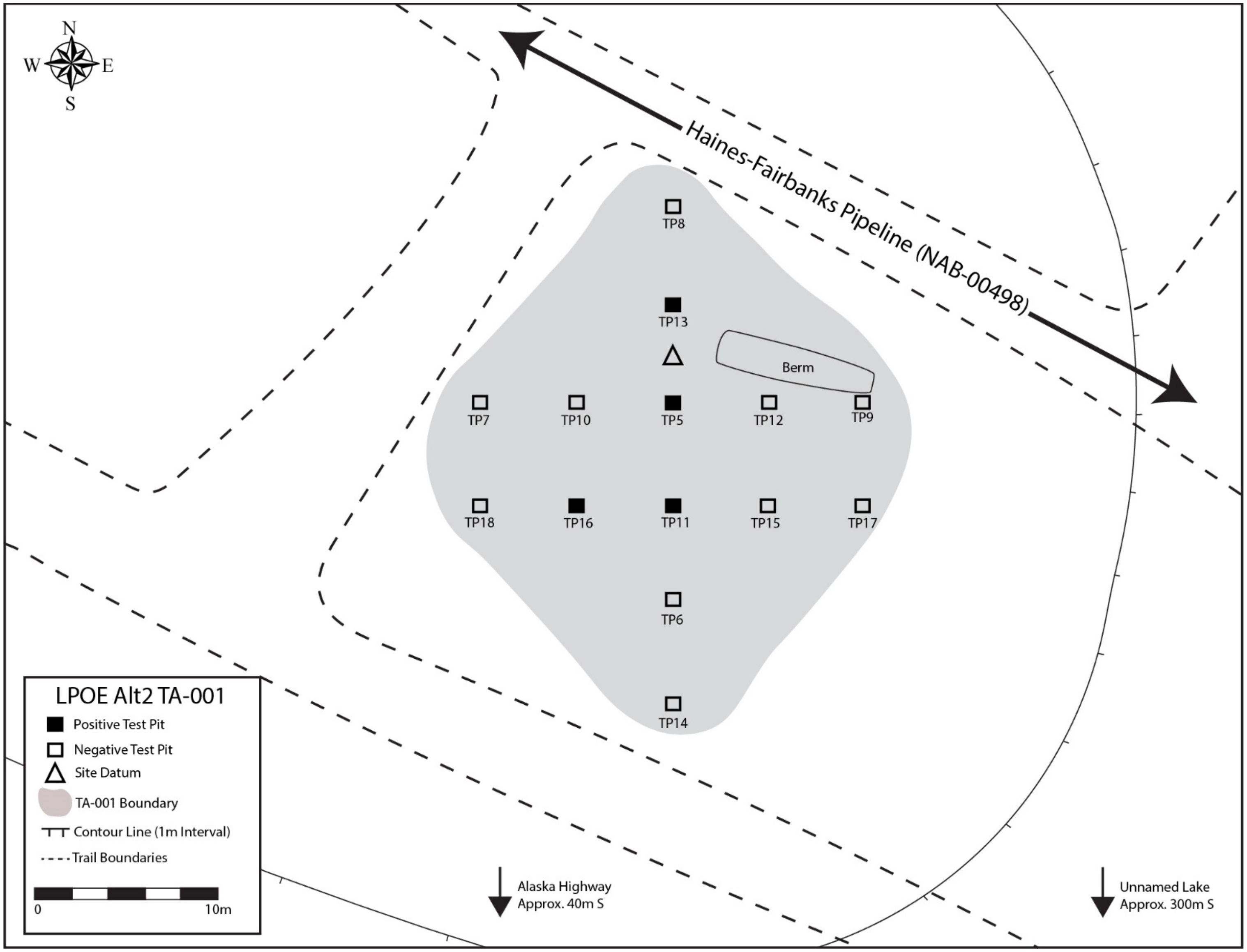

Figure 16. Sketch map of test area TA001 in Alternative 2.

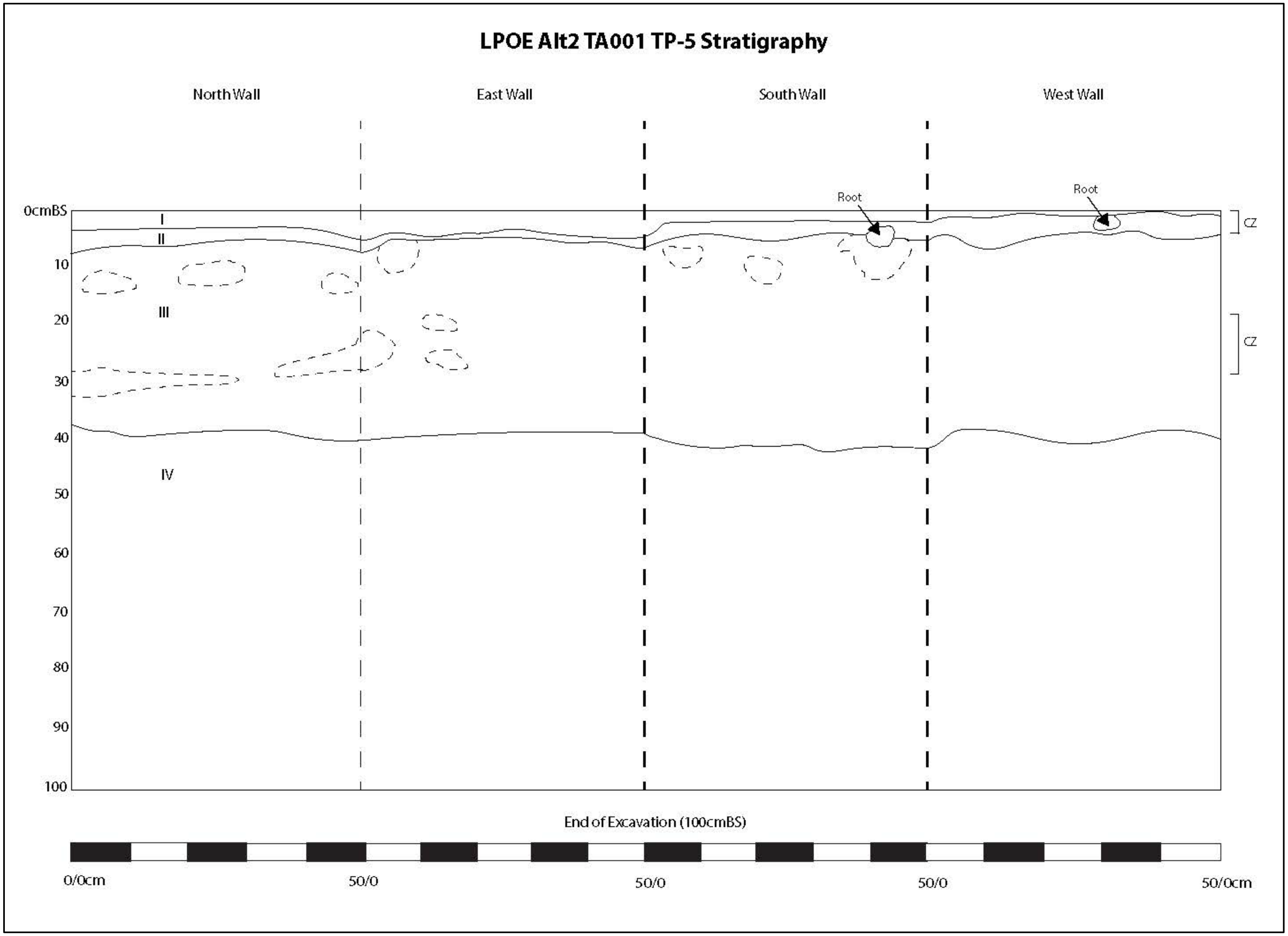

Figure 17. Stratigraphic profile of positive shovel test pit TP005 located in test area TA001 in Alternative 2.

Figure 18. TA001 overview, view North (NLURA photograph).

Figure 19. TA001 overview, view West (NLURA photograph).

Figure 20. TA001 overview, view South (NLURA photograph).

Figure 21. TA001 overview, view East (NLURA photograph).

Figure 22. TP005 overview, view North (NLURA photograph).

Figure 23. TP005 overview, view East (NLURA photograph).

Figure 24. TP005 overview, view South (NLURA photograph).

Figure 25. TP005 overview, view West (NLURA photograph).

Figure 26. TP005 profile, North wall (NLURA photograph).

Figure 27. TP005 profile, East wall (NLURA photograph).

Figure 28. TP005 profile, South wall (NLURA photograph).

Figure 29. TP005 profile, West wall (NLURA photograph).

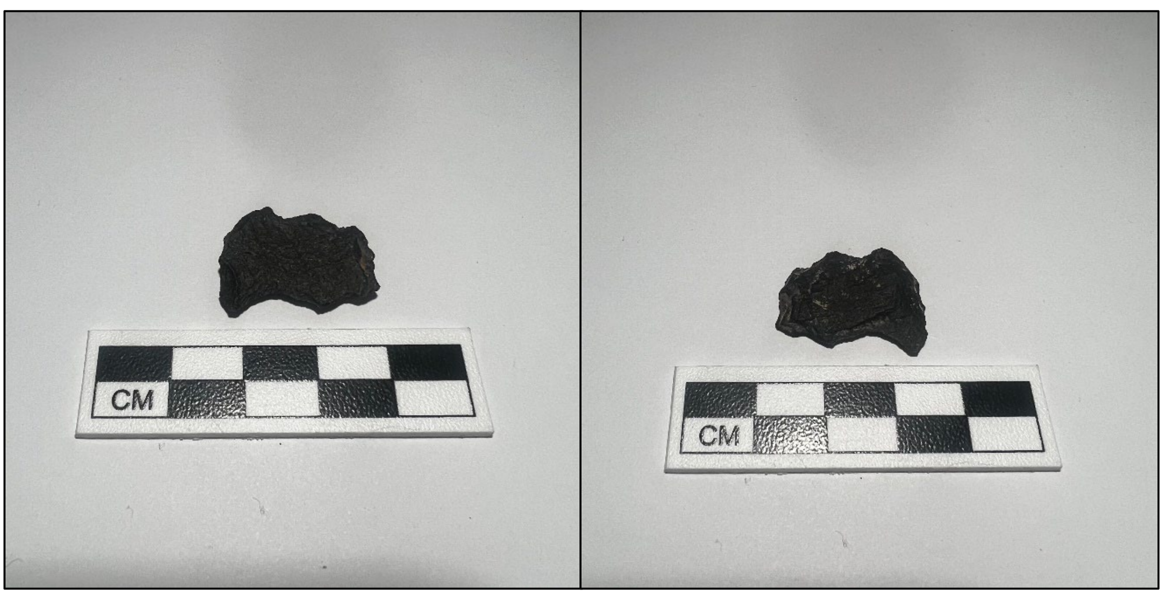

Figure 30. Andesite bipolar flake FS04.01 from TP011 (NLURA photograph).

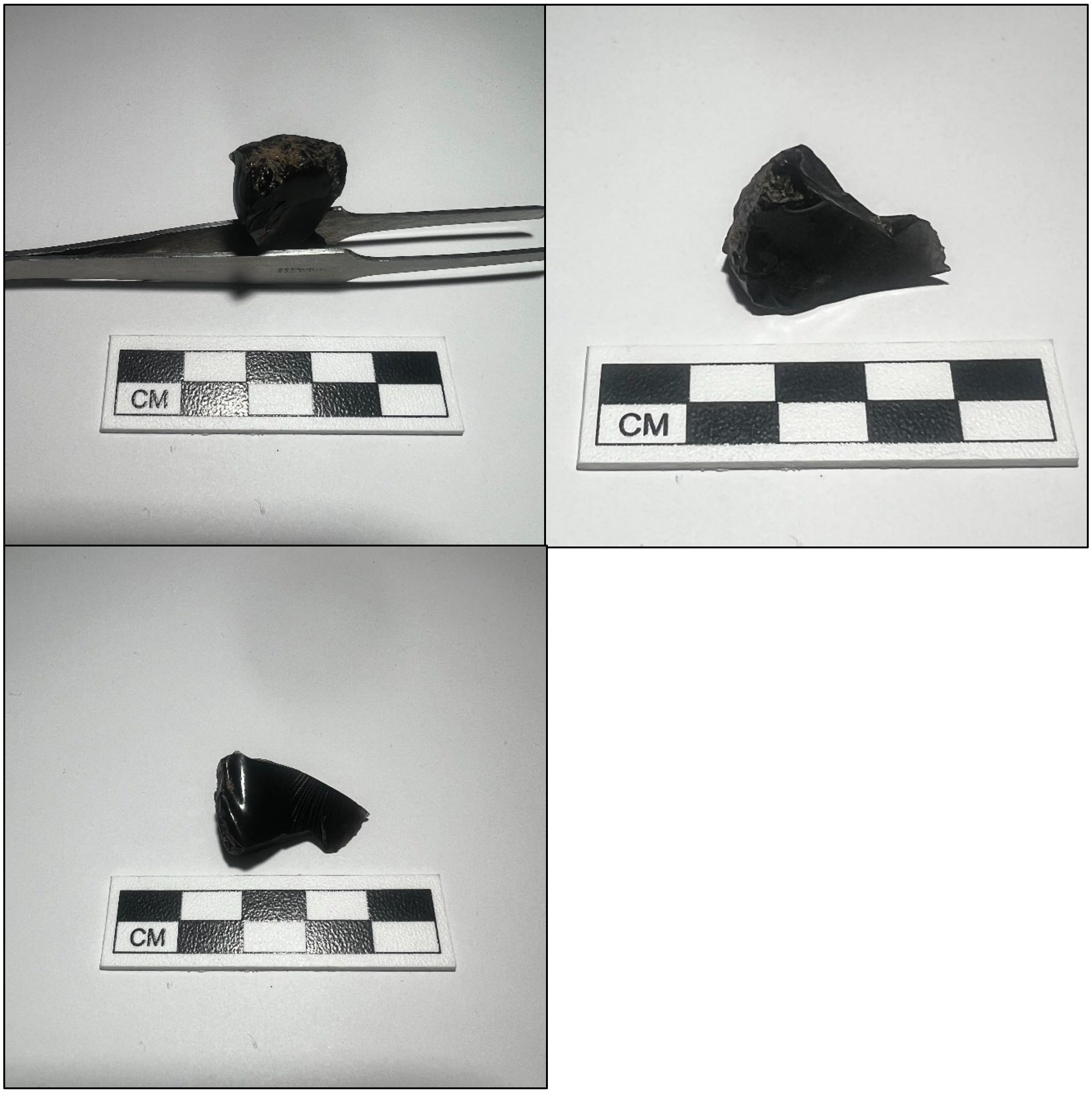

Figure 31. Obsidian core fragment FS10 from TP013 (NLURA photograph).

6 DETERMINATIONS OF ELIGIBILITY

The scope of work for the Project includes a Phase II (Evaluation) of cultural resources identified during the Phase I (Identification) survey of the APE (Alternative 1).

NLURA did not identify any cultural resources during the Phase I survey of Alternative 1.

There were two cultural resources documented during the Phase I survey of Alternative 2 — a segment of the RS 2477 trail RST 1586 and a prehistoric lithic site. Phase II was initiated at TA001; however, GSA instructed NLURA to not complete the full Phase II documentation of the resources, as Alternative 2 was removed from the APE mid-season. Therefore, no determinations of eligibility were completed during this survey.

7 SUMMARY AND RECOMMENDATIONS

Phase I survey of the APE at Alternative 1 did not identify any cultural resources. Phase I survey of the APE at Alternative 2 identified 11 feature points and lines and one prehistoric lithic site. Phase II was not necessary at Alternative 1. Phase II was initiated but not completed at Alternative 2 due to direction from GSA, as the location was no longer being considered as part of the APE for the Project.

At this time, NLURA recommends that the Project operate under an Inadvertent Discovery Plan for Archaeological Resources and an Inadvertent Discovery Plan for Human Remains during any ground-disturbing activity in the APE (Alternative 1). Should GSA reconsider Alternative 2 for the Project, Phase II evaluations would need to be conducted for the cultural resources identified at that location.

7.1 Inadvertent Discovery Plan for Archaeological Resources

If archaeological features or artifacts (not including human remains) are encountered, Project personnel should follow the steps below to avoid further effects:

1. Stop work in the immediate vicinity of the suspected cultural resources and avoid construction activities that may affect remains and artifacts until required coordination has been completed.
2. Mark the area in which the resources are located as well as a buffer area appropriate to the find and the terrain. The buffer may be larger if there is the possibility of more resources in the area or in case of slopes or trenches where ongoing work may affect the resource. Ensure that all cultural materials will be protected from possible effects during the required coordination.
3. The discovery shall be investigated by a professional meeting the Secretary of Interior Professional Qualification Standards for Archaeology (36 CFR 61). This investigation shall take place no longer than 72 hours after discovery.
4. The Project Manager will initiate coordination with the following to determine if the materials or features warrant a recovery effort or additional consultation:

Table 11. Contact information in case of inadvertent discovery of archaeological resources.

Entity	Position	Contact	Phone	Fax	Email Address
Alaska Office of History and Archaeology	Review and Compliance Coordinator	Sarah Meitl	(907) 269-8720	(907) 269-8908	sarah.meitl@alaska.gov
	Chief; OHA and SHPO	Judith Bittner	(907) 269-8715	(907) 269-8908	judy.bittner@alaska.gov

7.2 Inadvertent Discovery Plan for Human Remains and Graves

As set forth in the Native American Graves Protection and Repatriation Act (NAGPRA) regulation (43 CFR 10), a specific plan of action is required in the event that human remains are uncovered on federal lands during construction.

The following steps must be taken if human remains or suspected human remains are discovered:

1. A professional archaeologist meeting the Secretary of Interior Professional Standards for Archaeology (36 CFR 61) will be engaged to assess the extent and age of the discovery and ensure

that construction activities have been halted and the remains are protected and treated with respect and dignity.

2. If human remains appear recent in the judgment of the archaeologist, the Project Manager shall defer to the opinion of the Alaska State Troopers (AST) and Alaska State Medical Examiner (ASME) for a determination of whether the remains are of a forensic nature or subject to criminal investigation.
3. If the human remains appear archaeological or ancient in the judgment of the archaeologist, the Project Manager will engage a qualified physical anthropologist experienced in the analysis of human remains to evaluate the discovery and document the remains to make an independent assessment of cultural affiliation. The physical anthropologist shall be afforded no more than 30 days' time to conduct his or her analysis.
4. If the physical anthropologist believes the remains to be Native American in origin, the Project Manager will consult with the local federally recognized Tribe regarding respectful treatment of the remains.
5. If human remains are not Native American, and a determination has been made by the AST and ASME that a death investigation is not warranted, then the Project Manager, in consultation with the ASME, local government officials and applicable community officials will make a reasonable and good faith effort to identify, locate, and inform descendants of the deceased.
6. The Project Manager will contact the following people and agencies within 24 hours of uncovering the remains (list is current as of reporting date) (Table 12):

Table 12. Contact information in case of inadvertent discovery of human remains.

Entity	Position	Contact	Phone Number	Email Address
Village of Northway	Elder advisor / Northway Village Council member	Lorraine Titus	(907) 778-2311	llt53.northway@gmail.com
	Tribal Administrator	Darrell Kaase	(907) 778-2311	nvcta@aptalaska.net
Doyon	Fairbanks Office		(907) 459-2000	
Tanana Chiefs Conference	Archaeologist	Bob Sattler	(907) 452-8251	bob.sattler@tananachiefs.org
	Executive Director Tribal Government and Client Services	Amber Vaska	(907) 452-8251	amber.vaska@tananachiefs.org
White River First Nation	Chief	Chief Bessie Chasse	(867) 862-7802 ext. 101	Chief@wrfn.ca
GSA	Regional Historic Preservation Officer	Kimberly Gant	(253) 666-0891	kimberly.gant@gsa.gov
Solv, LLC	Environmental Project Manager	Eveline Martin	(703) 760-4801 ext. 130	eveline.martin@solvllc.com
Alaska Department of Health and Social Services	Medical Examiner	Stephen Hoage	(907) 334-2356	stephen.hoage@alaska.gov
Alaska Department of Public Safety	AST Missing Persons Clearinghouse	Lt. Paul Fussey	(907) 269-5038	paul.fussey@alaska.gov

Entity	Position	Contact	Phone Number	Email Address
Office of History and Archaeology	State Historic Preservation Officer Alaska Department of Natural Resources	Judith Bittner	(907) 269-8715	judy.bittner@alaska.gov

7.3 Limitations

This Project was carried out, and this report prepared, in accordance with generally accepted professional practices for the nature and type of work completed, at the time the work was performed. This memorandum is not a public document. It is intended for release to Solv, LLC, General Services Administration, U.S. Customs and Border Protection, Village of Northway, U.S. Fish and Wildlife Service, Alaska Office of History and Archaeology and State Historic Preservation Officer, and other appropriate consulting parties and permitting agencies only.

This report is based upon written information and verbal accounts provided by the agencies and individuals indicated in the report. NLURA can only relay this information and cannot be responsible for its accuracy or completeness. This report is not meant to represent a legal opinion.

NLURA does not warrant that all potentially significant cultural resources present within the APE have been identified. No other warranty, expressed or implied, is made. Any questions regarding this memorandum should be referred to NLURA Project Archaeologist Kate Yeske at (907) 328-0999 or NLURA General Manager Lindsay Simmons at (907) 345-2457.

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APPENDIX F: ALASKA NATIONAL INTEREST LANDS CONSERVATION ACT SECTION 810 ANALYSIS

ALASKA NATIONAL INTEREST LANDS CONSERVATION ACT (ANILCA) SECTION 810 ANALYSIS OF SUBSISTENCE IMPACTS

Section 810 of the Alaska National Interest Lands Conservation Act (ANILCA) requires an evaluation of the effects on subsistence uses and needs "in determining whether to withdraw, reserve, lease, or otherwise permit the use, occupancy, or disposition of public lands on National Wildlife Refuges (NWR) in Alaska" (16 United States Code [U.S.C.] 410hh-3233, 43 U.S.C.1602-1784). The United States (U.S.) General Services Administration (GSA) Northwest/Arctic Region (Region 10) proposes to build an expanded and modernized Land Port of Entry (LPOE) and housing units to replace the existing LPOE and housing units (hereafter LPOE) at Alcan, Alaska. The action alternative under consideration includes GSA's potential use of up to 2.5 acres of land that is part of the Tetlin NWR.

GSA prepared an Environmental Impact Statement (EIS) to evaluate the effects of the proposed expansion and modernization of the Alcan LPOE on the human environment, in compliance with the National Environmental Policy Act, as amended (42 U.S.C. et seq.). An evaluation of the effects of the proposed action alternative identified in the Alcan LPOE EIS (EIS) on subsistence uses and needs on federal lands per ANILCA Section 810 is documented below.

Project Description

The purpose of the proposed project is to expand and modernize the Alcan LPOE in order to improve the LPOE's functionality, capacity, security, comfort for cross border travelers and federal employees, and sustainability. The proposed project is needed to update the current facilities, which are over 50 years old and cannot effectively support U.S. Customs and Border Protection (CBP) infrastructure, enforcement operations, public and employee safety, and housing needs.

The 55-acre Alcan LPOE is bounded by the U.S.-Canada border to its east; the Tetlin NWR to its south and west; and undeveloped state lands to its north. The Tetlin NWR serves as a space to conserve fish and wildlife populations and habitats in their natural diversity, to provide interpretation and environmental education to the public, and to offer subsistence hunting opportunities to rural inhabitants. The external boundaries of Tetlin NWR encompass approximately 932,000 acres, an estimated 700,000 acres of which are refuge lands.

GSA identified one action alternative (Alternative 1) that meets the purpose and need of the proposed project and analyzed that alternative in the EIS. Alternative 1 includes the following:

- Site preparation and grading;
- Construction and operation of a new Main LPOE Building;
- Addition of enclosed inspection spaces for commercial and personal vehicles;
- Construction of new housing units with adequate separation from LPOE operations;
- Implementation of security measures for the LPOE housing complex;
- Construction of a firing range and a helipad; and
- Demolition of existing LPOE structures.

The majority of the site preparation, grading, and construction proposed under Alternative 1 would occur on the existing LPOE property, which is owned by GSA. However, Alternative 1 includes the construction of a helipad south of the existing LPOE, which would require the use of up to 2.5-acres of Tetlin NWR land. The new helipad would provide safer inspection facilities, as the existing LPOE does not have a dedicated landing area and helicopters must land along the Alaska Highway or in the parking area of the nearby Tetlin NWR trailhead for CBP inspection.

The parcel proposed for the helipad construction is assumed to be part of the Tetlin NWR; however, the formal property boundary has not been surveyed since the original acquisition of the LPOE land from the U.S. Department of Interior (DOI). GSA will complete land surveys during the planning phase of the proposed project to determine if GSA or DOI owns the parcel. Since it is assumed that the 2.5 acres are under the control of the Tetlin NWR, GSA evaluated the effects of the proposed action on subsistence uses and needs on federal lands, in accordance with ANILCA Section 810.

Subsistence Evaluation Factors

In determining whether to permit the use of public lands, ANILCA requires an evaluation of the following:

1. The effect of such use, occupancy, or disposition on subsistence uses and needs;
2. The availability of other lands for the purposes sought to be achieved; and
3. Other alternatives that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes.

The required evaluation and finding for the one action alternative (Alternative 1) identified in the EIS are provided in this ANILCA Section 810 analysis.

To determine if a significant restriction of subsistence uses and needs may result from the Alcan LPOE Alternative 1, the following factors were considered:

- A reduction in subsistence uses due to factors such as direct impacts on the resources or adverse impacts on habitat;
- A reduction in the subsistence uses due to changes in availability of resources caused by an alteration in their distribution, migration, or location; and
- A reduction in subsistence uses due to limitations on the access to harvestable resources such as physical or legal barriers.

A significant restriction to subsistence may occur when an action substantially reduces populations or their availability to subsistence users and when an action substantially limits access by subsistence users to resources. Sections 3.6 and 3.7 of the EIS identify areas and resources important for subsistence use and the degree of dependence of Alaska Native Villages and Alaska Native Corporations with interests in the project area on different subsistence resource populations.

Evaluation Factor 1: ***Effect of such use, occupancy, or disposition on subsistence uses and needs***

As detailed in Section 3.6 of the EIS, the Alcan LPOE is within the traditional territory of Alaska Native peoples who traditionally and currently hunt, gather, and fish for subsistence purposes. A former Native village and cemetery are located to the northeast of the current LPOE, and a traditional fishing camp is located immediately north of the LPOE on the American side of the international border. A modern fish camp is located along Little Scottie Creek to the northwest of the LPOE. Little Scottie Creek is a productive whitefish harvesting zone, which is one of the most important subsistence resources for the Upper Tanana people.

Northern pike, burbot, and grayling are popular sport fish in the Tetlin NWR. Lands managed by the Tetlin NWR are open to hunting in accordance with state and federal regulations, and the NWR offers several subsistence opportunities for residents, including winter moose and caribou hunts, a spring waterfowl hunt, and fishing opportunities throughout the year. Two of the six known humpback whitefish spawning areas in the Yukon River drainage, which are important subsistence resources for area residents, are located within the refuge.

The Airs Hill Trailhead, which provides access to an approximately 11-mile trail that heads southwest into Tetlin NWR, is located directly south of the existing LPOE site off the Alaska Highway. North of the Airs Hill Trail and the existing LPOE site is Scottie Creek. Bucko's Cabin, a recently renovated cabin that supports administrative and public use, is located approximately 0.25 miles downstream on the northern side of Scottie Creek. Section 3.9 of the EIS provides detailed information on additional recreational uses located greater than 2 miles from the Alcan LPOE.

According to Mr. Shawn Bayless, the Refuge Manager for the Tetlin NWR, staff of the Alcan LPOE and residents of the Border City Lodge are the primary subsistence users of Tetlin NWR near the port (S. Bayless, personal communication - April 4, 2024). Subsistence users near the Alcan LPOE reported using the Airs Hill Trailhead and Trail for the following: berry picking, hunting, trapping, dog mushing, and snowmobiling. Hunting resources include moose, grizzly and black bears, and caribou and trapping resources include wolverine, lynx, marten, ermine, squirrels, hares, fox, and coyote (S. Bayless, personal communication - April 12, 2024). Subsistence users access the Air Hills Trailhead and Trail for subsistence purposes year-round.

Increased noise and visual intrusions during construction activities could have minor, short-term effects on subsistence activities. Subsistence resources could be temporarily displaced due to the noise associated with construction activities. Subsistence users' access to the Airs Hill Trailhead could be temporarily impacted for short periods due to the movement of construction equipment but would not be significantly restricted. Once construction was complete, the new helipad would not block the trailhead and unimpeded access to and from the trailhead would be maintained. The Airs Hill Trail is not considered heavily trafficked, and it represents a small fraction of the estimated 700,000-acre Tetlin NWR lands managed by the U.S. Fish & Wildlife Service (USFWS).

GSA's use of the NWR property would not introduce new activities to the local area. Under current operations, helicopters land for inspection along the Alaska Highway, adjacent to the site proposed for use, or near the site proposed for use in the Air Hills Trail parking area. Although helicopter noise during takeoffs and landing could disrupt subsistence resources, use of the helipad would continue to be seldom and seasonal (wildfire season) (S. Bayless, personal communication - April 12, 2024) and an increase in helicopter traffic is not expected as a result of the proposed action. GSA's use of the 2.5-acre parcel at Tetlin NWR would not significantly affect subsistence uses or needs.

Evaluation Factor 2: *Availability of other lands for the purposes sought to be achieved*
The proposed Alcan LPOE expansion and modernization project requires the construction of a helipad within or adjacent to the existing LPOE to facilitate helicopter inspections. The Alcan LPOE does not have adequate space within its existing footprint to add a helipad. Using undeveloped state lands north of the LPOE could result in impacts to wetlands or to Scottie Creek, an important subsistence resource for the Upper Tanana people. The 2-5-acre Tetlin NWR parcel proposed for use includes cleared land and a gravel access road; therefore, the proposed changes to the site would not impact high quality habitat or undisturbed lands. The lands south and west of the LPOE are also part of Tetlin NWR. Therefore, there are no other lands available for the purposes sought to be achieved.

Evaluation Factor 3: *Other alternatives that would reduce or eliminate the use, occupancy, or disposition of public lands needed for subsistence purposes*
An alternative location for the Alcan LPOE was initially identified but then dismissed from detailed analysis in the EIS. GSA considered constructing the modernized LPOE at an acquired site approximately 4 miles northwest of the current LPOE. Under this alternative, GSA would have acquired 40 acres of land: 10 acres from private individuals and 30 acres from the State of Alaska. Per Section 2.3.1 of the EIS, this alternative was dismissed for the following reasons: 1) CBP expressed concerns that moving the LPOE further inland to an alternative site would create "no man's land" issues that increase operational complexity; 2) The Tanana Chiefs Conference issued a letter to GSA documenting significant concerns with the alternative site, including impacts to contemporary use of the site for food gathering activities and impacts to native allotments; 3) Initial investigation of this site revealed potential lithics and other native artifacts; 4) The USFWS expressed concerns that this site location would create access issues for hunters and recreational users of the Tetlin NWR; and 5) Canada Border Services Agency (CBSA) determined that their border security interests would not be served at the alternative site and they would not co-locate with CBP at that site. CBP and CBSA previously indicated that co-location is their preference for effective border security. Due to these issues and concerns, GSA dismissed this alternative from further consideration. There are no other alternatives that would reduce or eliminate GSA's use of these public lands.

Finding
This evaluation concludes that the proposed action will not result in a significant restriction of subsistence uses and needs on federal lands. Therefore, neither public hearings nor further analysis under ANILCA Section 810 is required.

APPENDIX G: METHODOLOGY AND CALCULATIONS FOR CONSTRUCTION-RELATED AND SOCIAL COST OF GREENHOUSE GAS EMISSIONS

Greenhouse Gas Emissions from Construction Activities for the Alcan LPOE Expansion and Modernization Project

The latest version of the Environmental Protection Agency's (EPA) Motor Vehicle Emissions Simulator (MOVES) model, MOVES4, was used to calculate greenhouse gas (GHG) emissions associated with construction and demolition of facilities at the Alcan Land Port of Entry (LPOE) for the Alcan LPOE Expansion and Modernization Project (the Project). The assumptions and input parameters for the model are summarized in **Table 1**.

Table 1. MOVES Parameters and Assumptions

Parameter	Assumption
Construction timeline	The majority of the construction activities would occur over a 5-year period, whereas the sixth year would be dedicated to building switch-over and renovations. For the purpose of calculations, construction is assumed to occur over the following years: 2026, 2027, 2028, and 2029. Beyond September 2029, any work would be internal (e.g., phone, A/V, furniture installations, etc.). Furniture, fixtures, and equipment would be delivered by trucks during 2030 (from Lower 48).
Workday hours	A typical workday is from 7 am to 3 pm, or 8 hours per day. Construction would occur during weekdays, and a 6-day work week is under consideration to maximize available work periods due to the short season.
Construction personnel	Up to 40 construction personnel would be hired for the Project.
Vehicle Use	Construction personnel would travel to and from the Project in privately-owned vehicles (POVs).
Distance of travel - POVs	Total commuting distance for construction personnel would be up to 7 miles per day.
Distance of travel – construction vehicles	Commuting distance for haul trucks, trucks shipping waste and construction materials to and from the site, would be 400 miles per day. Haul trucks may travel to the nearest major cities in Alaska, such as Fairbanks or Anchorage to source the construction materials or to ship the waste generated.
Construction equipment	The following nonroad equipment would be utilized during construction. Each equipment unit would be operated for 8 hours per day. Outdoor construction equipment (i.e., all equipment listed except for the forklift and generator) would be used 6 months per

Parameter	Assumption
	year (May thru October). The forklift and generator would be used year-round. • Paving Equipment - 2 • Trenchers - 1 • Concrete/Industrial Saws - 4 • Cement and Mortar Mixers - 5 • Cranes - 2 • Rough Terrain Forklift - 3 • Tractors/Loaders/Backhoes - 3 • Dumpers/Tenders - 5 • Other Construction Equipment - 4 • Excavators - 3 • Graders/Rollers - 3 • Crawler Tractors/Dozers - 2 • Generators - 3
Haul trucks	20 haul trucks would travel to and from the Project site daily (May through October for 3 years [2026 - 2028]).
Calculating construction-related GHG emissions	Use MOVES4 to calculate emissions of carbon dioxide (CO_2), methane (CH_4), and oxides of nitrogen (NOx) from construction. MOVES provides emission factors in g/hr and the final emissions are calculated in metric tons.
POV calculations	GHG emission from POVs is calculated using EPA's emission factors: • EPA fuel average economy = 25.4 miles per gallon • CO_2 emission factor = 10.21 kg/gallon of fuel • CH_4 emission factor = 0.0068 g/mile • N_2O emission factor = 0.0042 g/mile
Haul truck calculations	GHG emission from haul trucks is calculated using EPA's emission factors: • EPA fuel average economy = 6.5 miles/gallon • CO_2 emission factor = 10.21 kg/gallon of fuel • CH_4 emission factor = 0.0332 g/mile • N_2O emission factor = 0.0021 g/mile
Calculating GHG emissions from vehicle idling	Number of vehicles currently crossing the LPOE: 2023 is used as the baseline year for year for obtaining the number and types of vehicles crossing the LPOE annually. This information is available at: https://explore.dot.gov/views/BorderCrossingData/Monthly?%3Aembed=y&%3AisGuestRedirectFromVizportal=y.

Parameter	Assumption
Number of vehicles expected to cross the LPOE after the Project	The No Action Alternative assumes a 2 percent increase in traffic per year.
Current idling time for different types of vehicles and projected idling time after Project implementation	These numbers are for the existing situation. GSA intends to keep these numbers the same (or improve upon them) despite the anticipated 2 percent increase in traffic per year. Idling fuel use: • POVs = 0.39 gallons/hour • Trucks/Commercial vehicles = 0.84 gallons/hour • Transit bus = 0.97 gallons/hour
GHG emissions from idling - POVs	POVs • 0.588 grams of CO_2 per second of fuel use • 0.0097 mg of NO_x per second of fuel use • CH_4 emission factor was not available. The CH_4 global warming potential is multiplied by CO_2 emissions to get the equivalent CH_4 emissions from vehicle idling.
GHG emissions from idling – commercial	Commercial vehicles/buses • 21 tons of CO_2 annually per truck • 0.3 tons of NOx annually per truck • CH_4 emission factor was not available. The CH_4 global warming potential will be multiplied by CO_2 emissions to get the equivalent CH_4 emissions from vehicle idling.

Sources: DOE, 2015; DOE, 2024; EPA, 2022; EPA, 2023a; EPA, 2023b; Gaines et. al, 2022

After calculating the GHG emissions for the Project, the emissions data was used as the input parameters to calculate the social cost of GHGs associated with the Project using the EPA's workbook released in November 2023, which can be found at: https://www.epa.gov/system/files/documents/2024-03/epa-sc-ghg-workbook_1.0.1.xlsx. The assumptions and input parameters for the workbook inputs are summarized in **Table 2**.

Table 2. Workbook Parameters and Assumptions

Parameter	Assumption
Present value year	2026 is the year the Project would commence
Dollar year	2023 is the most recent dollar value provided
Discount rate	A static rate of 2 percent was used, as the EPA states in the technical background of the workbook that "For analysis with moderate timeframes (e.g., 30 years or less), the difference…will be small." The example provided thereafter shows a difference of less than 1 percent. The static rate options included 1.5 percent, 2 percent, and 2.5 percent. The middle value was chosen as a conservative measure.
Project live	The years 2026-2029 were chosen. The project is set to commence in April of 2026, which is in FY26, and end in the beginning of 2030 (FY30). However, outside/exterior work would be completed by September of 2029, which is in FY29.

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APPENDIX G-1: CO_2 EQUIVALENCY CALCULATIONS

Methodology for Calculating CO_2 Equivalency at Alcan Land Port of Entry

The following steps describe how greenhouse gas (GHG) emissions from the Alcan LPOE were estimated in metric tons of carbon dioxide equivalent (CO_2e). The estimates are compared to overall GHG emissions from the State of Alaska and the United States. References are provided for each step.

Step	Explanation
Step 1	Step 1 lists the GHG-emitting sources/equipment, the number of units for each source, the equipment fuel source, and the annual equipment runtimes. Sources: GSA, 2016; GSA, 2018
Step 2	Step 2 lists the fuel consumption rates of each GHG-emitting equipment. The rate is in gallons of fuel per hour, derived from specification sheets or manuals of each piece of equipment. Sources: CAT, 2013; CAT, 2022; Wein-McLain, No Date
Step 3	Step 3 lists the GHG factors in fuel oil No. 2, which is the fuel source used by the GHG-emitting equipment. Factors were derived from EPA's emission factors for greenhouse gas inventories. Source: EPA, 2024b
Step 4	Step 4 lists the Global Warming Potentials (GWPs) for each greenhouse gas. This was derived from Chapter 7 of the Sixth Assessment Report (AR6) of the United Nations Intergovernmental Panel on Climate Change. Source: Foster et al., 2021
Step 5	Step 5 calculates annual CO_2e for each GHG-emitting piece of equipment by multiplying the fuel consumption rate by the annual runtime and the GHG factor, then converting the mass of the GHG (kg) to metric tons. The metric tons of each GHG were then converted to metric tons of CO_2e by multiplying by the respective GWP. Metric tons of CO_2e were totaled by GHG-emitting equipment and tallied together to determine the total amount of metric tons of CO_2e emitted by generators and boilers at the Alcan LPOE.
Step 6	Step 6 compares the CO_2e from Alcan LPOE (in million metric tons) against the GHG emission totals from Alaska (for 2021) and the United States (for 2021) and displays the percentage of Alcan LPOE GHG emissions accounted for in the total GHG emission from Alaska and the United States. Step 6 also provides other metrics for comparison, such as cars drive per year or home energy use per year. Source: EPA, 2024a

Acronyms and Abbreviations

AR6	Sixth Assessment Report
CH_4	Methane
CO_2e	Caron Dioxide Equivalent
EPA	Environmental Protection Agency
gal	gallon
GHG	Greenhouse Gas
GWP	Global Warming Potential
hr	hour
kg	kilograms
kW	kilowatt
LPOE	Land Port of Entry
MMBtu	Metric Million British Thermal unit
N_2O	Nitrous Oxide

Note: The numbers in the tables below are the raw output from the calculations and do not include any adjustments or rounding.

CO_2 Equivalency Calculation at Alcan LPOE

Annual Runtimes of Equipment				
No. of Units	GHG Emission Sources	Fuel Source	Annual Run Time (hr)	
			Individual	Total
2	250 kW Primary Generators	Fuel Oil No. 2	4,400	8,800
1	175 kW Emergency Generator	Fuel Oil No. 2	300	300
2	2.0 MMBtu Boilers	Fuel Oil No. 2	3,360	6,720

Sources: GSA, 2016; GSA, 2018

Fuel Consumption Rate* of Equipment

Equipment	Rate (gal/hr)
250 kW Primary Generator	15.5
175 kW Emergency Generator	10.9
2.0 MMBtu Boiler	17.6

Sources: CAT, 2013; CAT, 2022; Weil-McLain, No Date

*Generators fuel load at 75 percent; power load not available for boiler; standby rate used for emergency generator.

Greenhouse Gas Factor in Fuel Oil No. 2

GHG	Factor (kg/gal)
CO_2	10.21
CH_4	0.00041
N_2O	0.00008

Source: EPA, 2024b

Global Warming Potentials (GWP)

GHG	GWP-100
CO_2	1.0
CH_4	29.8
N_2O	273.0

Source: Foster et al., 2021

Calculating Annual CO_2 Equivalency in Metric Tons

Emission Source	Fuel Consumption	Annual Runtime	GHG Factor	Metric Ton of GHG	Metric Tons of CO_2e
Primary Generators	(gal/hr)	(hr)	(kg-GHG/gal)	(1 metric ton/1000kg)	GWP-100
CO_2	15.5	8,800	10.21	1392.64	1392.64
CH_4	15.5	8,800	0.00041	0.05592	1.67
N_2O	15.5	8,800	0.00008	0.01091	2.98
Total					**1397.29**
Emergency Generator					
CO_2	10.9	300	10.21	33.39	33.39
CH_4	10.9	300	0.00041	0.00134	0.04
N_2O	10.9	300	0.00008	0.00026	0.07
Total					**33.50**
Boilers					
CO_2	17.6	6,720	10.21	1207.56	1207.56
CH_4	17.6	6,720	0.00041	0.04849	1.45
N_2O	17.6	6,720	0.00008	0.00946	2.58
Total					**1211.59**
TOTAL Metric Tons of CO_2e					**2642.37**

Comparison of Alcan LPOE GHG Emissions

Location	Million Metric Tons of CO_2e	% of Alcan GHG Emissions	Gasoline-Powered Vehicles Driven Annually	Home Energy Use Annually
Alcan LPOE GHG Emissions	0.003	N/A	629	345
Alaska GHG Emissions (2021)	37.9	0.00697%	7,966,584	4,512,004
US GHG Emissions (2021)	6340	0.00004%	1,410,841,966	799,053,145

Source: EPA, 2024a

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APPENDIX G-2: CONSTRUCTION-RELATED GHG EMISSIONS CALCULATIONS

Note: The emission factors were calculated by averaging the MOVES4 output over four years for seasonal equipment (operating 6 months/ year between April 2026 and September 2029). The numbers in the tables below are the raw output from the calculations and do not include any adjustments or rounding, except for where indicated.

Pollutant ID	
1	Total gaseous hydrocarbons
3	NO_x
5	CH_4
90	CO_2

Fuel Type	
23	Diesel

Emission factor averaged over four years (g/hr)

Equipment	Fuel	Total Gaseous Hydrocarbons (1)	NO_X (3)	CH_4 (5)	CO_2 (90)
Cement & Mortar Mixers	Diesel	3.979686797	42.55418359	0.27064653	7280.112568
Concrete/Industrial Saws	Diesel	2.135756978	54.84885046	0.251081102	16419.95134
Cranes	Diesel	2.189462446	43.78519205	0.162224879	52911.61817
Crawler Tractor/Dozers	Diesel	2.854941102	82.52385876	0.214275121	82670.64038
Dumpers/Tenders	Diesel	3.956082359	25.57128842	0.231053672	4724.971364
Excavators	Diesel	1.427334384	33.59843773	0.113778744	54615.93823
Graders/Rollers	Diesel	1.571995884	34.08948818	0.137285336	47723.8143
Paving Equipment	Diesel	2.346180612	39.32662266	0.235907104	22847.79186
Tractors/Loaders/Backhoes	Diesel	4.297547908	34.44747274	0.254849343	13058.06194
Trenchers	Diesel	2.505151363	76.65015835	0.303987329	25775.30037
Other Construction Equipment	Diesel	9.123951858	176.9146145	0.642870882	104840.8452

MOVES4 Output

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2027	6	5	2	2240	Rollers	23	1	0	1.749181425	g/hr
1	2027	7	5	2	2240	Rollers	23	1	0	1.74918366	g/hr
1	2027	8	5	2	2240	Rollers	23	1	0	1.74918366	g/hr
1	2027	9	5	2	2240	Rollers	23	1	0	1.749179595	g/hr
1	2027	10	5	2	2240	Rollers	23	1	0	1.749178661	g/hr
1	2028	5	5	2	2240	Rollers	23	1	0	1.660573528	g/hr
1	2028	6	5	2	2240	Rollers	23	1	0	1.660580074	g/hr
1	2028	7	5	2	2240	Rollers	23	1	0	1.660578721	g/hr
1	2028	8	5	2	2240	Rollers	23	1	0	1.660578721	g/hr
1	2028	9	5	2	2240	Rollers	23	1	0	1.660573324	g/hr
1	2028	10	5	2	2240	Rollers	23	1	0	1.660579179	g/hr
1	2029	5	5	2	2240	Rollers	23	1	0	1.605109905	g/hr
1	2029	6	5	2	2240	Rollers	23	1	0	1.605107493	g/hr
1	2029	7	5	2	2240	Rollers	23	1	0	1.605101645	g/hr
1	2029	8	5	2	2240	Rollers	23	1	0	1.605101645	g/hr
1	2029	9	5	2	2240	Rollers	23	1	0	1.605106416	g/hr
1	2029	10	5	2	2240	Rollers	23	1	0	1.605107232	g/hr
1	2026	5	5	2	2240	Rollers	23	3	0	48.5767246	g/hr
1	2026	6	5	2	2240	Rollers	23	3	0	48.57669334	g/hr
1	2026	7	5	2	2240	Rollers	23	3	0	48.57668703	g/hr
1	2026	8	5	2	2240	Rollers	23	3	0	48.57668703	g/hr
1	2026	9	5	2	2240	Rollers	23	3	0	48.57671264	g/hr
1	2026	10	5	2	2240	Rollers	23	3	0	48.57674409	g/hr
1	2027	5	5	2	2240	Rollers	23	3	0	45.62091994	g/hr
1	2027	6	5	2	2240	Rollers	23	3	0	45.62098171	g/hr
1	2027	7	5	2	2240	Rollers	23	3	0	45.62098394	g/hr
1	2027	8	5	2	2240	Rollers	23	3	0	45.62098394	g/hr
1	2027	9	5	2	2240	Rollers	23	3	0	45.62086567	g/hr
1	2027	10	5	2	2240	Rollers	23	3	0	45.62093724	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	5	5	2	2240	Rollers	23	3	0	44.11550195	g/hr
1	2028	6	5	2	2240	Rollers	23	3	0	44.11546514	g/hr
1	2028	7	5	2	2240	Rollers	23	3	0	44.11541541	g/hr
1	2028	8	5	2	2240	Rollers	23	3	0	44.11541541	g/hr
1	2028	9	5	2	2240	Rollers	23	3	0	44.11546631	g/hr
1	2028	10	5	2	2240	Rollers	23	3	0	44.11544577	g/hr
1	2029	5	5	2	2240	Rollers	23	3	0	43.0781455	g/hr
1	2029	6	5	2	2240	Rollers	23	3	0	43.07812467	g/hr
1	2029	7	5	2	2240	Rollers	23	3	0	43.07818072	g/hr
1	2029	8	5	2	2240	Rollers	23	3	0	43.07818072	g/hr
1	2029	9	5	2	2240	Rollers	23	3	0	43.07815562	g/hr
1	2029	10	5	2	2240	Rollers	23	3	0	43.07813387	g/hr
1	2026	5	5	2	2240	Rollers	23	5	0	0.206956359	g/hr
1	2026	6	5	2	2240	Rollers	23	5	0	0.206956729	g/hr
1	2026	7	5	2	2240	Rollers	23	5	0	0.206956447	g/hr
1	2026	8	5	2	2240	Rollers	23	5	0	0.206956447	g/hr
1	2026	9	5	2	2240	Rollers	23	5	0	0.206956166	g/hr
1	2026	10	5	2	2240	Rollers	23	5	0	0.206957258	g/hr
1	2027	5	5	2	2240	Rollers	23	5	0	0.187863347	g/hr
1	2027	6	5	2	2240	Rollers	23	5	0	0.187863273	g/hr
1	2027	7	5	2	2240	Rollers	23	5	0	0.18786396	g/hr
1	2027	8	5	2	2240	Rollers	23	5	0	0.18786396	g/hr
1	2027	9	5	2	2240	Rollers	23	5	0	0.187863226	g/hr
1	2027	10	5	2	2240	Rollers	23	5	0	0.187863045	g/hr
1	2028	5	5	2	2240	Rollers	23	5	0	0.179250887	g/hr
1	2028	6	5	2	2240	Rollers	23	5	0	0.179250456	g/hr
1	2028	7	5	2	2240	Rollers	23	5	0	0.179250813	g/hr
1	2028	8	5	2	2240	Rollers	23	5	0	0.179250813	g/hr
1	2028	9	5	2	2240	Rollers	23	5	0	0.179250669	g/hr
1	2028	10	5	2	2240	Rollers	23	5	0	0.179250133	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2029	5	5	2	2240	Rollers	23	5	0	0.173746064	g/hr
1	2029	6	5	2	2240	Rollers	23	5	0	0.173745407	g/hr
1	2029	7	5	2	2240	Rollers	23	5	0	0.17374605	g/hr
1	2029	8	5	2	2240	Rollers	23	5	0	0.17374605	g/hr
1	2029	9	5	2	2240	Rollers	23	5	0	0.173745593	g/hr
1	2029	10	5	2	2240	Rollers	23	5	0	0.173746477	g/hr
1	2026	5	5	2	2240	Rollers	23	90	0	30492.70411	g/hr
1	2026	6	5	2	2240	Rollers	23	90	0	30492.67614	g/hr
1	2026	7	5	2	2240	Rollers	23	90	0	30492.62711	g/hr
1	2026	8	5	2	2240	Rollers	23	90	0	30492.62711	g/hr
1	2026	9	5	2	2240	Rollers	23	90	0	30492.64705	g/hr
1	2026	10	5	2	2240	Rollers	23	90	0	30492.63087	g/hr
1	2027	5	5	2	2240	Rollers	23	90	0	30493.19403	g/hr
1	2027	6	5	2	2240	Rollers	23	90	0	30493.33289	g/hr
1	2027	7	5	2	2240	Rollers	23	90	0	30493.31198	g/hr
1	2027	8	5	2	2240	Rollers	23	90	0	30493.31198	g/hr
1	2027	9	5	2	2240	Rollers	23	90	0	30493.32239	g/hr
1	2027	10	5	2	2240	Rollers	23	90	0	30493.31288	g/hr
1	2028	5	5	2	2240	Rollers	23	90	0	30493.55221	g/hr
1	2028	6	5	2	2240	Rollers	23	90	0	30493.54126	g/hr
1	2028	7	5	2	2240	Rollers	23	90	0	30493.51242	g/hr
1	2028	8	5	2	2240	Rollers	23	90	0	30493.51242	g/hr
1	2028	9	5	2	2240	Rollers	23	90	0	30493.6	g/hr
1	2028	10	5	2	2240	Rollers	23	90	0	30493.50588	g/hr
1	2029	5	5	2	2240	Rollers	23	90	0	30493.72468	g/hr
1	2029	6	5	2	2240	Rollers	23	90	0	30493.74467	g/hr
1	2029	7	5	2	2240	Rollers	23	90	0	30493.69182	g/hr
1	2029	8	5	2	2240	Rollers	23	90	0	30493.69182	g/hr
1	2029	9	5	2	2240	Rollers	23	90	0	30493.63949	g/hr
1	2029	10	5	2	2240	Rollers	23	90	0	30493.70651	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	5	5	2	2240	Pavers	23	1	0	1.656904898	g/hr
1	2026	6	5	2	2240	Pavers	23	1	0	1.656903044	g/hr
1	2026	7	5	2	2240	Pavers	23	1	0	1.656907661	g/hr
1	2026	8	5	2	2240	Pavers	23	1	0	1.656907661	g/hr
1	2026	9	5	2	2240	Pavers	23	1	0	1.656900678	g/hr
1	2026	10	5	2	2240	Pavers	23	1	0	1.65690493	g/hr
1	2027	5	5	2	2240	Pavers	23	1	0	1.527300037	g/hr
1	2027	6	5	2	2240	Pavers	23	1	0	1.527301111	g/hr
1	2027	7	5	2	2240	Pavers	23	1	0	1.52729833	g/hr
1	2027	8	5	2	2240	Pavers	23	1	0	1.52729833	g/hr
1	2027	9	5	2	2240	Pavers	23	1	0	1.527299299	g/hr
1	2027	10	5	2	2240	Pavers	23	1	0	1.527301881	g/hr
1	2028	5	5	2	2240	Pavers	23	1	0	1.448301241	g/hr
1	2028	6	5	2	2240	Pavers	23	1	0	1.448301827	g/hr
1	2028	7	5	2	2240	Pavers	23	1	0	1.44830336	g/hr
1	2028	8	5	2	2240	Pavers	23	1	0	1.44830336	g/hr
1	2028	9	5	2	2240	Pavers	23	1	0	1.448303158	g/hr
1	2028	10	5	2	2240	Pavers	23	1	0	1.448300975	g/hr
1	2029	5	5	2	2240	Pavers	23	1	0	1.384564632	g/hr
1	2029	6	5	2	2240	Pavers	23	1	0	1.384563844	g/hr
1	2029	7	5	2	2240	Pavers	23	1	0	1.384561248	g/hr
1	2029	8	5	2	2240	Pavers	23	1	0	1.384561248	g/hr
1	2029	9	5	2	2240	Pavers	23	1	0	1.384563465	g/hr
1	2029	10	5	2	2240	Pavers	23	1	0	1.384563555	g/hr
1	2026	5	5	2	2240	Pavers	23	3	0	49.15829688	g/hr
1	2026	6	5	2	2240	Pavers	23	3	0	49.1585676	g/hr
1	2026	7	5	2	2240	Pavers	23	3	0	49.15852056	g/hr
1	2026	8	5	2	2240	Pavers	23	3	0	49.15852056	g/hr
1	2026	9	5	2	2240	Pavers	23	3	0	49.15813672	g/hr
1	2026	10	5	2	2240	Pavers	23	3	0	49.15821838	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2027	5	5	2	2240	Pavers	23	3	0	46.95750575	g/hr
1	2027	6	5	2	2240	Pavers	23	3	0	46.95749721	g/hr
1	2027	7	5	2	2240	Pavers	23	3	0	46.95762779	g/hr
1	2027	8	5	2	2240	Pavers	23	3	0	46.95762779	g/hr
1	2027	9	5	2	2240	Pavers	23	3	0	46.95756129	g/hr
1	2027	10	5	2	2240	Pavers	23	3	0	46.95779404	g/hr
1	2028	5	5	2	2240	Pavers	23	3	0	45.46495603	g/hr
1	2028	6	5	2	2240	Pavers	23	3	0	45.46489296	g/hr
1	2028	7	5	2	2240	Pavers	23	3	0	45.46480632	g/hr
1	2028	8	5	2	2240	Pavers	23	3	0	45.46480632	g/hr
1	2028	9	5	2	2240	Pavers	23	3	0	45.46477338	g/hr
1	2028	10	5	2	2240	Pavers	23	3	0	45.46478484	g/hr
1	2029	5	5	2	2240	Pavers	23	3	0	44.20854254	g/hr
1	2029	6	5	2	2240	Pavers	23	3	0	44.20828718	g/hr
1	2029	7	5	2	2240	Pavers	23	3	0	44.20828069	g/hr
1	2029	8	5	2	2240	Pavers	23	3	0	44.20828069	g/hr
1	2029	9	5	2	2240	Pavers	23	3	0	44.20823467	g/hr
1	2029	10	5	2	2240	Pavers	23	3	0	44.20843453	g/hr
1	2026	5	5	2	2240	Pavers	23	5	0	0.184282081	g/hr
1	2026	6	5	2	2240	Pavers	23	5	0	0.18428202	g/hr
1	2026	7	5	2	2240	Pavers	23	5	0	0.184282622	g/hr
1	2026	8	5	2	2240	Pavers	23	5	0	0.184282622	g/hr
1	2026	9	5	2	2240	Pavers	23	5	0	0.184281836	g/hr
1	2026	10	5	2	2240	Pavers	23	5	0	0.18428226	g/hr
1	2027	5	5	2	2240	Pavers	23	5	0	0.171052668	g/hr
1	2027	6	5	2	2240	Pavers	23	5	0	0.171052822	g/hr
1	2027	7	5	2	2240	Pavers	23	5	0	0.171052814	g/hr
1	2027	8	5	2	2240	Pavers	23	5	0	0.171052814	g/hr
1	2027	9	5	2	2240	Pavers	23	5	0	0.171052806	g/hr
1	2027	10	5	2	2240	Pavers	23	5	0	0.171053458	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	5	5	2	2240	Pavers	23	5	0	0.162666743	g/hr
1	2028	6	5	2	2240	Pavers	23	5	0	0.162666288	g/hr
1	2028	7	5	2	2240	Pavers	23	5	0	0.162666938	g/hr
1	2028	8	5	2	2240	Pavers	23	5	0	0.162666938	g/hr
1	2028	9	5	2	2240	Pavers	23	5	0	0.16266634	g/hr
1	2028	10	5	2	2240	Pavers	23	5	0	0.162666578	g/hr
1	2029	5	5	2	2240	Pavers	23	5	0	0.155790144	g/hr
1	2029	6	5	2	2240	Pavers	23	5	0	0.155790181	g/hr
1	2029	7	5	2	2240	Pavers	23	5	0	0.155789744	g/hr
1	2029	8	5	2	2240	Pavers	23	5	0	0.155789744	g/hr
1	2029	9	5	2	2240	Pavers	23	5	0	0.155789993	g/hr
1	2029	10	5	2	2240	Pavers	23	5	0	0.155789924	g/hr
1	2026	5	5	2	2240	Pavers	23	90	0	40466.80746	g/hr
1	2026	6	5	2	2240	Pavers	23	90	0	40466.72958	g/hr
1	2026	7	5	2	2240	Pavers	23	90	0	40466.82901	g/hr
1	2026	8	5	2	2240	Pavers	23	90	0	40466.82901	g/hr
1	2026	9	5	2	2240	Pavers	23	90	0	40466.71984	g/hr
1	2026	10	5	2	2240	Pavers	23	90	0	40466.78913	g/hr
1	2027	5	5	2	2240	Pavers	23	90	0	40467.19619	g/hr
1	2027	6	5	2	2240	Pavers	23	90	0	40467.17886	g/hr
1	2027	7	5	2	2240	Pavers	23	90	0	40467.10241	g/hr
1	2027	8	5	2	2240	Pavers	23	90	0	40467.10241	g/hr
1	2027	9	5	2	2240	Pavers	23	90	0	40467.19497	g/hr
1	2027	10	5	2	2240	Pavers	23	90	0	40467.25873	g/hr
1	2028	5	5	2	2240	Pavers	23	90	0	40467.46726	g/hr
1	2028	6	5	2	2240	Pavers	23	90	0	40467.36462	g/hr
1	2028	7	5	2	2240	Pavers	23	90	0	40467.42096	g/hr
1	2028	8	5	2	2240	Pavers	23	90	0	40467.42096	g/hr
1	2028	9	5	2	2240	Pavers	23	90	0	40467.42209	g/hr
1	2028	10	5	2	2240	Pavers	23	90	0	40467.40668	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2029	5	5	2	2240	Pavers	23	90	0	40467.71161	g/hr
1	2029	6	5	2	2240	Pavers	23	90	0	40467.73202	g/hr
1	2029	7	5	2	2240	Pavers	23	90	0	40467.65708	g/hr
1	2029	8	5	2	2240	Pavers	23	90	0	40467.65708	g/hr
1	2029	9	5	2	2240	Pavers	23	90	0	40467.65916	g/hr
1	2029	10	5	2	2240	Pavers	23	90	0	40467.67238	g/hr
1	2026	5	5	2	2240	Paving Equipment	23	1	0	2.666059747	g/hr
1	2026	6	5	2	2240	Paving Equipment	23	1	0	2.666070424	g/hr
1	2026	7	5	2	2240	Paving Equipment	23	1	0	2.666061173	g/hr
1	2026	8	5	2	2240	Paving Equipment	23	1	0	2.666061173	g/hr
1	2026	9	5	2	2240	Paving Equipment	23	1	0	2.666067629	g/hr
1	2026	10	5	2	2240	Paving Equipment	23	1	0	2.666071912	g/hr
1	2027	5	5	2	2240	Paving Equipment	23	1	0	2.448392601	g/hr
1	2027	6	5	2	2240	Paving Equipment	23	1	0	2.448398507	g/hr
1	2027	7	5	2	2240	Paving Equipment	23	1	0	2.448399222	g/hr
1	2027	8	5	2	2240	Paving Equipment	23	1	0	2.448399222	g/hr
1	2027	9	5	2	2240	Paving Equipment	23	1	0	2.448398634	g/hr
1	2027	10	5	2	2240	Paving Equipment	23	1	0	2.448392241	g/hr
1	2028	5	5	2	2240	Paving Equipment	23	1	0	2.233940028	g/hr
1	2028	6	5	2	2240	Paving Equipment	23	1	0	2.23395016	g/hr
1	2028	7	5	2	2240	Paving Equipment	23	1	0	2.23394119	g/hr
1	2028	8	5	2	2240	Paving Equipment	23	1	0	2.23394119	g/hr
1	2028	9	5	2	2240	Paving Equipment	23	1	0	2.233950239	g/hr
1	2028	10	5	2	2240	Paving Equipment	23	1	0	2.233938577	g/hr
1	2029	5	5	2	2240	Paving Equipment	23	1	0	2.036312799	g/hr
1	2029	6	5	2	2240	Paving Equipment	23	1	0	2.036320313	g/hr
1	2029	7	5	2	2240	Paving Equipment	23	1	0	2.036314649	g/hr
1	2029	8	5	2	2240	Paving Equipment	23	1	0	2.036314649	g/hr
1	2029	9	5	2	2240	Paving Equipment	23	1	0	2.036313964	g/hr
1	2029	10	5	2	2240	Paving Equipment	23	1	0	2.036324443	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	5	5	2	2240	Paving Equipment	23	3	0	42.91737415	g/hr
1	2026	6	5	2	2240	Paving Equipment	23	3	0	42.91739121	g/hr
1	2026	7	5	2	2240	Paving Equipment	23	3	0	42.91735001	g/hr
1	2026	8	5	2	2240	Paving Equipment	23	3	0	42.91735001	g/hr
1	2026	9	5	2	2240	Paving Equipment	23	3	0	42.91722784	g/hr
1	2026	10	5	2	2240	Paving Equipment	23	3	0	42.91726849	g/hr
1	2027	5	5	2	2240	Paving Equipment	23	3	0	40.50165889	g/hr
1	2027	6	5	2	2240	Paving Equipment	23	3	0	40.5016773	g/hr
1	2027	7	5	2	2240	Paving Equipment	23	3	0	40.50164711	g/hr
1	2027	8	5	2	2240	Paving Equipment	23	3	0	40.50164711	g/hr
1	2027	9	5	2	2240	Paving Equipment	23	3	0	40.50174701	g/hr
1	2027	10	5	2	2240	Paving Equipment	23	3	0	40.50169694	g/hr
1	2028	5	5	2	2240	Paving Equipment	23	3	0	38.09121724	g/hr
1	2028	6	5	2	2240	Paving Equipment	23	3	0	38.0911815	g/hr
1	2028	7	5	2	2240	Paving Equipment	23	3	0	38.09110894	g/hr
1	2028	8	5	2	2240	Paving Equipment	23	3	0	38.09110894	g/hr
1	2028	9	5	2	2240	Paving Equipment	23	3	0	38.09122623	g/hr
1	2028	10	5	2	2240	Paving Equipment	23	3	0	38.09117122	g/hr
1	2029	5	5	2	2240	Paving Equipment	23	3	0	35.79634435	g/hr
1	2029	6	5	2	2240	Paving Equipment	23	3	0	35.79628898	g/hr
1	2029	7	5	2	2240	Paving Equipment	23	3	0	35.79630384	g/hr
1	2029	8	5	2	2240	Paving Equipment	23	3	0	35.79630384	g/hr
1	2029	9	5	2	2240	Paving Equipment	23	3	0	35.79631374	g/hr
1	2029	10	5	2	2240	Paving Equipment	23	3	0	35.79633892	g/hr
1	2026	5	5	2	2240	Paving Equipment	23	5	0	0.260005764	g/hr
1	2026	6	5	2	2240	Paving Equipment	23	5	0	0.260006434	g/hr
1	2026	7	5	2	2240	Paving Equipment	23	5	0	0.260006537	g/hr
1	2026	8	5	2	2240	Paving Equipment	23	5	0	0.260006537	g/hr
1	2026	9	5	2	2240	Paving Equipment	23	5	0	0.260006648	g/hr
1	2026	10	5	2	2240	Paving Equipment	23	5	0	0.26000712	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2027	5	5	2	2240	Paving Equipment	23	5	0	0.244791002	g/hr
1	2027	6	5	2	2240	Paving Equipment	23	5	0	0.244790635	g/hr
1	2027	7	5	2	2240	Paving Equipment	23	5	0	0.244790546	g/hr
1	2027	8	5	2	2240	Paving Equipment	23	5	0	0.244790546	g/hr
1	2027	9	5	2	2240	Paving Equipment	23	5	0	0.244791533	g/hr
1	2027	10	5	2	2240	Paving Equipment	23	5	0	0.244790997	g/hr
1	2028	5	5	2	2240	Paving Equipment	23	5	0	0.227981463	g/hr
1	2028	6	5	2	2240	Paving Equipment	23	5	0	0.22798108	g/hr
1	2028	7	5	2	2240	Paving Equipment	23	5	0	0.227981593	g/hr
1	2028	8	5	2	2240	Paving Equipment	23	5	0	0.227981593	g/hr
1	2028	9	5	2	2240	Paving Equipment	23	5	0	0.227981016	g/hr
1	2028	10	5	2	2240	Paving Equipment	23	5	0	0.227980762	g/hr
1	2029	5	5	2	2240	Paving Equipment	23	5	0	0.210849199	g/hr
1	2029	6	5	2	2240	Paving Equipment	23	5	0	0.210849412	g/hr
1	2029	7	5	2	2240	Paving Equipment	23	5	0	0.210849768	g/hr
1	2029	8	5	2	2240	Paving Equipment	23	5	0	0.210849768	g/hr
1	2029	9	5	2	2240	Paving Equipment	23	5	0	0.210850143	g/hr
1	2029	10	5	2	2240	Paving Equipment	23	5	0	0.2108504	g/hr
1	2026	5	5	2	2240	Paving Equipment	23	90	0	22846.83799	g/hr
1	2026	6	5	2	2240	Paving Equipment	23	90	0	22846.74561	g/hr
1	2026	7	5	2	2240	Paving Equipment	23	90	0	22846.76976	g/hr
1	2026	8	5	2	2240	Paving Equipment	23	90	0	22846.76976	g/hr
1	2026	9	5	2	2240	Paving Equipment	23	90	0	22846.84996	g/hr
1	2026	10	5	2	2240	Paving Equipment	23	90	0	22846.81271	g/hr
1	2027	5	5	2	2240	Paving Equipment	23	90	0	22847.50423	g/hr
1	2027	6	5	2	2240	Paving Equipment	23	90	0	22847.48246	g/hr
1	2027	7	5	2	2240	Paving Equipment	23	90	0	22847.39742	g/hr
1	2027	8	5	2	2240	Paving Equipment	23	90	0	22847.39742	g/hr
1	2027	9	5	2	2240	Paving Equipment	23	90	0	22847.44232	g/hr
1	2027	10	5	2	2240	Paving Equipment	23	90	0	22847.42485	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	5	5	2	2240	Paving Equipment	23	90	0	22848.19058	g/hr
1	2028	6	5	2	2240	Paving Equipment	23	90	0	22848.17866	g/hr
1	2028	7	5	2	2240	Paving Equipment	23	90	0	22848.09743	g/hr
1	2028	8	5	2	2240	Paving Equipment	23	90	0	22848.09743	g/hr
1	2028	9	5	2	2240	Paving Equipment	23	90	0	22848.22025	g/hr
1	2028	10	5	2	2240	Paving Equipment	23	90	0	22848.14242	g/hr
1	2029	5	5	2	2240	Paving Equipment	23	90	0	22848.74574	g/hr
1	2029	6	5	2	2240	Paving Equipment	23	90	0	22848.77223	g/hr
1	2029	7	5	2	2240	Paving Equipment	23	90	0	22848.73681	g/hr
1	2029	8	5	2	2240	Paving Equipment	23	90	0	22848.73681	g/hr
1	2029	9	5	2	2240	Paving Equipment	23	90	0	22848.81483	g/hr
1	2029	10	5	2	2240	Paving Equipment	23	90	0	22848.83708	g/hr
1	2026	5	5	2	2240	Surfacing Equipment	23	1	0	5.321580398	g/hr
1	2026	6	5	2	2240	Surfacing Equipment	23	1	0	5.321592626	g/hr
1	2026	7	5	2	2240	Surfacing Equipment	23	1	0	5.321590174	g/hr
1	2026	8	5	2	2240	Surfacing Equipment	23	1	0	5.321590174	g/hr
1	2026	9	5	2	2240	Surfacing Equipment	23	1	0	5.321611488	g/hr
1	2026	10	5	2	2240	Surfacing Equipment	23	1	0	5.32156772	g/hr
1	2027	5	5	2	2240	Surfacing Equipment	23	1	0	4.717306938	g/hr
1	2027	6	5	2	2240	Surfacing Equipment	23	1	0	4.717278015	g/hr
1	2027	7	5	2	2240	Surfacing Equipment	23	1	0	4.71729838	g/hr
1	2027	8	5	2	2240	Surfacing Equipment	23	1	0	4.71729838	g/hr
1	2027	9	5	2	2240	Surfacing Equipment	23	1	0	4.717293523	g/hr
1	2027	10	5	2	2240	Surfacing Equipment	23	1	0	4.717315004	g/hr
1	2028	5	5	2	2240	Surfacing Equipment	23	1	0	4.204720223	g/hr
1	2028	6	5	2	2240	Surfacing Equipment	23	1	0	4.204712487	g/hr
1	2028	7	5	2	2240	Surfacing Equipment	23	1	0	4.204700764	g/hr
1	2028	8	5	2	2240	Surfacing Equipment	23	1	0	4.204700764	g/hr
1	2028	9	5	2	2240	Surfacing Equipment	23	1	0	4.204720437	g/hr
1	2028	10	5	2	2240	Surfacing Equipment	23	1	0	4.204706525	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2029	5	5	2	2240	Surfacing Equipment	23	1	0	3.82388122	g/hr
1	2029	6	5	2	2240	Surfacing Equipment	23	1	0	3.823858063	g/hr
1	2029	7	5	2	2240	Surfacing Equipment	23	1	0	3.823872761	g/hr
1	2029	8	5	2	2240	Surfacing Equipment	23	1	0	3.823872761	g/hr
1	2029	9	5	2	2240	Surfacing Equipment	23	1	0	3.823871886	g/hr
1	2029	10	5	2	2240	Surfacing Equipment	23	1	0	3.823863023	g/hr
1	2026	5	5	2	2240	Surfacing Equipment	23	3	0	99.9200639	g/hr
1	2026	6	5	2	2240	Surfacing Equipment	23	3	0	99.91998469	g/hr
1	2026	7	5	2	2240	Surfacing Equipment	23	3	0	99.92002311	g/hr
1	2026	8	5	2	2240	Surfacing Equipment	23	3	0	99.92002311	g/hr
1	2026	9	5	2	2240	Surfacing Equipment	23	3	0	99.92037611	g/hr
1	2026	10	5	2	2240	Surfacing Equipment	23	3	0	99.91993446	g/hr
1	2027	5	5	2	2240	Surfacing Equipment	23	3	0	88.91486432	g/hr
1	2027	6	5	2	2240	Surfacing Equipment	23	3	0	88.91473448	g/hr
1	2027	7	5	2	2240	Surfacing Equipment	23	3	0	88.91486964	g/hr
1	2027	8	5	2	2240	Surfacing Equipment	23	3	0	88.91486964	g/hr
1	2027	9	5	2	2240	Surfacing Equipment	23	3	0	88.91466331	g/hr
1	2027	10	5	2	2240	Surfacing Equipment	23	3	0	88.91492601	g/hr
1	2028	5	5	2	2240	Surfacing Equipment	23	3	0	80.66426009	g/hr
1	2028	6	5	2	2240	Surfacing Equipment	23	3	0	80.66409952	g/hr
1	2028	7	5	2	2240	Surfacing Equipment	23	3	0	80.66397047	g/hr
1	2028	8	5	2	2240	Surfacing Equipment	23	3	0	80.66397047	g/hr
1	2028	9	5	2	2240	Surfacing Equipment	23	3	0	80.66422072	g/hr
1	2028	10	5	2	2240	Surfacing Equipment	23	3	0	80.66376234	g/hr
1	2029	5	5	2	2240	Surfacing Equipment	23	3	0	74.67876345	g/hr
1	2029	6	5	2	2240	Surfacing Equipment	23	3	0	74.67861293	g/hr
1	2029	7	5	2	2240	Surfacing Equipment	23	3	0	74.67894339	g/hr
1	2029	8	5	2	2240	Surfacing Equipment	23	3	0	74.67894339	g/hr
1	2029	9	5	2	2240	Surfacing Equipment	23	3	0	74.67881863	g/hr
1	2029	10	5	2	2240	Surfacing Equipment	23	3	0	74.67881952	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	5	5	2	2240	Surfacing Equipment	23	5	0	0.445282985	g/hr
1	2026	6	5	2	2240	Surfacing Equipment	23	5	0	0.44528321	g/hr
1	2026	7	5	2	2240	Surfacing Equipment	23	5	0	0.445284985	g/hr
1	2026	8	5	2	2240	Surfacing Equipment	23	5	0	0.445284985	g/hr
1	2026	9	5	2	2240	Surfacing Equipment	23	5	0	0.445284747	g/hr
1	2026	10	5	2	2240	Surfacing Equipment	23	5	0	0.445284548	g/hr
1	2027	5	5	2	2240	Surfacing Equipment	23	5	0	0.401784597	g/hr
1	2027	6	5	2	2240	Surfacing Equipment	23	5	0	0.40178518	g/hr
1	2027	7	5	2	2240	Surfacing Equipment	23	5	0	0.401781981	g/hr
1	2027	8	5	2	2240	Surfacing Equipment	23	5	0	0.401781981	g/hr
1	2027	9	5	2	2240	Surfacing Equipment	23	5	0	0.401782955	g/hr
1	2027	10	5	2	2240	Surfacing Equipment	23	5	0	0.401784007	g/hr
1	2028	5	5	2	2240	Surfacing Equipment	23	5	0	0.365035191	g/hr
1	2028	6	5	2	2240	Surfacing Equipment	23	5	0	0.365033929	g/hr
1	2028	7	5	2	2240	Surfacing Equipment	23	5	0	0.365034597	g/hr
1	2028	8	5	2	2240	Surfacing Equipment	23	5	0	0.365034597	g/hr
1	2028	9	5	2	2240	Surfacing Equipment	23	5	0	0.365035067	g/hr
1	2028	10	5	2	2240	Surfacing Equipment	23	5	0	0.365034001	g/hr
1	2029	5	5	2	2240	Surfacing Equipment	23	5	0	0.338869608	g/hr
1	2029	6	5	2	2240	Surfacing Equipment	23	5	0	0.338868974	g/hr
1	2029	7	5	2	2240	Surfacing Equipment	23	5	0	0.338868765	g/hr
1	2029	8	5	2	2240	Surfacing Equipment	23	5	0	0.338868765	g/hr
1	2029	9	5	2	2240	Surfacing Equipment	23	5	0	0.33886912	g/hr
1	2029	10	5	2	2240	Surfacing Equipment	23	5	0	0.338868379	g/hr
1	2026	5	5	2	2240	Surfacing Equipment	23	90	0	32421.01831	g/hr
1	2026	6	5	2	2240	Surfacing Equipment	23	90	0	32421.01269	g/hr
1	2026	7	5	2	2240	Surfacing Equipment	23	90	0	32420.95873	g/hr
1	2026	8	5	2	2240	Surfacing Equipment	23	90	0	32420.95873	g/hr
1	2026	9	5	2	2240	Surfacing Equipment	23	90	0	32421.03931	g/hr
1	2026	10	5	2	2240	Surfacing Equipment	23	90	0	32420.9632	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2027	5	5	2	2240	Surfacing Equipment	23	90	0	32422.95556	g/hr
1	2027	6	5	2	2240	Surfacing Equipment	23	90	0	32422.87666	g/hr
1	2027	7	5	2	2240	Surfacing Equipment	23	90	0	32422.86329	g/hr
1	2027	8	5	2	2240	Surfacing Equipment	23	90	0	32422.86329	g/hr
1	2027	9	5	2	2240	Surfacing Equipment	23	90	0	32422.82882	g/hr
1	2027	10	5	2	2240	Surfacing Equipment	23	90	0	32422.9069	g/hr
1	2028	5	5	2	2240	Surfacing Equipment	23	90	0	32424.56202	g/hr
1	2028	6	5	2	2240	Surfacing Equipment	23	90	0	32424.45566	g/hr
1	2028	7	5	2	2240	Surfacing Equipment	23	90	0	32424.46105	g/hr
1	2028	8	5	2	2240	Surfacing Equipment	23	90	0	32424.46105	g/hr
1	2028	9	5	2	2240	Surfacing Equipment	23	90	0	32424.52388	g/hr
1	2028	10	5	2	2240	Surfacing Equipment	23	90	0	32424.4546	g/hr
1	2029	5	5	2	2240	Surfacing Equipment	23	90	0	32425.74154	g/hr
1	2029	6	5	2	2240	Surfacing Equipment	23	90	0	32425.63549	g/hr
1	2029	7	5	2	2240	Surfacing Equipment	23	90	0	32425.65556	g/hr
1	2029	8	5	2	2240	Surfacing Equipment	23	90	0	32425.65556	g/hr
1	2029	9	5	2	2240	Surfacing Equipment	23	90	0	32425.66098	g/hr
1	2029	10	5	2	2240	Surfacing Equipment	23	90	0	32425.59411	g/hr
1	2026	5	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	5.353404158	g/hr
1	2026	6	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	5.353397471	g/hr
1	2026	7	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	5.353405755	g/hr
1	2026	8	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	5.353405755	g/hr
1	2026	9	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	5.353414852	g/hr
1	2026	10	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	5.35338756	g/hr
1	2027	5	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	4.496176145	g/hr
1	2027	6	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	4.496167627	g/hr
1	2027	7	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	4.496179249	g/hr
1	2027	8	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	4.496179249	g/hr
1	2027	9	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	4.496185132	g/hr
1	2027	10	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	4.496177947	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	5	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	3.904323925	g/hr
1	2028	6	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	3.90431702	g/hr
1	2028	7	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	3.904328083	g/hr
1	2028	8	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	3.904328083	g/hr
1	2028	9	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	3.904321183	g/hr
1	2028	10	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	3.904336107	g/hr
1	2029	5	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	3.436283688	g/hr
1	2029	6	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	3.436296229	g/hr
1	2029	7	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	3.43628647	g/hr
1	2029	8	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	3.43628647	g/hr
1	2029	9	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	3.436281788	g/hr
1	2029	10	5	2	2240	Tractors/Loaders/Backhoes	23	1	0	3.436279852	g/hr
1	2026	5	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	39.64110284	g/hr
1	2026	6	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	39.64104697	g/hr
1	2026	7	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	39.64109633	g/hr
1	2026	8	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	39.64109633	g/hr
1	2026	9	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	39.64115893	g/hr
1	2026	10	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	39.64109275	g/hr
1	2027	5	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	35.41340989	g/hr
1	2027	6	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	35.41343528	g/hr
1	2027	7	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	35.41344779	g/hr
1	2027	8	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	35.41344779	g/hr
1	2027	9	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	35.41362577	g/hr
1	2027	10	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	35.41342157	g/hr
1	2028	5	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	32.50157212	g/hr
1	2028	6	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	32.50164024	g/hr
1	2028	7	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	32.5015462	g/hr
1	2028	8	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	32.5015462	g/hr
1	2028	9	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	32.50153116	g/hr
1	2028	10	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	32.50157039	g/hr

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1	2029	5	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	30.23383322	g/hr
1	2029	6	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	30.23378174	g/hr
1	2029	7	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	30.23371281	g/hr
1	2029	8	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	30.23371281	g/hr
1	2029	9	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	30.23380051	g/hr
1	2029	10	5	2	2240	Tractors/Loaders/Backhoes	23	3	0	30.2337161	g/hr
1	2026	5	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.31687009	g/hr
1	2026	6	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.316869738	g/hr
1	2026	7	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.316870617	g/hr
1	2026	8	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.316870617	g/hr
1	2026	9	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.316870161	g/hr
1	2026	10	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.316869341	g/hr
1	2027	5	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.263895743	g/hr
1	2027	6	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.263895338	g/hr
1	2027	7	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.263895375	g/hr
1	2027	8	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.263895375	g/hr
1	2027	9	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.263896386	g/hr
1	2027	10	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.263894054	g/hr
1	2028	5	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.231364659	g/hr
1	2028	6	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.231365628	g/hr
1	2028	7	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.231365186	g/hr
1	2028	8	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.231365186	g/hr
1	2028	9	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.231364401	g/hr
1	2028	10	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.231365778	g/hr
1	2029	5	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.207266847	g/hr
1	2029	6	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.207267652	g/hr
1	2029	7	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.207266305	g/hr
1	2029	8	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.207266305	g/hr
1	2029	9	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.207266673	g/hr
1	2029	10	5	2	2240	Tractors/Loaders/Backhoes	23	5	0	0.207266779	g/hr

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1	2026	5	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13054.75872	g/hr
1	2026	6	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13054.75398	g/hr
1	2026	7	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13054.77778	g/hr
1	2026	8	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13054.77778	g/hr
1	2026	9	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13054.75856	g/hr
1	2026	10	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13054.74873	g/hr
1	2027	5	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13057.42306	g/hr
1	2027	6	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13057.44424	g/hr
1	2027	7	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13057.45296	g/hr
1	2027	8	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13057.45296	g/hr
1	2027	9	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13057.44084	g/hr
1	2027	10	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13057.42787	g/hr
1	2028	5	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13059.27355	g/hr
1	2028	6	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13059.27232	g/hr
1	2028	7	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13059.29325	g/hr
1	2028	8	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13059.29325	g/hr
1	2028	9	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13059.30289	g/hr
1	2028	10	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13059.29189	g/hr
1	2029	5	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13060.75324	g/hr
1	2029	6	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13060.75666	g/hr
1	2029	7	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13060.77168	g/hr
1	2029	8	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13060.77168	g/hr
1	2029	9	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13060.74217	g/hr
1	2029	10	5	2	2240	Tractors/Loaders/Backhoes	23	90	0	13060.74645	g/hr
1	2026	5	5	2	2240	Off-Highway Tractors	23	1	0	17.50521971	g/hr
1	2026	6	5	2	2240	Off-Highway Tractors	23	1	0	17.50522568	g/hr
1	2026	7	5	2	2240	Off-Highway Tractors	23	1	0	17.50525957	g/hr
1	2026	8	5	2	2240	Off-Highway Tractors	23	1	0	17.50525957	g/hr
1	2026	9	5	2	2240	Off-Highway Tractors	23	1	0	17.5052317	g/hr
1	2026	10	5	2	2240	Off-Highway Tractors	23	1	0	17.50524656	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2027	5	5	2	2240	Off-Highway Tractors	23	1	0	15.96814533	g/hr
1	2027	6	5	2	2240	Off-Highway Tractors	23	1	0	15.96812605	g/hr
1	2027	7	5	2	2240	Off-Highway Tractors	23	1	0	15.96814582	g/hr
1	2027	8	5	2	2240	Off-Highway Tractors	23	1	0	15.96814582	g/hr
1	2027	9	5	2	2240	Off-Highway Tractors	23	1	0	15.9681064	g/hr
1	2027	10	5	2	2240	Off-Highway Tractors	23	1	0	15.96811733	g/hr
1	2028	5	5	2	2240	Off-Highway Tractors	23	1	0	14.59165814	g/hr
1	2028	6	5	2	2240	Off-Highway Tractors	23	1	0	14.59166553	g/hr
1	2028	7	5	2	2240	Off-Highway Tractors	23	1	0	14.59165277	g/hr
1	2028	8	5	2	2240	Off-Highway Tractors	23	1	0	14.59165277	g/hr
1	2028	9	5	2	2240	Off-Highway Tractors	23	1	0	14.59167146	g/hr
1	2028	10	5	2	2240	Off-Highway Tractors	23	1	0	14.59165705	g/hr
1	2029	5	5	2	2240	Off-Highway Tractors	23	1	0	13.24487563	g/hr
1	2029	6	5	2	2240	Off-Highway Tractors	23	1	0	13.24488885	g/hr
1	2029	7	5	2	2240	Off-Highway Tractors	23	1	0	13.24489457	g/hr
1	2029	8	5	2	2240	Off-Highway Tractors	23	1	0	13.24489457	g/hr
1	2029	9	5	2	2240	Off-Highway Tractors	23	1	0	13.24488897	g/hr
1	2029	10	5	2	2240	Off-Highway Tractors	23	1	0	13.24491209	g/hr
1	2026	5	5	2	2240	Off-Highway Tractors	23	3	0	590.7771839	g/hr
1	2026	6	5	2	2240	Off-Highway Tractors	23	3	0	590.7780489	g/hr
1	2026	7	5	2	2240	Off-Highway Tractors	23	3	0	590.7780733	g/hr
1	2026	8	5	2	2240	Off-Highway Tractors	23	3	0	590.7780733	g/hr
1	2026	9	5	2	2240	Off-Highway Tractors	23	3	0	590.7785134	g/hr
1	2026	10	5	2	2240	Off-Highway Tractors	23	3	0	590.778437	g/hr
1	2027	5	5	2	2240	Off-Highway Tractors	23	3	0	564.7589847	g/hr
1	2027	6	5	2	2240	Off-Highway Tractors	23	3	0	564.7584117	g/hr
1	2027	7	5	2	2240	Off-Highway Tractors	23	3	0	564.759319	g/hr
1	2027	8	5	2	2240	Off-Highway Tractors	23	3	0	564.759319	g/hr
1	2027	9	5	2	2240	Off-Highway Tractors	23	3	0	564.7578928	g/hr
1	2027	10	5	2	2240	Off-Highway Tractors	23	3	0	564.7570848	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	5	5	2	2240	Off-Highway Tractors	23	3	0	541.2386207	g/hr
1	2028	6	5	2	2240	Off-Highway Tractors	23	3	0	541.2376293	g/hr
1	2028	7	5	2	2240	Off-Highway Tractors	23	3	0	541.2378286	g/hr
1	2028	8	5	2	2240	Off-Highway Tractors	23	3	0	541.2378286	g/hr
1	2028	9	5	2	2240	Off-Highway Tractors	23	3	0	541.2380106	g/hr
1	2028	10	5	2	2240	Off-Highway Tractors	23	3	0	541.2385678	g/hr
1	2029	5	5	2	2240	Off-Highway Tractors	23	3	0	518.5582749	g/hr
1	2029	6	5	2	2240	Off-Highway Tractors	23	3	0	518.5584539	g/hr
1	2029	7	5	2	2240	Off-Highway Tractors	23	3	0	518.5576343	g/hr
1	2029	8	5	2	2240	Off-Highway Tractors	23	3	0	518.5576343	g/hr
1	2029	9	5	2	2240	Off-Highway Tractors	23	3	0	518.5572147	g/hr
1	2029	10	5	2	2240	Off-Highway Tractors	23	3	0	518.5570874	g/hr
1	2026	5	5	2	2240	Off-Highway Tractors	23	5	0	1.27992332	g/hr
1	2026	6	5	2	2240	Off-Highway Tractors	23	5	0	1.279922925	g/hr
1	2026	7	5	2	2240	Off-Highway Tractors	23	5	0	1.279924647	g/hr
1	2026	8	5	2	2240	Off-Highway Tractors	23	5	0	1.279924647	g/hr
1	2026	9	5	2	2240	Off-Highway Tractors	23	5	0	1.279923688	g/hr
1	2026	10	5	2	2240	Off-Highway Tractors	23	5	0	1.279925091	g/hr
1	2027	5	5	2	2240	Off-Highway Tractors	23	5	0	1.199974246	g/hr
1	2027	6	5	2	2240	Off-Highway Tractors	23	5	0	1.199971951	g/hr
1	2027	7	5	2	2240	Off-Highway Tractors	23	5	0	1.199973882	g/hr
1	2027	8	5	2	2240	Off-Highway Tractors	23	5	0	1.199973882	g/hr
1	2027	9	5	2	2240	Off-Highway Tractors	23	5	0	1.199971345	g/hr
1	2027	10	5	2	2240	Off-Highway Tractors	23	5	0	1.199972807	g/hr
1	2028	5	5	2	2240	Off-Highway Tractors	23	5	0	1.126682166	g/hr
1	2028	6	5	2	2240	Off-Highway Tractors	23	5	0	1.126683706	g/hr
1	2028	7	5	2	2240	Off-Highway Tractors	23	5	0	1.126682443	g/hr
1	2028	8	5	2	2240	Off-Highway Tractors	23	5	0	1.126682443	g/hr
1	2028	9	5	2	2240	Off-Highway Tractors	23	5	0	1.126680136	g/hr
1	2028	10	5	2	2240	Off-Highway Tractors	23	5	0	1.126681399	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2029	5	5	2	2240	Off-Highway Tractors	23	5	0	1.052130242	g/hr
1	2029	6	5	2	2240	Off-Highway Tractors	23	5	0	1.052130782	g/hr
1	2029	7	5	2	2240	Off-Highway Tractors	23	5	0	1.052131568	g/hr
1	2029	8	5	2	2240	Off-Highway Tractors	23	5	0	1.052131568	g/hr
1	2029	9	5	2	2240	Off-Highway Tractors	23	5	0	1.052129914	g/hr
1	2029	10	5	2	2240	Off-Highway Tractors	23	5	0	1.052130927	g/hr
1	2026	5	5	2	2240	Off-Highway Tractors	23	90	0	228275.6452	g/hr
1	2026	6	5	2	2240	Off-Highway Tractors	23	90	0	228276.63	g/hr
1	2026	7	5	2	2240	Off-Highway Tractors	23	90	0	228276.1369	g/hr
1	2026	8	5	2	2240	Off-Highway Tractors	23	90	0	228276.1369	g/hr
1	2026	9	5	2	2240	Off-Highway Tractors	23	90	0	228275.6621	g/hr
1	2026	10	5	2	2240	Off-Highway Tractors	23	90	0	228275.9509	g/hr
1	2027	5	5	2	2240	Off-Highway Tractors	23	90	0	228280.9529	g/hr
1	2027	6	5	2	2240	Off-Highway Tractors	23	90	0	228281.1464	g/hr
1	2027	7	5	2	2240	Off-Highway Tractors	23	90	0	228281.5917	g/hr
1	2027	8	5	2	2240	Off-Highway Tractors	23	90	0	228281.5917	g/hr
1	2027	9	5	2	2240	Off-Highway Tractors	23	90	0	228280.392	g/hr
1	2027	10	5	2	2240	Off-Highway Tractors	23	90	0	228280.5691	g/hr
1	2028	5	5	2	2240	Off-Highway Tractors	23	90	0	228284.9712	g/hr
1	2028	6	5	2	2240	Off-Highway Tractors	23	90	0	228284.3664	g/hr
1	2028	7	5	2	2240	Off-Highway Tractors	23	90	0	228285.1306	g/hr
1	2028	8	5	2	2240	Off-Highway Tractors	23	90	0	228285.1306	g/hr
1	2028	9	5	2	2240	Off-Highway Tractors	23	90	0	228284.8175	g/hr
1	2028	10	5	2	2240	Off-Highway Tractors	23	90	0	228285.0679	g/hr
1	2029	5	5	2	2240	Off-Highway Tractors	23	90	0	228289.0407	g/hr
1	2029	6	5	2	2240	Off-Highway Tractors	23	90	0	228288.547	g/hr
1	2029	7	5	2	2240	Off-Highway Tractors	23	90	0	228288.5471	g/hr
1	2029	8	5	2	2240	Off-Highway Tractors	23	90	0	228288.5471	g/hr
1	2029	9	5	2	2240	Off-Highway Tractors	23	90	0	228288.9428	g/hr
1	2026	5	5	2	2240	Rubber Tire Loaders	23	1	0	4.269357746	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	6	5	2	2240	Rubber Tire Loaders	23	1	0	4.269339254	g/hr
1	2026	7	5	2	2240	Rubber Tire Loaders	23	1	0	4.269348261	g/hr
1	2026	8	5	2	2240	Rubber Tire Loaders	23	1	0	4.269348261	g/hr
1	2026	9	5	2	2240	Rubber Tire Loaders	23	1	0	4.269348409	g/hr
1	2026	10	5	2	2240	Rubber Tire Loaders	23	1	0	4.269334176	g/hr
1	2027	5	5	2	2240	Rubber Tire Loaders	23	1	0	3.734222984	g/hr
1	2027	6	5	2	2240	Rubber Tire Loaders	23	1	0	3.734236266	g/hr
1	2027	7	5	2	2240	Rubber Tire Loaders	23	1	0	3.73423965	g/hr
1	2027	8	5	2	2240	Rubber Tire Loaders	23	1	0	3.73423965	g/hr
1	2027	9	5	2	2240	Rubber Tire Loaders	23	1	0	3.734222236	g/hr
1	2027	10	5	2	2240	Rubber Tire Loaders	23	1	0	3.734228054	g/hr
1	2028	5	5	2	2240	Rubber Tire Loaders	23	1	0	3.365922611	g/hr
1	2028	6	5	2	2240	Rubber Tire Loaders	23	1	0	3.365933073	g/hr
1	2028	7	5	2	2240	Rubber Tire Loaders	23	1	0	3.365920205	g/hr
1	2028	8	5	2	2240	Rubber Tire Loaders	23	1	0	3.365920205	g/hr
1	2028	9	5	2	2240	Rubber Tire Loaders	23	1	0	3.365935766	g/hr
1	2028	10	5	2	2240	Rubber Tire Loaders	23	1	0	3.36591514	g/hr
1	2029	5	5	2	2240	Rubber Tire Loaders	23	1	0	3.07826399	g/hr
1	2029	6	5	2	2240	Rubber Tire Loaders	23	1	0	3.078273346	g/hr
1	2029	7	5	2	2240	Rubber Tire Loaders	23	1	0	3.078268742	g/hr
1	2029	8	5	2	2240	Rubber Tire Loaders	23	1	0	3.078268742	g/hr
1	2029	9	5	2	2240	Rubber Tire Loaders	23	1	0	3.078266364	g/hr
1	2029	10	5	2	2240	Rubber Tire Loaders	23	1	0	3.078278195	g/hr
1	2026	5	5	2	2240	Rubber Tire Loaders	23	3	0	104.5428245	g/hr
1	2026	6	5	2	2240	Rubber Tire Loaders	23	3	0	104.5428558	g/hr
1	2026	7	5	2	2240	Rubber Tire Loaders	23	3	0	104.5427431	g/hr
1	2026	8	5	2	2240	Rubber Tire Loaders	23	3	0	104.5427431	g/hr
1	2026	9	5	2	2240	Rubber Tire Loaders	23	3	0	104.5427467	g/hr
1	2026	10	5	2	2240	Rubber Tire Loaders	23	3	0	104.5425852	g/hr
1	2027	5	5	2	2240	Rubber Tire Loaders	23	3	0	95.51179896	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2027	6	5	2	2240	Rubber Tire Loaders	23	3	0	95.51220328	g/hr
1	2027	7	5	2	2240	Rubber Tire Loaders	23	3	0	95.51237835	g/hr
1	2027	8	5	2	2240	Rubber Tire Loaders	23	3	0	95.51237835	g/hr
1	2027	9	5	2	2240	Rubber Tire Loaders	23	3	0	95.51194483	g/hr
1	2027	10	5	2	2240	Rubber Tire Loaders	23	3	0	95.51181241	g/hr
1	2028	5	5	2	2240	Rubber Tire Loaders	23	3	0	88.84207546	g/hr
1	2028	6	5	2	2240	Rubber Tire Loaders	23	3	0	88.84253068	g/hr
1	2028	7	5	2	2240	Rubber Tire Loaders	23	3	0	88.8418278	g/hr
1	2028	8	5	2	2240	Rubber Tire Loaders	23	3	0	88.8418278	g/hr
1	2028	9	5	2	2240	Rubber Tire Loaders	23	3	0	88.84218222	g/hr
1	2028	10	5	2	2240	Rubber Tire Loaders	23	3	0	88.84211293	g/hr
1	2029	5	5	2	2240	Rubber Tire Loaders	23	3	0	83.41915899	g/hr
1	2029	6	5	2	2240	Rubber Tire Loaders	23	3	0	83.41942226	g/hr
1	2029	7	5	2	2240	Rubber Tire Loaders	23	3	0	83.41977552	g/hr
1	2029	8	5	2	2240	Rubber Tire Loaders	23	3	0	83.41977552	g/hr
1	2029	9	5	2	2240	Rubber Tire Loaders	23	3	0	83.41954239	g/hr
1	2029	10	5	2	2240	Rubber Tire Loaders	23	3	0	83.41951015	g/hr
1	2026	5	5	2	2240	Rubber Tire Loaders	23	5	0	0.318297923	g/hr
1	2026	6	5	2	2240	Rubber Tire Loaders	23	5	0	0.318296203	g/hr
1	2026	7	5	2	2240	Rubber Tire Loaders	23	5	0	0.318297165	g/hr
1	2026	8	5	2	2240	Rubber Tire Loaders	23	5	0	0.318297165	g/hr
1	2026	9	5	2	2240	Rubber Tire Loaders	23	5	0	0.318297061	g/hr
1	2026	10	5	2	2240	Rubber Tire Loaders	23	5	0	0.318295854	g/hr
1	2027	5	5	2	2240	Rubber Tire Loaders	23	5	0	0.275739383	g/hr
1	2027	6	5	2	2240	Rubber Tire Loaders	23	5	0	0.27574064	g/hr
1	2027	7	5	2	2240	Rubber Tire Loaders	23	5	0	0.275740594	g/hr
1	2027	8	5	2	2240	Rubber Tire Loaders	23	5	0	0.275740594	g/hr
1	2027	9	5	2	2240	Rubber Tire Loaders	23	5	0	0.275739729	g/hr
1	2027	10	5	2	2240	Rubber Tire Loaders	23	5	0	0.275740053	g/hr
1	2028	5	5	2	2240	Rubber Tire Loaders	23	5	0	0.247783108	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	6	5	2	2240	Rubber Tire Loaders	23	5	0	0.247783428	g/hr
1	2028	7	5	2	2240	Rubber Tire Loaders	23	5	0	0.247782546	g/hr
1	2028	8	5	2	2240	Rubber Tire Loaders	23	5	0	0.247782546	g/hr
1	2028	9	5	2	2240	Rubber Tire Loaders	23	5	0	0.247783633	g/hr
1	2028	10	5	2	2240	Rubber Tire Loaders	23	5	0	0.247781893	g/hr
1	2029	5	5	2	2240	Rubber Tire Loaders	23	5	0	0.226353693	g/hr
1	2029	6	5	2	2240	Rubber Tire Loaders	23	5	0	0.226354266	g/hr
1	2029	7	5	2	2240	Rubber Tire Loaders	23	5	0	0.226353653	g/hr
1	2029	8	5	2	2240	Rubber Tire Loaders	23	5	0	0.226353653	g/hr
1	2029	9	5	2	2240	Rubber Tire Loaders	23	5	0	0.226354188	g/hr
1	2029	10	5	2	2240	Rubber Tire Loaders	23	5	0	0.226354589	g/hr
1	2026	5	5	2	2240	Rubber Tire Loaders	23	90	0	77160.79719	g/hr
1	2026	6	5	2	2240	Rubber Tire Loaders	23	90	0	77160.26313	g/hr
1	2026	7	5	2	2240	Rubber Tire Loaders	23	90	0	77160.09984	g/hr
1	2026	8	5	2	2240	Rubber Tire Loaders	23	90	0	77160.09984	g/hr
1	2026	9	5	2	2240	Rubber Tire Loaders	23	90	0	77160.21235	g/hr
1	2026	10	5	2	2240	Rubber Tire Loaders	23	90	0	77160.13793	g/hr
1	2027	5	5	2	2240	Rubber Tire Loaders	23	90	0	77162.33579	g/hr
1	2027	6	5	2	2240	Rubber Tire Loaders	23	90	0	77162.11855	g/hr
1	2027	7	5	2	2240	Rubber Tire Loaders	23	90	0	77162.05359	g/hr
1	2027	8	5	2	2240	Rubber Tire Loaders	23	90	0	77162.05359	g/hr
1	2027	9	5	2	2240	Rubber Tire Loaders	23	90	0	77161.75222	g/hr
1	2027	10	5	2	2240	Rubber Tire Loaders	23	90	0	77162.03858	g/hr
1	2028	5	5	2	2240	Rubber Tire Loaders	23	90	0	77163.25268	g/hr
1	2028	6	5	2	2240	Rubber Tire Loaders	23	90	0	77163.24809	g/hr
1	2028	7	5	2	2240	Rubber Tire Loaders	23	90	0	77163.04342	g/hr
1	2028	8	5	2	2240	Rubber Tire Loaders	23	90	0	77163.04342	g/hr
1	2028	9	5	2	2240	Rubber Tire Loaders	23	90	0	77163.44192	g/hr
1	2028	10	5	2	2240	Rubber Tire Loaders	23	90	0	77162.92546	g/hr
1	2029	5	5	2	2240	Rubber Tire Loaders	23	90	0	77164.32674	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2029	6	5	2	2240	Rubber Tire Loaders	23	90	0	77164.34921	g/hr
1	2029	7	5	2	2240	Rubber Tire Loaders	23	90	0	77163.92612	g/hr
1	2029	8	5	2	2240	Rubber Tire Loaders	23	90	0	77163.92612	g/hr
1	2029	9	5	2	2240	Rubber Tire Loaders	23	90	0	77164.51173	g/hr
1	2029	10	5	2	2240	Rubber Tire Loaders	23	90	0	77164.29184	g/hr
1	2026	5	5	2	2240	Skid Steer Loaders	23	1	0	7.500699915	g/hr
1	2026	6	5	2	2240	Skid Steer Loaders	23	1	0	7.500707571	g/hr
1	2026	7	5	2	2240	Skid Steer Loaders	23	1	0	7.500697047	g/hr
1	2026	8	5	2	2240	Skid Steer Loaders	23	1	0	7.500697047	g/hr
1	2026	9	5	2	2240	Skid Steer Loaders	23	1	0	7.500700639	g/hr
1	2026	10	5	2	2240	Skid Steer Loaders	23	1	0	7.500694433	g/hr
1	2027	5	5	2	2240	Skid Steer Loaders	23	1	0	6.775684323	g/hr
1	2027	6	5	2	2240	Skid Steer Loaders	23	1	0	6.775672699	g/hr
1	2027	7	5	2	2240	Skid Steer Loaders	23	1	0	6.775684909	g/hr
1	2027	8	5	2	2240	Skid Steer Loaders	23	1	0	6.775684909	g/hr
1	2027	9	5	2	2240	Skid Steer Loaders	23	1	0	6.775670258	g/hr
1	2027	10	5	2	2240	Skid Steer Loaders	23	1	0	6.775677363	g/hr
1	2028	5	5	2	2240	Skid Steer Loaders	23	1	0	5.915488179	g/hr
1	2028	6	5	2	2240	Skid Steer Loaders	23	1	0	5.915486827	g/hr
1	2028	7	5	2	2240	Skid Steer Loaders	23	1	0	5.915482818	g/hr
1	2028	8	5	2	2240	Skid Steer Loaders	23	1	0	5.915482818	g/hr
1	2028	9	5	2	2240	Skid Steer Loaders	23	1	0	5.915483394	g/hr
1	2028	10	5	2	2240	Skid Steer Loaders	23	1	0	5.915491459	g/hr
1	2029	5	5	2	2240	Skid Steer Loaders	23	1	0	5.058442087	g/hr
1	2029	6	5	2	2240	Skid Steer Loaders	23	1	0	5.058442095	g/hr
1	2029	7	5	2	2240	Skid Steer Loaders	23	1	0	5.058429809	g/hr
1	2029	8	5	2	2240	Skid Steer Loaders	23	1	0	5.058429809	g/hr
1	2029	9	5	2	2240	Skid Steer Loaders	23	1	0	5.058434789	g/hr
1	2029	10	5	2	2240	Skid Steer Loaders	23	1	0	5.058429556	g/hr
1	2026	5	5	2	2240	Skid Steer Loaders	23	3	0	47.58658882	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	6	5	2	2240	Skid Steer Loaders	23	3	0	47.58663327	g/hr
1	2026	7	5	2	2240	Skid Steer Loaders	23	3	0	47.58659621	g/hr
1	2026	8	5	2	2240	Skid Steer Loaders	23	3	0	47.58659621	g/hr
1	2026	9	5	2	2240	Skid Steer Loaders	23	3	0	47.58656405	g/hr
1	2026	10	5	2	2240	Skid Steer Loaders	23	3	0	47.5865421	g/hr
1	2027	5	5	2	2240	Skid Steer Loaders	23	3	0	45.02423054	g/hr
1	2027	6	5	2	2240	Skid Steer Loaders	23	3	0	45.02420178	g/hr
1	2027	7	5	2	2240	Skid Steer Loaders	23	3	0	45.02420694	g/hr
1	2027	8	5	2	2240	Skid Steer Loaders	23	3	0	45.02420694	g/hr
1	2027	9	5	2	2240	Skid Steer Loaders	23	3	0	45.02416966	g/hr
1	2027	10	5	2	2240	Skid Steer Loaders	23	3	0	45.02434821	g/hr
1	2028	5	5	2	2240	Skid Steer Loaders	23	3	0	41.92155087	g/hr
1	2028	6	5	2	2240	Skid Steer Loaders	23	3	0	41.92153262	g/hr
1	2028	7	5	2	2240	Skid Steer Loaders	23	3	0	41.92161007	g/hr
1	2028	8	5	2	2240	Skid Steer Loaders	23	3	0	41.92161007	g/hr
1	2028	9	5	2	2240	Skid Steer Loaders	23	3	0	41.92150382	g/hr
1	2028	10	5	2	2240	Skid Steer Loaders	23	3	0	41.92153535	g/hr
1	2029	5	5	2	2240	Skid Steer Loaders	23	3	0	38.76018722	g/hr
1	2029	6	5	2	2240	Skid Steer Loaders	23	3	0	38.76017014	g/hr
1	2029	7	5	2	2240	Skid Steer Loaders	23	3	0	38.76010908	g/hr
1	2029	8	5	2	2240	Skid Steer Loaders	23	3	0	38.76010908	g/hr
1	2029	9	5	2	2240	Skid Steer Loaders	23	3	0	38.7602264	g/hr
1	2029	10	5	2	2240	Skid Steer Loaders	23	3	0	38.76015557	g/hr
1	2026	5	5	2	2240	Skid Steer Loaders	23	5	0	0.374441233	g/hr
1	2026	6	5	2	2240	Skid Steer Loaders	23	5	0	0.374440674	g/hr
1	2026	7	5	2	2240	Skid Steer Loaders	23	5	0	0.374440706	g/hr
1	2026	8	5	2	2240	Skid Steer Loaders	23	5	0	0.374440706	g/hr
1	2026	9	5	2	2240	Skid Steer Loaders	23	5	0	0.374440386	g/hr
1	2026	10	5	2	2240	Skid Steer Loaders	23	5	0	0.374440805	g/hr
1	2027	5	5	2	2240	Skid Steer Loaders	23	5	0	0.357421334	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2027	6	5	2	2240	Skid Steer Loaders	23	5	0	0.357421974	g/hr
1	2027	7	5	2	2240	Skid Steer Loaders	23	5	0	0.357422281	g/hr
1	2027	8	5	2	2240	Skid Steer Loaders	23	5	0	0.357422281	g/hr
1	2027	9	5	2	2240	Skid Steer Loaders	23	5	0	0.35742201	g/hr
1	2027	10	5	2	2240	Skid Steer Loaders	23	5	0	0.357421252	g/hr
1	2028	5	5	2	2240	Skid Steer Loaders	23	5	0	0.335858125	g/hr
1	2028	6	5	2	2240	Skid Steer Loaders	23	5	0	0.335856951	g/hr
1	2028	7	5	2	2240	Skid Steer Loaders	23	5	0	0.335858006	g/hr
1	2028	8	5	2	2240	Skid Steer Loaders	23	5	0	0.335858006	g/hr
1	2028	9	5	2	2240	Skid Steer Loaders	23	5	0	0.335858092	g/hr
1	2028	10	5	2	2240	Skid Steer Loaders	23	5	0	0.335858407	g/hr
1	2029	5	5	2	2240	Skid Steer Loaders	23	5	0	0.3030252	g/hr
1	2029	6	5	2	2240	Skid Steer Loaders	23	5	0	0.303025408	g/hr
1	2029	7	5	2	2240	Skid Steer Loaders	23	5	0	0.303023951	g/hr
1	2029	8	5	2	2240	Skid Steer Loaders	23	5	0	0.303023951	g/hr
1	2029	9	5	2	2240	Skid Steer Loaders	23	5	0	0.30302403	g/hr
1	2029	10	5	2	2240	Skid Steer Loaders	23	5	0	0.303024535	g/hr
1	2026	5	5	2	2240	Skid Steer Loaders	23	90	0	7978.447257	g/hr
1	2026	6	5	2	2240	Skid Steer Loaders	23	90	0	7978.445857	g/hr
1	2026	7	5	2	2240	Skid Steer Loaders	23	90	0	7978.448203	g/hr
1	2026	8	5	2	2240	Skid Steer Loaders	23	90	0	7978.448203	g/hr
1	2026	9	5	2	2240	Skid Steer Loaders	23	90	0	7978.444767	g/hr
1	2026	10	5	2	2240	Skid Steer Loaders	23	90	0	7978.454162	g/hr
1	2027	5	5	2	2240	Skid Steer Loaders	23	90	0	7980.708585	g/hr
1	2027	6	5	2	2240	Skid Steer Loaders	23	90	0	7980.708289	g/hr
1	2027	7	5	2	2240	Skid Steer Loaders	23	90	0	7980.715928	g/hr
1	2027	8	5	2	2240	Skid Steer Loaders	23	90	0	7980.715928	g/hr
1	2027	9	5	2	2240	Skid Steer Loaders	23	90	0	7980.698427	g/hr
1	2027	10	5	2	2240	Skid Steer Loaders	23	90	0	7980.706073	g/hr
1	2028	5	5	2	2240	Skid Steer Loaders	23	90	0	7983.397071	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	6	5	2	2240	Skid Steer Loaders	23	90	0	7983.398054	g/hr
1	2028	7	5	2	2240	Skid Steer Loaders	23	90	0	7983.39781	g/hr
1	2028	8	5	2	2240	Skid Steer Loaders	23	90	0	7983.39781	g/hr
1	2028	9	5	2	2240	Skid Steer Loaders	23	90	0	7983.394887	g/hr
1	2028	10	5	2	2240	Skid Steer Loaders	23	90	0	7983.39954	g/hr
1	2029	5	5	2	2240	Skid Steer Loaders	23	90	0	7986.090888	g/hr
1	2029	6	5	2	2240	Skid Steer Loaders	23	90	0	7986.084059	g/hr
1	2029	7	5	2	2240	Skid Steer Loaders	23	90	0	7986.080802	g/hr
1	2029	8	5	2	2240	Skid Steer Loaders	23	90	0	7986.080802	g/hr
1	2029	9	5	2	2240	Skid Steer Loaders	23	90	0	7986.088794	g/hr
1	2029	10	5	2	2240	Skid Steer Loaders	23	90	0	7986.084277	g/hr
1	2026	5	5	2	2240	Trenchers	23	1	0	2.878990453	g/hr
1	2026	6	5	2	2240	Trenchers	23	1	0	2.878988575	g/hr
1	2026	7	5	2	2240	Trenchers	23	1	0	2.878983932	g/hr
1	2026	8	5	2	2240	Trenchers	23	1	0	2.878983932	g/hr
1	2026	9	5	2	2240	Trenchers	23	1	0	2.878975383	g/hr
1	2026	10	5	2	2240	Trenchers	23	1	0	2.878972397	g/hr
1	2027	5	5	2	2240	Trenchers	23	1	0	2.60221886	g/hr
1	2027	6	5	2	2240	Trenchers	23	1	0	2.602221683	g/hr
1	2027	7	5	2	2240	Trenchers	23	1	0	2.602220955	g/hr
1	2027	8	5	2	2240	Trenchers	23	1	0	2.602220955	g/hr
1	2027	9	5	2	2240	Trenchers	23	1	0	2.60221141	g/hr
1	2027	10	5	2	2240	Trenchers	23	1	0	2.602224242	g/hr
1	2028	5	5	2	2240	Trenchers	23	1	0	2.368709078	g/hr
1	2028	6	5	2	2240	Trenchers	23	1	0	2.368708084	g/hr
1	2028	7	5	2	2240	Trenchers	23	1	0	2.36871357	g/hr
1	2028	8	5	2	2240	Trenchers	23	1	0	2.36871357	g/hr
1	2028	9	5	2	2240	Trenchers	23	1	0	2.368704537	g/hr
1	2028	10	5	2	2240	Trenchers	23	1	0	2.368705823	g/hr
1	2029	5	5	2	2240	Trenchers	23	1	0	2.170689723	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2029	6	5	2	2240	Trenchers	23	1	0	2.17069973	g/hr
1	2029	7	5	2	2240	Trenchers	23	1	0	2.1706942	g/hr
1	2029	8	5	2	2240	Trenchers	23	1	0	2.1706942	g/hr
1	2029	9	5	2	2240	Trenchers	23	1	0	2.170692861	g/hr
1	2029	10	5	2	2240	Trenchers	23	1	0	2.170694564	g/hr
1	2026	5	5	2	2240	Trenchers	23	3	0	80.37222256	g/hr
1	2026	6	5	2	2240	Trenchers	23	3	0	80.37221173	g/hr
1	2026	7	5	2	2240	Trenchers	23	3	0	80.37213457	g/hr
1	2026	8	5	2	2240	Trenchers	23	3	0	80.37213457	g/hr
1	2026	9	5	2	2240	Trenchers	23	3	0	80.3720616	g/hr
1	2026	10	5	2	2240	Trenchers	23	3	0	80.37201727	g/hr
1	2027	5	5	2	2240	Trenchers	23	3	0	77.57707022	g/hr
1	2027	6	5	2	2240	Trenchers	23	3	0	77.57700013	g/hr
1	2027	7	5	2	2240	Trenchers	23	3	0	77.57714328	g/hr
1	2027	8	5	2	2240	Trenchers	23	3	0	77.57714328	g/hr
1	2027	9	5	2	2240	Trenchers	23	3	0	77.5770744	g/hr
1	2027	10	5	2	2240	Trenchers	23	3	0	77.57692029	g/hr
1	2028	5	5	2	2240	Trenchers	23	3	0	75.28989061	g/hr
1	2028	6	5	2	2240	Trenchers	23	3	0	75.28978421	g/hr
1	2028	7	5	2	2240	Trenchers	23	3	0	75.28973219	g/hr
1	2028	8	5	2	2240	Trenchers	23	3	0	75.28973219	g/hr
1	2028	9	5	2	2240	Trenchers	23	3	0	75.28966847	g/hr
1	2028	10	5	2	2240	Trenchers	23	3	0	75.28962967	g/hr
1	2029	5	5	2	2240	Trenchers	23	3	0	73.36156881	g/hr
1	2029	6	5	2	2240	Trenchers	23	3	0	73.36171453	g/hr
1	2029	7	5	2	2240	Trenchers	23	3	0	73.36174929	g/hr
1	2029	8	5	2	2240	Trenchers	23	3	0	73.36174929	g/hr
1	2029	9	5	2	2240	Trenchers	23	3	0	73.3616745	g/hr
1	2029	10	5	2	2240	Trenchers	23	3	0	73.36177278	g/hr
1	2026	5	5	2	2240	Trenchers	23	5	0	0.325177787	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	6	5	2	2240	Trenchers	23	5	0	0.325177406	g/hr
1	2026	7	5	2	2240	Trenchers	23	5	0	0.325178279	g/hr
1	2026	8	5	2	2240	Trenchers	23	5	0	0.325178279	g/hr
1	2026	9	5	2	2240	Trenchers	23	5	0	0.325177447	g/hr
1	2026	10	5	2	2240	Trenchers	23	5	0	0.325177764	g/hr
1	2027	5	5	2	2240	Trenchers	23	5	0	0.309456464	g/hr
1	2027	6	5	2	2240	Trenchers	23	5	0	0.309457978	g/hr
1	2027	7	5	2	2240	Trenchers	23	5	0	0.309457583	g/hr
1	2027	8	5	2	2240	Trenchers	23	5	0	0.309457583	g/hr
1	2027	9	5	2	2240	Trenchers	23	5	0	0.309458038	g/hr
1	2027	10	5	2	2240	Trenchers	23	5	0	0.309457171	g/hr
1	2028	5	5	2	2240	Trenchers	23	5	0	0.296543242	g/hr
1	2028	6	5	2	2240	Trenchers	23	5	0	0.296544231	g/hr
1	2028	7	5	2	2240	Trenchers	23	5	0	0.296542946	g/hr
1	2028	8	5	2	2240	Trenchers	23	5	0	0.296542946	g/hr
1	2028	9	5	2	2240	Trenchers	23	5	0	0.296543071	g/hr
1	2028	10	5	2	2240	Trenchers	23	5	0	0.296544179	g/hr
1	2029	5	5	2	2240	Trenchers	23	5	0	0.284771395	g/hr
1	2029	6	5	2	2240	Trenchers	23	5	0	0.284770454	g/hr
1	2029	7	5	2	2240	Trenchers	23	5	0	0.284770226	g/hr
1	2029	8	5	2	2240	Trenchers	23	5	0	0.284770226	g/hr
1	2029	9	5	2	2240	Trenchers	23	5	0	0.28477167	g/hr
1	2029	10	5	2	2240	Trenchers	23	5	0	0.284769542	g/hr
1	2026	5	5	2	2240	Trenchers	23	90	0	25774.04692	g/hr
1	2026	6	5	2	2240	Trenchers	23	90	0	25774.10512	g/hr
1	2026	7	5	2	2240	Trenchers	23	90	0	25774.16234	g/hr
1	2026	8	5	2	2240	Trenchers	23	90	0	25774.16234	g/hr
1	2026	9	5	2	2240	Trenchers	23	90	0	25774.13637	g/hr
1	2026	10	5	2	2240	Trenchers	23	90	0	25774.17782	g/hr
1	2027	5	5	2	2240	Trenchers	23	90	0	25775.06236	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2027	6	5	2	2240	Trenchers	23	90	0	25774.9081	g/hr
1	2027	7	5	2	2240	Trenchers	23	90	0	25775.00421	g/hr
1	2027	8	5	2	2240	Trenchers	23	90	0	25775.00421	g/hr
1	2027	9	5	2	2240	Trenchers	23	90	0	25775.09487	g/hr
1	2027	10	5	2	2240	Trenchers	23	90	0	25774.87413	g/hr
1	2028	5	5	2	2240	Trenchers	23	90	0	25775.65086	g/hr
1	2028	6	5	2	2240	Trenchers	23	90	0	25775.71202	g/hr
1	2028	7	5	2	2240	Trenchers	23	90	0	25775.66185	g/hr
1	2028	8	5	2	2240	Trenchers	23	90	0	25775.66185	g/hr
1	2028	9	5	2	2240	Trenchers	23	90	0	25775.79702	g/hr
1	2028	10	5	2	2240	Trenchers	23	90	0	25775.78817	g/hr
1	2029	5	5	2	2240	Trenchers	23	90	0	25776.27894	g/hr
1	2029	6	5	2	2240	Trenchers	23	90	0	25776.45013	g/hr
1	2029	7	5	2	2240	Trenchers	23	90	0	25776.40406	g/hr
1	2029	8	5	2	2240	Trenchers	23	90	0	25776.40406	g/hr
1	2029	9	5	2	2240	Trenchers	23	90	0	25776.31039	g/hr
1	2029	10	5	2	2240	Trenchers	23	90	0	25776.35066	g/hr
1	2026	5	5	2	2240	Bore/Drill Rigs	23	1	0	13.68064498	g/hr
1	2026	6	5	2	2240	Bore/Drill Rigs	23	1	0	13.6806701	g/hr
1	2026	7	5	2	2240	Bore/Drill Rigs	23	1	0	13.68068779	g/hr
1	2026	8	5	2	2240	Bore/Drill Rigs	23	1	0	13.68068779	g/hr
1	2026	9	5	2	2240	Bore/Drill Rigs	23	1	0	13.6806708	g/hr
1	2026	10	5	2	2240	Bore/Drill Rigs	23	1	0	13.68066948	g/hr
1	2027	5	5	2	2240	Bore/Drill Rigs	23	1	0	11.98602529	g/hr
1	2027	6	5	2	2240	Bore/Drill Rigs	23	1	0	11.98605761	g/hr
1	2027	7	5	2	2240	Bore/Drill Rigs	23	1	0	11.98607152	g/hr
1	2027	8	5	2	2240	Bore/Drill Rigs	23	1	0	11.98607152	g/hr
1	2027	9	5	2	2240	Bore/Drill Rigs	23	1	0	11.98603846	g/hr
1	2027	10	5	2	2240	Bore/Drill Rigs	23	1	0	11.9860165	g/hr
1	2028	5	5	2	2240	Bore/Drill Rigs	23	1	0	10.33770735	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	6	5	2	2240	Bore/Drill Rigs	23	1	0	10.33773587	g/hr
1	2028	7	5	2	2240	Bore/Drill Rigs	23	1	0	10.33775322	g/hr
1	2028	8	5	2	2240	Bore/Drill Rigs	23	1	0	10.33775322	g/hr
1	2028	9	5	2	2240	Bore/Drill Rigs	23	1	0	10.33773222	g/hr
1	2028	10	5	2	2240	Bore/Drill Rigs	23	1	0	10.33772398	g/hr
1	2029	5	5	2	2240	Bore/Drill Rigs	23	1	0	8.741866058	g/hr
1	2029	6	5	2	2240	Bore/Drill Rigs	23	1	0	8.741840543	g/hr
1	2029	7	5	2	2240	Bore/Drill Rigs	23	1	0	8.741868843	g/hr
1	2029	8	5	2	2240	Bore/Drill Rigs	23	1	0	8.741868843	g/hr
1	2029	9	5	2	2240	Bore/Drill Rigs	23	1	0	8.741860346	g/hr
1	2029	10	5	2	2240	Bore/Drill Rigs	23	1	0	8.741860219	g/hr
1	2026	5	5	2	2240	Bore/Drill Rigs	23	3	0	222.062623	g/hr
1	2026	6	5	2	2240	Bore/Drill Rigs	23	3	0	222.0629592	g/hr
1	2026	7	5	2	2240	Bore/Drill Rigs	23	3	0	222.0633162	g/hr
1	2026	8	5	2	2240	Bore/Drill Rigs	23	3	0	222.0633162	g/hr
1	2026	9	5	2	2240	Bore/Drill Rigs	23	3	0	222.0625647	g/hr
1	2026	10	5	2	2240	Bore/Drill Rigs	23	3	0	222.0631087	g/hr
1	2027	5	5	2	2240	Bore/Drill Rigs	23	3	0	198.610334	g/hr
1	2027	6	5	2	2240	Bore/Drill Rigs	23	3	0	198.6103661	g/hr
1	2027	7	5	2	2240	Bore/Drill Rigs	23	3	0	198.6106999	g/hr
1	2027	8	5	2	2240	Bore/Drill Rigs	23	3	0	198.6106999	g/hr
1	2027	9	5	2	2240	Bore/Drill Rigs	23	3	0	198.6104154	g/hr
1	2027	10	5	2	2240	Bore/Drill Rigs	23	3	0	198.6101608	g/hr
1	2028	5	5	2	2240	Bore/Drill Rigs	23	3	0	174.6815987	g/hr
1	2028	6	5	2	2240	Bore/Drill Rigs	23	3	0	174.6818154	g/hr
1	2028	7	5	2	2240	Bore/Drill Rigs	23	3	0	174.6821191	g/hr
1	2028	8	5	2	2240	Bore/Drill Rigs	23	3	0	174.6821191	g/hr
1	2028	9	5	2	2240	Bore/Drill Rigs	23	3	0	174.6816598	g/hr
1	2028	10	5	2	2240	Bore/Drill Rigs	23	3	0	174.6820274	g/hr
1	2029	5	5	2	2240	Bore/Drill Rigs	23	3	0	151.2258101	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2029	6	5	2	2240	Bore/Drill Rigs	23	3	0	151.2260082	g/hr
1	2029	7	5	2	2240	Bore/Drill Rigs	23	3	0	151.2262545	g/hr
1	2029	8	5	2	2240	Bore/Drill Rigs	23	3	0	151.2262545	g/hr
1	2029	9	5	2	2240	Bore/Drill Rigs	23	3	0	151.2261243	g/hr
1	2029	10	5	2	2240	Bore/Drill Rigs	23	3	0	151.2263287	g/hr
1	2026	5	5	2	2240	Bore/Drill Rigs	23	5	0	0.863595005	g/hr
1	2026	6	5	2	2240	Bore/Drill Rigs	23	5	0	0.863597098	g/hr
1	2026	7	5	2	2240	Bore/Drill Rigs	23	5	0	0.863594733	g/hr
1	2026	8	5	2	2240	Bore/Drill Rigs	23	5	0	0.863594733	g/hr
1	2026	9	5	2	2240	Bore/Drill Rigs	23	5	0	0.863595311	g/hr
1	2026	10	5	2	2240	Bore/Drill Rigs	23	5	0	0.863594807	g/hr
1	2027	5	5	2	2240	Bore/Drill Rigs	23	5	0	0.773638888	g/hr
1	2027	6	5	2	2240	Bore/Drill Rigs	23	5	0	0.773643132	g/hr
1	2027	7	5	2	2240	Bore/Drill Rigs	23	5	0	0.773642164	g/hr
1	2027	8	5	2	2240	Bore/Drill Rigs	23	5	0	0.773642164	g/hr
1	2027	9	5	2	2240	Bore/Drill Rigs	23	5	0	0.773643842	g/hr
1	2027	10	5	2	2240	Bore/Drill Rigs	23	5	0	0.773641979	g/hr
1	2028	5	5	2	2240	Bore/Drill Rigs	23	5	0	0.671229792	g/hr
1	2028	6	5	2	2240	Bore/Drill Rigs	23	5	0	0.671229922	g/hr
1	2028	7	5	2	2240	Bore/Drill Rigs	23	5	0	0.671232709	g/hr
1	2028	8	5	2	2240	Bore/Drill Rigs	23	5	0	0.671232709	g/hr
1	2028	9	5	2	2240	Bore/Drill Rigs	23	5	0	0.671230764	g/hr
1	2028	10	5	2	2240	Bore/Drill Rigs	23	5	0	0.671230597	g/hr
1	2029	5	5	2	2240	Bore/Drill Rigs	23	5	0	0.566142595	g/hr
1	2029	6	5	2	2240	Bore/Drill Rigs	23	5	0	0.566141067	g/hr
1	2029	7	5	2	2240	Bore/Drill Rigs	23	5	0	0.566141527	g/hr
1	2029	8	5	2	2240	Bore/Drill Rigs	23	5	0	0.566141527	g/hr
1	2029	9	5	2	2240	Bore/Drill Rigs	23	5	0	0.566143439	g/hr
1	2029	10	5	2	2240	Bore/Drill Rigs	23	5	0	0.566142892	g/hr
1	2026	5	5	2	2240	Bore/Drill Rigs	23	90	0	40424.48067	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	6	5	2	2240	Bore/Drill Rigs	23	90	0	40424.63777	g/hr
1	2026	7	5	2	2240	Bore/Drill Rigs	23	90	0	40424.46665	g/hr
1	2026	8	5	2	2240	Bore/Drill Rigs	23	90	0	40424.46665	g/hr
1	2026	9	5	2	2240	Bore/Drill Rigs	23	90	0	40424.46094	g/hr
1	2026	10	5	2	2240	Bore/Drill Rigs	23	90	0	40424.55419	g/hr
1	2027	5	5	2	2240	Bore/Drill Rigs	23	90	0	40429.72768	g/hr
1	2027	6	5	2	2240	Bore/Drill Rigs	23	90	0	40429.64077	g/hr
1	2027	7	5	2	2240	Bore/Drill Rigs	23	90	0	40430.00382	g/hr
1	2027	8	5	2	2240	Bore/Drill Rigs	23	90	0	40430.00382	g/hr
1	2027	9	5	2	2240	Bore/Drill Rigs	23	90	0	40429.84889	g/hr
1	2027	10	5	2	2240	Bore/Drill Rigs	23	90	0	40429.73342	g/hr
1	2028	5	5	2	2240	Bore/Drill Rigs	23	90	0	40434.8998	g/hr
1	2028	6	5	2	2240	Bore/Drill Rigs	23	90	0	40435.07489	g/hr
1	2028	7	5	2	2240	Bore/Drill Rigs	23	90	0	40435.19259	g/hr
1	2028	8	5	2	2240	Bore/Drill Rigs	23	90	0	40435.19259	g/hr
1	2028	9	5	2	2240	Bore/Drill Rigs	23	90	0	40434.98179	g/hr
1	2028	10	5	2	2240	Bore/Drill Rigs	23	90	0	40434.96038	g/hr
1	2029	5	5	2	2240	Bore/Drill Rigs	23	90	0	40439.97441	g/hr
1	2029	6	5	2	2240	Bore/Drill Rigs	23	90	0	40439.95127	g/hr
1	2029	7	5	2	2240	Bore/Drill Rigs	23	90	0	40439.85803	g/hr
1	2029	8	5	2	2240	Bore/Drill Rigs	23	90	0	40439.85803	g/hr
1	2029	9	5	2	2240	Bore/Drill Rigs	23	90	0	40439.97929	g/hr
1	2029	10	5	2	2240	Bore/Drill Rigs	23	90	0	40440.00519	g/hr
1	2026	5	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.630666371	g/hr
1	2026	6	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.630666281	g/hr
1	2026	7	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.630662126	g/hr
1	2026	8	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.630662126	g/hr
1	2026	9	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.630672592	g/hr
1	2026	10	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.630652773	g/hr
1	2027	5	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.309884714	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2027	6	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.30986461	g/hr
1	2027	7	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.309877866	g/hr
1	2027	8	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.309877866	g/hr
1	2027	9	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.309871896	g/hr
1	2027	10	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.309880744	g/hr
1	2028	5	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.059437602	g/hr
1	2028	6	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.059436166	g/hr
1	2028	7	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.059436376	g/hr
1	2028	8	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.059436376	g/hr
1	2028	9	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.059431088	g/hr
1	2028	10	5	2	2240	Crushing/Proc. Equipment	23	1	0	2.059437891	g/hr
1	2029	5	5	2	2240	Crushing/Proc. Equipment	23	1	0	1.888182893	g/hr
1	2029	6	5	2	2240	Crushing/Proc. Equipment	23	1	0	1.888173377	g/hr
1	2029	7	5	2	2240	Crushing/Proc. Equipment	23	1	0	1.888179748	g/hr
1	2029	8	5	2	2240	Crushing/Proc. Equipment	23	1	0	1.888179748	g/hr
1	2029	9	5	2	2240	Crushing/Proc. Equipment	23	1	0	1.888177475	g/hr
1	2029	10	5	2	2240	Crushing/Proc. Equipment	23	1	0	1.888186762	g/hr
1	2026	5	5	2	2240	Crushing/Proc. Equipment	23	3	0	69.32581275	g/hr
1	2026	6	5	2	2240	Crushing/Proc. Equipment	23	3	0	69.32585941	g/hr
1	2026	7	5	2	2240	Crushing/Proc. Equipment	23	3	0	69.32576666	g/hr
1	2026	8	5	2	2240	Crushing/Proc. Equipment	23	3	0	69.32576666	g/hr
1	2026	9	5	2	2240	Crushing/Proc. Equipment	23	3	0	69.32603735	g/hr
1	2026	10	5	2	2240	Crushing/Proc. Equipment	23	3	0	69.32559793	g/hr
1	2027	5	5	2	2240	Crushing/Proc. Equipment	23	3	0	64.27242082	g/hr
1	2027	6	5	2	2240	Crushing/Proc. Equipment	23	3	0	64.2719699	g/hr
1	2027	7	5	2	2240	Crushing/Proc. Equipment	23	3	0	64.27229749	g/hr
1	2027	8	5	2	2240	Crushing/Proc. Equipment	23	3	0	64.27229749	g/hr
1	2027	9	5	2	2240	Crushing/Proc. Equipment	23	3	0	64.27213766	g/hr
1	2027	10	5	2	2240	Crushing/Proc. Equipment	23	3	0	64.27234365	g/hr
1	2028	5	5	2	2240	Crushing/Proc. Equipment	23	3	0	60.11990909	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	6	5	2	2240	Crushing/Proc. Equipment	23	3	0	60.11991743	g/hr
1	2028	7	5	2	2240	Crushing/Proc. Equipment	23	3	0	60.11988398	g/hr
1	2028	8	5	2	2240	Crushing/Proc. Equipment	23	3	0	60.11988398	g/hr
1	2028	9	5	2	2240	Crushing/Proc. Equipment	23	3	0	60.11989488	g/hr
1	2028	10	5	2	2240	Crushing/Proc. Equipment	23	3	0	60.12004176	g/hr
1	2029	5	5	2	2240	Crushing/Proc. Equipment	23	3	0	56.93398335	g/hr
1	2029	6	5	2	2240	Crushing/Proc. Equipment	23	3	0	56.93373796	g/hr
1	2029	7	5	2	2240	Crushing/Proc. Equipment	23	3	0	56.93387382	g/hr
1	2029	8	5	2	2240	Crushing/Proc. Equipment	23	3	0	56.93387382	g/hr
1	2029	9	5	2	2240	Crushing/Proc. Equipment	23	3	0	56.93377912	g/hr
1	2029	10	5	2	2240	Crushing/Proc. Equipment	23	3	0	56.93401015	g/hr
1	2026	5	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.265385476	g/hr
1	2026	6	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.265385662	g/hr
1	2026	7	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.265384836	g/hr
1	2026	8	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.265384836	g/hr
1	2026	9	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.265385778	g/hr
1	2026	10	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.26538438	g/hr
1	2027	5	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.239033712	g/hr
1	2027	6	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.239032173	g/hr
1	2027	7	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.239033939	g/hr
1	2027	8	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.239033939	g/hr
1	2027	9	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.23903301	g/hr
1	2027	10	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.239033275	g/hr
1	2028	5	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.218108816	g/hr
1	2028	6	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.218108852	g/hr
1	2028	7	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.218108767	g/hr
1	2028	8	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.218108767	g/hr
1	2028	9	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.218109228	g/hr
1	2028	10	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.218109759	g/hr
1	2029	5	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.203974013	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2029	6	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.203972922	g/hr
1	2029	7	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.203973447	g/hr
1	2029	8	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.203973447	g/hr
1	2029	9	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.203973284	g/hr
1	2029	10	5	2	2240	Crushing/Proc. Equipment	23	5	0	0.203973616	g/hr
1	2026	5	5	2	2240	Crushing/Proc. Equipment	23	90	0	35874.62424	g/hr
1	2026	6	5	2	2240	Crushing/Proc. Equipment	23	90	0	35874.59199	g/hr
1	2026	7	5	2	2240	Crushing/Proc. Equipment	23	90	0	35874.58242	g/hr
1	2026	8	5	2	2240	Crushing/Proc. Equipment	23	90	0	35874.58242	g/hr
1	2026	9	5	2	2240	Crushing/Proc. Equipment	23	90	0	35874.70067	g/hr
1	2026	10	5	2	2240	Crushing/Proc. Equipment	23	90	0	35874.45954	g/hr
1	2027	5	5	2	2240	Crushing/Proc. Equipment	23	90	0	35875.75518	g/hr
1	2027	6	5	2	2240	Crushing/Proc. Equipment	23	90	0	35875.48119	g/hr
1	2027	7	5	2	2240	Crushing/Proc. Equipment	23	90	0	35875.70918	g/hr
1	2027	8	5	2	2240	Crushing/Proc. Equipment	23	90	0	35875.70918	g/hr
1	2027	9	5	2	2240	Crushing/Proc. Equipment	23	90	0	35875.58786	g/hr
1	2027	10	5	2	2240	Crushing/Proc. Equipment	23	90	0	35875.6728	g/hr
1	2028	5	5	2	2240	Crushing/Proc. Equipment	23	90	0	35876.20633	g/hr
1	2028	6	5	2	2240	Crushing/Proc. Equipment	23	90	0	35876.23046	g/hr
1	2028	7	5	2	2240	Crushing/Proc. Equipment	23	90	0	35876.23754	g/hr
1	2028	8	5	2	2240	Crushing/Proc. Equipment	23	90	0	35876.23754	g/hr
1	2028	9	5	2	2240	Crushing/Proc. Equipment	23	90	0	35876.22961	g/hr
1	2028	10	5	2	2240	Crushing/Proc. Equipment	23	90	0	35876.36454	g/hr
1	2029	5	5	2	2240	Crushing/Proc. Equipment	23	90	0	35876.88487	g/hr
1	2029	6	5	2	2240	Crushing/Proc. Equipment	23	90	0	35876.81071	g/hr
1	2029	7	5	2	2240	Crushing/Proc. Equipment	23	90	0	35876.82958	g/hr
1	2029	8	5	2	2240	Crushing/Proc. Equipment	23	90	0	35876.82958	g/hr
1	2029	9	5	2	2240	Crushing/Proc. Equipment	23	90	0	35876.81224	g/hr
1	2029	10	5	2	2240	Crushing/Proc. Equipment	23	90	0	35876.90816	g/hr
1	2026	5	5	2	2240	Other Construction Equip.	23	1	0	11.25932296	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	6	5	2	2240	Other Construction Equip.	23	1	0	11.25928627	g/hr
1	2026	7	5	2	2240	Other Construction Equip.	23	1	0	11.25931466	g/hr
1	2026	8	5	2	2240	Other Construction Equip.	23	1	0	11.25931466	g/hr
1	2026	9	5	2	2240	Other Construction Equip.	23	1	0	11.2593279	g/hr
1	2026	10	5	2	2240	Other Construction Equip.	23	1	0	11.25934009	g/hr
1	2027	5	5	2	2240	Other Construction Equip.	23	1	0	9.564497054	g/hr
1	2027	6	5	2	2240	Other Construction Equip.	23	1	0	9.564483758	g/hr
1	2027	7	5	2	2240	Other Construction Equip.	23	1	0	9.564492609	g/hr
1	2027	8	5	2	2240	Other Construction Equip.	23	1	0	9.564492609	g/hr
1	2027	9	5	2	2240	Other Construction Equip.	23	1	0	9.564498314	g/hr
1	2027	10	5	2	2240	Other Construction Equip.	23	1	0	9.564506305	g/hr
1	2028	5	5	2	2240	Other Construction Equip.	23	1	0	8.31997825	g/hr
1	2028	6	5	2	2240	Other Construction Equip.	23	1	0	8.319963098	g/hr
1	2028	7	5	2	2240	Other Construction Equip.	23	1	0	8.319985017	g/hr
1	2028	8	5	2	2240	Other Construction Equip.	23	1	0	8.319985017	g/hr
1	2028	9	5	2	2240	Other Construction Equip.	23	1	0	8.319983809	g/hr
1	2028	10	5	2	2240	Other Construction Equip.	23	1	0	8.319982062	g/hr
1	2029	5	5	2	2240	Other Construction Equip.	23	1	0	7.352014714	g/hr
1	2029	6	5	2	2240	Other Construction Equip.	23	1	0	7.351995903	g/hr
1	2029	7	5	2	2240	Other Construction Equip.	23	1	0	7.352020133	g/hr
1	2029	8	5	2	2240	Other Construction Equip.	23	1	0	7.352020133	g/hr
1	2029	9	5	2	2240	Other Construction Equip.	23	1	0	7.35201899	g/hr
1	2029	10	5	2	2240	Other Construction Equip.	23	1	0	7.352020263	g/hr
1	2026	5	5	2	2240	Other Construction Equip.	23	3	0	213.5388083	g/hr
1	2026	6	5	2	2240	Other Construction Equip.	23	3	0	213.5382404	g/hr
1	2026	7	5	2	2240	Other Construction Equip.	23	3	0	213.5387644	g/hr
1	2026	8	5	2	2240	Other Construction Equip.	23	3	0	213.5387644	g/hr
1	2026	9	5	2	2240	Other Construction Equip.	23	3	0	213.5388755	g/hr
1	2026	10	5	2	2240	Other Construction Equip.	23	3	0	213.5380834	g/hr
1	2027	5	5	2	2240	Other Construction Equip.	23	3	0	184.6644384	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2027	6	5	2	2240	Other Construction Equip.	23	3	0	184.663076	g/hr
1	2027	7	5	2	2240	Other Construction Equip.	23	3	0	184.6641415	g/hr
1	2027	8	5	2	2240	Other Construction Equip.	23	3	0	184.6641415	g/hr
1	2027	9	5	2	2240	Other Construction Equip.	23	3	0	184.6643504	g/hr
1	2027	10	5	2	2240	Other Construction Equip.	23	3	0	184.6637831	g/hr
1	2028	5	5	2	2240	Other Construction Equip.	23	3	0	163.2562285	g/hr
1	2028	6	5	2	2240	Other Construction Equip.	23	3	0	163.2561623	g/hr
1	2028	7	5	2	2240	Other Construction Equip.	23	3	0	163.2567022	g/hr
1	2028	8	5	2	2240	Other Construction Equip.	23	3	0	163.2567022	g/hr
1	2028	9	5	2	2240	Other Construction Equip.	23	3	0	163.2562124	g/hr
1	2028	10	5	2	2240	Other Construction Equip.	23	3	0	163.2565217	g/hr
1	2029	5	5	2	2240	Other Construction Equip.	23	3	0	146.1995781	g/hr
1	2029	6	5	2	2240	Other Construction Equip.	23	3	0	146.1991742	g/hr
1	2029	7	5	2	2240	Other Construction Equip.	23	3	0	146.1994875	g/hr
1	2029	8	5	2	2240	Other Construction Equip.	23	3	0	146.1994875	g/hr
1	2029	9	5	2	2240	Other Construction Equip.	23	3	0	146.1992964	g/hr
1	2029	10	5	2	2240	Other Construction Equip.	23	3	0	146.1997284	g/hr
1	2026	5	5	2	2240	Other Construction Equip.	23	5	0	0.795019602	g/hr
1	2026	6	5	2	2240	Other Construction Equip.	23	5	0	0.795019441	g/hr
1	2026	7	5	2	2240	Other Construction Equip.	23	5	0	0.795021611	g/hr
1	2026	8	5	2	2240	Other Construction Equip.	23	5	0	0.795021611	g/hr
1	2026	9	5	2	2240	Other Construction Equip.	23	5	0	0.795019364	g/hr
1	2026	10	5	2	2240	Other Construction Equip.	23	5	0	0.795020531	g/hr
1	2027	5	5	2	2240	Other Construction Equip.	23	5	0	0.672040953	g/hr
1	2027	6	5	2	2240	Other Construction Equip.	23	5	0	0.672038434	g/hr
1	2027	7	5	2	2240	Other Construction Equip.	23	5	0	0.672040803	g/hr
1	2027	8	5	2	2240	Other Construction Equip.	23	5	0	0.672040803	g/hr
1	2027	9	5	2	2240	Other Construction Equip.	23	5	0	0.672041038	g/hr
1	2027	10	5	2	2240	Other Construction Equip.	23	5	0	0.672040921	g/hr
1	2028	5	5	2	2240	Other Construction Equip.	23	5	0	0.585294321	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	6	5	2	2240	Other Construction Equip.	23	5	0	0.585293704	g/hr
1	2028	7	5	2	2240	Other Construction Equip.	23	5	0	0.585295407	g/hr
1	2028	8	5	2	2240	Other Construction Equip.	23	5	0	0.585295407	g/hr
1	2028	9	5	2	2240	Other Construction Equip.	23	5	0	0.585294341	g/hr
1	2028	10	5	2	2240	Other Construction Equip.	23	5	0	0.585294063	g/hr
1	2029	5	5	2	2240	Other Construction Equip.	23	5	0	0.519128096	g/hr
1	2029	6	5	2	2240	Other Construction Equip.	23	5	0	0.519126958	g/hr
1	2029	7	5	2	2240	Other Construction Equip.	23	5	0	0.519128086	g/hr
1	2029	8	5	2	2240	Other Construction Equip.	23	5	0	0.519128086	g/hr
1	2029	9	5	2	2240	Other Construction Equip.	23	5	0	0.519128918	g/hr
1	2029	10	5	2	2240	Other Construction Equip.	23	5	0	0.519128658	g/hr
1	2026	5	5	2	2240	Other Construction Equip.	23	90	0	104834.1844	g/hr
1	2026	6	5	2	2240	Other Construction Equip.	23	90	0	104833.8707	g/hr
1	2026	7	5	2	2240	Other Construction Equip.	23	90	0	104834.6443	g/hr
1	2026	8	5	2	2240	Other Construction Equip.	23	90	0	104834.6443	g/hr
1	2026	9	5	2	2240	Other Construction Equip.	23	90	0	104834.1442	g/hr
1	2026	10	5	2	2240	Other Construction Equip.	23	90	0	104834.196	g/hr
1	2027	5	5	2	2240	Other Construction Equip.	23	90	0	104839.5027	g/hr
1	2027	6	5	2	2240	Other Construction Equip.	23	90	0	104838.6516	g/hr
1	2027	7	5	2	2240	Other Construction Equip.	23	90	0	104839.2935	g/hr
1	2027	8	5	2	2240	Other Construction Equip.	23	90	0	104839.2935	g/hr
1	2027	9	5	2	2240	Other Construction Equip.	23	90	0	104839.4602	g/hr
1	2027	10	5	2	2240	Other Construction Equip.	23	90	0	104839.511	g/hr
1	2028	5	5	2	2240	Other Construction Equip.	23	90	0	104843.3476	g/hr
1	2028	6	5	2	2240	Other Construction Equip.	23	90	0	104843.4886	g/hr
1	2028	7	5	2	2240	Other Construction Equip.	23	90	0	104843.9142	g/hr
1	2028	8	5	2	2240	Other Construction Equip.	23	90	0	104843.9142	g/hr
1	2028	9	5	2	2240	Other Construction Equip.	23	90	0	104843.3894	g/hr
1	2028	10	5	2	2240	Other Construction Equip.	23	90	0	104843.3149	g/hr
1	2029	5	5	2	2240	Other Construction Equip.	23	90	0	104846.4414	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2029	6	5	2	2240	Other Construction Equip.	23	90	0	104846.2816	g/hr
1	2029	7	5	2	2240	Other Construction Equip.	23	90	0	104846.0146	g/hr
1	2029	8	5	2	2240	Other Construction Equip.	23	90	0	104846.0146	g/hr
1	2029	9	5	2	2240	Other Construction Equip.	23	90	0	104846.3905	g/hr
1	2029	10	5	2	2240	Other Construction Equip.	23	90	0	104846.3767	g/hr
1	2026	5	5	2	2240	Plate Compactors	23	1	0	1.973274246	g/hr
1	2026	6	5	2	2240	Plate Compactors	23	1	0	1.973265597	g/hr
1	2026	7	5	2	2240	Plate Compactors	23	1	0	1.973272586	g/hr
1	2026	8	5	2	2240	Plate Compactors	23	1	0	1.973272586	g/hr
1	2026	9	5	2	2240	Plate Compactors	23	1	0	1.973265121	g/hr
1	2026	10	5	2	2240	Plate Compactors	23	1	0	1.973263658	g/hr
1	2027	5	5	2	2240	Plate Compactors	23	1	0	1.972179289	g/hr
1	2027	6	5	2	2240	Plate Compactors	23	1	0	1.972171841	g/hr
1	2027	7	5	2	2240	Plate Compactors	23	1	0	1.97217879	g/hr
1	2027	8	5	2	2240	Plate Compactors	23	1	0	1.97217879	g/hr
1	2027	9	5	2	2240	Plate Compactors	23	1	0	1.972176472	g/hr
1	2027	10	5	2	2240	Plate Compactors	23	1	0	1.972164368	g/hr
1	2028	5	5	2	2240	Plate Compactors	23	1	0	1.970892398	g/hr
1	2028	6	5	2	2240	Plate Compactors	23	1	0	1.970888091	g/hr
1	2028	7	5	2	2240	Plate Compactors	23	1	0	1.970882435	g/hr
1	2028	8	5	2	2240	Plate Compactors	23	1	0	1.970882435	g/hr
1	2028	9	5	2	2240	Plate Compactors	23	1	0	1.970880068	g/hr
1	2028	10	5	2	2240	Plate Compactors	23	1	0	1.970883148	g/hr
1	2029	5	5	2	2240	Plate Compactors	23	1	0	1.969218271	g/hr
1	2029	6	5	2	2240	Plate Compactors	23	1	0	1.969219573	g/hr
1	2029	7	5	2	2240	Plate Compactors	23	1	0	1.969213401	g/hr
1	2029	8	5	2	2240	Plate Compactors	23	1	0	1.969213401	g/hr
1	2029	9	5	2	2240	Plate Compactors	23	1	0	1.969218794	g/hr
1	2029	10	5	2	2240	Plate Compactors	23	1	0	1.969221476	g/hr
1	2026	5	5	2	2240	Plate Compactors	23	3	0	13.20113731	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	6	5	2	2240	Plate Compactors	23	3	0	13.20105273	g/hr
1	2026	7	5	2	2240	Plate Compactors	23	3	0	13.20103043	g/hr
1	2026	8	5	2	2240	Plate Compactors	23	3	0	13.20103043	g/hr
1	2026	9	5	2	2240	Plate Compactors	23	3	0	13.20104249	g/hr
1	2026	10	5	2	2240	Plate Compactors	23	3	0	13.20106753	g/hr
1	2027	5	5	2	2240	Plate Compactors	23	3	0	13.16562875	g/hr
1	2027	6	5	2	2240	Plate Compactors	23	3	0	13.16556364	g/hr
1	2027	7	5	2	2240	Plate Compactors	23	3	0	13.16564371	g/hr
1	2027	8	5	2	2240	Plate Compactors	23	3	0	13.16564371	g/hr
1	2027	9	5	2	2240	Plate Compactors	23	3	0	13.16563611	g/hr
1	2027	10	5	2	2240	Plate Compactors	23	3	0	13.16555986	g/hr
1	2028	5	5	2	2240	Plate Compactors	23	3	0	13.14070806	g/hr
1	2028	6	5	2	2240	Plate Compactors	23	3	0	13.14067404	g/hr
1	2028	7	5	2	2240	Plate Compactors	23	3	0	13.1407079	g/hr
1	2028	8	5	2	2240	Plate Compactors	23	3	0	13.1407079	g/hr
1	2028	9	5	2	2240	Plate Compactors	23	3	0	13.14065424	g/hr
1	2028	10	5	2	2240	Plate Compactors	23	3	0	13.14072246	g/hr
1	2029	5	5	2	2240	Plate Compactors	23	3	0	13.12431609	g/hr
1	2029	6	5	2	2240	Plate Compactors	23	3	0	13.12432376	g/hr
1	2029	7	5	2	2240	Plate Compactors	23	3	0	13.12427205	g/hr
1	2029	8	5	2	2240	Plate Compactors	23	3	0	13.12427205	g/hr
1	2029	9	5	2	2240	Plate Compactors	23	3	0	13.1243386	g/hr
1	2029	10	5	2	2240	Plate Compactors	23	3	0	13.12431074	g/hr
1	2026	5	5	2	2240	Plate Compactors	23	5	0	0.191210138	g/hr
1	2026	6	5	2	2240	Plate Compactors	23	5	0	0.191209573	g/hr
1	2026	7	5	2	2240	Plate Compactors	23	5	0	0.191209656	g/hr
1	2026	8	5	2	2240	Plate Compactors	23	5	0	0.191209656	g/hr
1	2026	9	5	2	2240	Plate Compactors	23	5	0	0.191209382	g/hr
1	2026	10	5	2	2240	Plate Compactors	23	5	0	0.191209705	g/hr
1	2027	5	5	2	2240	Plate Compactors	23	5	0	0.192316343	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2027	6	5	2	2240	Plate Compactors	23	5	0	0.192315068	g/hr
1	2027	7	5	2	2240	Plate Compactors	23	5	0	0.192315524	g/hr
1	2027	8	5	2	2240	Plate Compactors	23	5	0	0.192315524	g/hr
1	2027	9	5	2	2240	Plate Compactors	23	5	0	0.192315704	g/hr
1	2027	10	5	2	2240	Plate Compactors	23	5	0	0.192314921	g/hr
1	2028	5	5	2	2240	Plate Compactors	23	5	0	0.192851026	g/hr
1	2028	6	5	2	2240	Plate Compactors	23	5	0	0.192850229	g/hr
1	2028	7	5	2	2240	Plate Compactors	23	5	0	0.192850301	g/hr
1	2028	8	5	2	2240	Plate Compactors	23	5	0	0.192850301	g/hr
1	2028	9	5	2	2240	Plate Compactors	23	5	0	0.192850463	g/hr
1	2028	10	5	2	2240	Plate Compactors	23	5	0	0.192850347	g/hr
1	2029	5	5	2	2240	Plate Compactors	23	5	0	0.192942642	g/hr
1	2029	6	5	2	2240	Plate Compactors	23	5	0	0.192943147	g/hr
1	2029	7	5	2	2240	Plate Compactors	23	5	0	0.192941883	g/hr
1	2029	8	5	2	2240	Plate Compactors	23	5	0	0.192941883	g/hr
1	2029	9	5	2	2240	Plate Compactors	23	5	0	0.192942943	g/hr
1	2029	10	5	2	2240	Plate Compactors	23	5	0	0.192943209	g/hr
1	2026	5	5	2	2240	Plate Compactors	23	90	0	1908.995866	g/hr
1	2026	6	5	2	2240	Plate Compactors	23	90	0	1908.983135	g/hr
1	2026	7	5	2	2240	Plate Compactors	23	90	0	1908.984575	g/hr
1	2026	8	5	2	2240	Plate Compactors	23	90	0	1908.984575	g/hr
1	2026	9	5	2	2240	Plate Compactors	23	90	0	1908.983773	g/hr
1	2026	10	5	2	2240	Plate Compactors	23	90	0	1908.98734	g/hr
1	2027	5	5	2	2240	Plate Compactors	23	90	0	1908.997032	g/hr
1	2027	6	5	2	2240	Plate Compactors	23	90	0	1908.983538	g/hr
1	2027	7	5	2	2240	Plate Compactors	23	90	0	1908.990195	g/hr
1	2027	8	5	2	2240	Plate Compactors	23	90	0	1908.990195	g/hr
1	2027	9	5	2	2240	Plate Compactors	23	90	0	1908.992697	g/hr
1	2027	10	5	2	2240	Plate Compactors	23	90	0	1908.986482	g/hr
1	2028	5	5	2	2240	Plate Compactors	23	90	0	1908.991238	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	6	5	2	2240	Plate Compactors	23	90	0	1908.990536	g/hr
1	2028	7	5	2	2240	Plate Compactors	23	90	0	1908.991017	g/hr
1	2028	8	5	2	2240	Plate Compactors	23	90	0	1908.991017	g/hr
1	2028	9	5	2	2240	Plate Compactors	23	90	0	1908.987397	g/hr
1	2028	10	5	2	2240	Plate Compactors	23	90	0	1908.98772	g/hr
1	2029	5	5	2	2240	Plate Compactors	23	90	0	1908.990691	g/hr
1	2029	6	5	2	2240	Plate Compactors	23	90	0	1908.996873	g/hr
1	2029	7	5	2	2240	Plate Compactors	23	90	0	1908.98742	g/hr
1	2029	8	5	2	2240	Plate Compactors	23	90	0	1908.98742	g/hr
1	2029	9	5	2	2240	Plate Compactors	23	90	0	1908.994127	g/hr
1	2029	10	5	2	2240	Plate Compactors	23	90	0	1908.998708	g/hr
1	2026	5	5	2	2240	Scrapers	23	1	0	5.142255688	g/hr
1	2026	6	5	2	2240	Scrapers	23	1	0	5.14227527	g/hr
1	2026	7	5	2	2240	Scrapers	23	1	0	5.142257083	g/hr
1	2026	8	5	2	2240	Scrapers	23	1	0	5.142257083	g/hr
1	2026	9	5	2	2240	Scrapers	23	1	0	5.142266579	g/hr
1	2026	10	5	2	2240	Scrapers	23	1	0	5.142264571	g/hr
1	2027	5	5	2	2240	Scrapers	23	1	0	4.543515396	g/hr
1	2027	6	5	2	2240	Scrapers	23	1	0	4.543505054	g/hr
1	2027	7	5	2	2240	Scrapers	23	1	0	4.543494189	g/hr
1	2027	8	5	2	2240	Scrapers	23	1	0	4.543494189	g/hr
1	2027	9	5	2	2240	Scrapers	23	1	0	4.543512837	g/hr
1	2027	10	5	2	2240	Scrapers	23	1	0	4.543513011	g/hr
1	2028	5	5	2	2240	Scrapers	23	1	0	3.98468347	g/hr
1	2028	6	5	2	2240	Scrapers	23	1	0	3.984693096	g/hr
1	2028	7	5	2	2240	Scrapers	23	1	0	3.984684376	g/hr
1	2028	8	5	2	2240	Scrapers	23	1	0	3.984684376	g/hr
1	2028	9	5	2	2240	Scrapers	23	1	0	3.984676452	g/hr
1	2028	10	5	2	2240	Scrapers	23	1	0	3.984688885	g/hr
1	2029	5	5	2	2240	Scrapers	23	1	0	3.413045543	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2029	6	5	2	2240	Scrapers	23	1	0	3.413054678	g/hr
1	2029	7	5	2	2240	Scrapers	23	1	0	3.41305641	g/hr
1	2029	8	5	2	2240	Scrapers	23	1	0	3.41305641	g/hr
1	2029	9	5	2	2240	Scrapers	23	1	0	3.413050502	g/hr
1	2029	10	5	2	2240	Scrapers	23	1	0	3.413051283	g/hr
1	2026	5	5	2	2240	Scrapers	23	3	0	83.57993805	g/hr
1	2026	6	5	2	2240	Scrapers	23	3	0	83.58009548	g/hr
1	2026	7	5	2	2240	Scrapers	23	3	0	83.58022486	g/hr
1	2026	8	5	2	2240	Scrapers	23	3	0	83.58022486	g/hr
1	2026	9	5	2	2240	Scrapers	23	3	0	83.58021501	g/hr
1	2026	10	5	2	2240	Scrapers	23	3	0	83.57985222	g/hr
1	2027	5	5	2	2240	Scrapers	23	3	0	70.5116578	g/hr
1	2027	6	5	2	2240	Scrapers	23	3	0	70.51129368	g/hr
1	2027	7	5	2	2240	Scrapers	23	3	0	70.51117362	g/hr
1	2027	8	5	2	2240	Scrapers	23	3	0	70.51117362	g/hr
1	2027	9	5	2	2240	Scrapers	23	3	0	70.51117716	g/hr
1	2027	10	5	2	2240	Scrapers	23	3	0	70.51158844	g/hr
1	2028	5	5	2	2240	Scrapers	23	3	0	58.75686105	g/hr
1	2028	6	5	2	2240	Scrapers	23	3	0	58.75701701	g/hr
1	2028	7	5	2	2240	Scrapers	23	3	0	58.75692666	g/hr
1	2028	8	5	2	2240	Scrapers	23	3	0	58.75692666	g/hr
1	2028	9	5	2	2240	Scrapers	23	3	0	58.75667223	g/hr
1	2028	10	5	2	2240	Scrapers	23	3	0	58.75697936	g/hr
1	2029	5	5	2	2240	Scrapers	23	3	0	47.51646549	g/hr
1	2029	6	5	2	2240	Scrapers	23	3	0	47.51662551	g/hr
1	2029	7	5	2	2240	Scrapers	23	3	0	47.5164661	g/hr
1	2029	8	5	2	2240	Scrapers	23	3	0	47.5164661	g/hr
1	2029	9	5	2	2240	Scrapers	23	3	0	47.51654396	g/hr
1	2029	10	5	2	2240	Scrapers	23	3	0	47.5165854	g/hr
1	2026	5	5	2	2240	Scrapers	23	5	0	0.37103178	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	6	5	2	2240	Scrapers	23	5	0	0.371032329	g/hr
1	2026	7	5	2	2240	Scrapers	23	5	0	0.371032394	g/hr
1	2026	8	5	2	2240	Scrapers	23	5	0	0.371032394	g/hr
1	2026	9	5	2	2240	Scrapers	23	5	0	0.371032457	g/hr
1	2026	10	5	2	2240	Scrapers	23	5	0	0.371032364	g/hr
1	2027	5	5	2	2240	Scrapers	23	5	0	0.315285834	g/hr
1	2027	6	5	2	2240	Scrapers	23	5	0	0.315284847	g/hr
1	2027	7	5	2	2240	Scrapers	23	5	0	0.315284201	g/hr
1	2027	8	5	2	2240	Scrapers	23	5	0	0.315284201	g/hr
1	2027	9	5	2	2240	Scrapers	23	5	0	0.315285337	g/hr
1	2027	10	5	2	2240	Scrapers	23	5	0	0.315285141	g/hr
1	2028	5	5	2	2240	Scrapers	23	5	0	0.261449457	g/hr
1	2028	6	5	2	2240	Scrapers	23	5	0	0.261450171	g/hr
1	2028	7	5	2	2240	Scrapers	23	5	0	0.261449397	g/hr
1	2028	8	5	2	2240	Scrapers	23	5	0	0.261449397	g/hr
1	2028	9	5	2	2240	Scrapers	23	5	0	0.261449156	g/hr
1	2028	10	5	2	2240	Scrapers	23	5	0	0.261449652	g/hr
1	2029	5	5	2	2240	Scrapers	23	5	0	0.205135672	g/hr
1	2029	6	5	2	2240	Scrapers	23	5	0	0.205136182	g/hr
1	2029	7	5	2	2240	Scrapers	23	5	0	0.205136057	g/hr
1	2029	8	5	2	2240	Scrapers	23	5	0	0.205136057	g/hr
1	2029	9	5	2	2240	Scrapers	23	5	0	0.205136068	g/hr
1	2029	10	5	2	2240	Scrapers	23	5	0	0.205135937	g/hr
1	2026	5	5	2	2240	Scrapers	23	90	0	129784.8588	g/hr
1	2026	6	5	2	2240	Scrapers	23	90	0	129784.7346	g/hr
1	2026	7	5	2	2240	Scrapers	23	90	0	129784.8372	g/hr
1	2026	8	5	2	2240	Scrapers	23	90	0	129784.8372	g/hr
1	2026	9	5	2	2240	Scrapers	23	90	0	129784.8989	g/hr
1	2026	10	5	2	2240	Scrapers	23	90	0	129784.819	g/hr
1	2027	5	5	2	2240	Scrapers	23	90	0	129786.8682	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2027	6	5	2	2240	Scrapers	23	90	0	129786.4388	g/hr
1	2027	7	5	2	2240	Scrapers	23	90	0	129786.1944	g/hr
1	2027	8	5	2	2240	Scrapers	23	90	0	129786.1944	g/hr
1	2027	9	5	2	2240	Scrapers	23	90	0	129786.7553	g/hr
1	2027	10	5	2	2240	Scrapers	23	90	0	129786.5947	g/hr
1	2028	5	5	2	2240	Scrapers	23	90	0	129788.1859	g/hr
1	2028	6	5	2	2240	Scrapers	23	90	0	129788.7411	g/hr
1	2028	7	5	2	2240	Scrapers	23	90	0	129788.0748	g/hr
1	2028	8	5	2	2240	Scrapers	23	90	0	129788.0748	g/hr
1	2028	9	5	2	2240	Scrapers	23	90	0	129787.9264	g/hr
1	2028	10	5	2	2240	Scrapers	23	90	0	129788.2472	g/hr
1	2029	5	5	2	2240	Scrapers	23	90	0	129789.7914	g/hr
1	2029	6	5	2	2240	Scrapers	23	90	0	129790.0801	g/hr
1	2029	7	5	2	2240	Scrapers	23	90	0	129790.2391	g/hr
1	2029	8	5	2	2240	Scrapers	23	90	0	129790.2391	g/hr
1	2029	9	5	2	2240	Scrapers	23	90	0	129790.2043	g/hr
1	2029	10	5	2	2240	Scrapers	23	90	0	129790.1143	g/hr
1	2026	5	5	2	2240	Signal Boards/Light Plants	23	1	0	2.656669901	g/hr
1	2026	6	5	2	2240	Signal Boards/Light Plants	23	1	0	2.656675222	g/hr
1	2026	7	5	2	2240	Signal Boards/Light Plants	23	1	0	2.656662738	g/hr
1	2026	8	5	2	2240	Signal Boards/Light Plants	23	1	0	2.656662738	g/hr
1	2026	9	5	2	2240	Signal Boards/Light Plants	23	1	0	2.656659707	g/hr
1	2026	10	5	2	2240	Signal Boards/Light Plants	23	1	0	2.656670272	g/hr
1	2027	5	5	2	2240	Signal Boards/Light Plants	23	1	0	2.60886206	g/hr
1	2027	6	5	2	2240	Signal Boards/Light Plants	23	1	0	2.608873682	g/hr
1	2027	7	5	2	2240	Signal Boards/Light Plants	23	1	0	2.608870357	g/hr
1	2027	8	5	2	2240	Signal Boards/Light Plants	23	1	0	2.608870357	g/hr
1	2027	9	5	2	2240	Signal Boards/Light Plants	23	1	0	2.608869498	g/hr
1	2027	10	5	2	2240	Signal Boards/Light Plants	23	1	0	2.608861391	g/hr
1	2028	5	5	2	2240	Signal Boards/Light Plants	23	1	0	2.57802535	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	6	5	2	2240	Signal Boards/Light Plants	23	1	0	2.57801424	g/hr
1	2028	7	5	2	2240	Signal Boards/Light Plants	23	1	0	2.578029121	g/hr
1	2028	8	5	2	2240	Signal Boards/Light Plants	23	1	0	2.578029121	g/hr
1	2028	9	5	2	2240	Signal Boards/Light Plants	23	1	0	2.578028346	g/hr
1	2028	10	5	2	2240	Signal Boards/Light Plants	23	1	0	2.578024956	g/hr
1	2029	5	5	2	2240	Signal Boards/Light Plants	23	1	0	2.557879529	g/hr
1	2029	6	5	2	2240	Signal Boards/Light Plants	23	1	0	2.557861963	g/hr
1	2029	7	5	2	2240	Signal Boards/Light Plants	23	1	0	2.557864929	g/hr
1	2029	8	5	2	2240	Signal Boards/Light Plants	23	1	0	2.557864929	g/hr
1	2029	9	5	2	2240	Signal Boards/Light Plants	23	1	0	2.557882483	g/hr
1	2029	10	5	2	2240	Signal Boards/Light Plants	23	1	0	2.55787971	g/hr
1	2026	5	5	2	2240	Signal Boards/Light Plants	23	3	0	34.26308243	g/hr
1	2026	6	5	2	2240	Signal Boards/Light Plants	23	3	0	34.26290996	g/hr
1	2026	7	5	2	2240	Signal Boards/Light Plants	23	3	0	34.26292713	g/hr
1	2026	8	5	2	2240	Signal Boards/Light Plants	23	3	0	34.26292713	g/hr
1	2026	9	5	2	2240	Signal Boards/Light Plants	23	3	0	34.26280129	g/hr
1	2026	10	5	2	2240	Signal Boards/Light Plants	23	3	0	34.26283111	g/hr
1	2027	5	5	2	2240	Signal Boards/Light Plants	23	3	0	33.85485971	g/hr
1	2027	6	5	2	2240	Signal Boards/Light Plants	23	3	0	33.85493295	g/hr
1	2027	7	5	2	2240	Signal Boards/Light Plants	23	3	0	33.85476655	g/hr
1	2027	8	5	2	2240	Signal Boards/Light Plants	23	3	0	33.85476655	g/hr
1	2027	9	5	2	2240	Signal Boards/Light Plants	23	3	0	33.85484493	g/hr
1	2027	10	5	2	2240	Signal Boards/Light Plants	23	3	0	33.85482788	g/hr
1	2028	5	5	2	2240	Signal Boards/Light Plants	23	3	0	33.59511723	g/hr
1	2028	6	5	2	2240	Signal Boards/Light Plants	23	3	0	33.59520483	g/hr
1	2028	7	5	2	2240	Signal Boards/Light Plants	23	3	0	33.59517172	g/hr
1	2028	8	5	2	2240	Signal Boards/Light Plants	23	3	0	33.59517172	g/hr
1	2028	9	5	2	2240	Signal Boards/Light Plants	23	3	0	33.59510752	g/hr
1	2028	10	5	2	2240	Signal Boards/Light Plants	23	3	0	33.59515201	g/hr
1	2029	5	5	2	2240	Signal Boards/Light Plants	23	3	0	33.42413515	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2029	6	5	2	2240	Signal Boards/Light Plants	23	3	0	33.42399139	g/hr
1	2029	7	5	2	2240	Signal Boards/Light Plants	23	3	0	33.42407247	g/hr
1	2029	8	5	2	2240	Signal Boards/Light Plants	23	3	0	33.42407247	g/hr
1	2029	9	5	2	2240	Signal Boards/Light Plants	23	3	0	33.42419094	g/hr
1	2029	10	5	2	2240	Signal Boards/Light Plants	23	3	0	33.42408235	g/hr
1	2026	5	5	2	2240	Signal Boards/Light Plants	23	5	0	0.263939055	g/hr
1	2026	6	5	2	2240	Signal Boards/Light Plants	23	5	0	0.263937935	g/hr
1	2026	7	5	2	2240	Signal Boards/Light Plants	23	5	0	0.263939104	g/hr
1	2026	8	5	2	2240	Signal Boards/Light Plants	23	5	0	0.263939104	g/hr
1	2026	9	5	2	2240	Signal Boards/Light Plants	23	5	0	0.263937834	g/hr
1	2026	10	5	2	2240	Signal Boards/Light Plants	23	5	0	0.263938111	g/hr
1	2027	5	5	2	2240	Signal Boards/Light Plants	23	5	0	0.260649514	g/hr
1	2027	6	5	2	2240	Signal Boards/Light Plants	23	5	0	0.260648182	g/hr
1	2027	7	5	2	2240	Signal Boards/Light Plants	23	5	0	0.260648445	g/hr
1	2027	8	5	2	2240	Signal Boards/Light Plants	23	5	0	0.260648445	g/hr
1	2027	9	5	2	2240	Signal Boards/Light Plants	23	5	0	0.260647494	g/hr
1	2027	10	5	2	2240	Signal Boards/Light Plants	23	5	0	0.260648612	g/hr
1	2028	5	5	2	2240	Signal Boards/Light Plants	23	5	0	0.258499914	g/hr
1	2028	6	5	2	2240	Signal Boards/Light Plants	23	5	0	0.25849988	g/hr
1	2028	7	5	2	2240	Signal Boards/Light Plants	23	5	0	0.258500956	g/hr
1	2028	8	5	2	2240	Signal Boards/Light Plants	23	5	0	0.258500956	g/hr
1	2028	9	5	2	2240	Signal Boards/Light Plants	23	5	0	0.258498873	g/hr
1	2028	10	5	2	2240	Signal Boards/Light Plants	23	5	0	0.258499402	g/hr
1	2029	5	5	2	2240	Signal Boards/Light Plants	23	5	0	0.257233757	g/hr
1	2029	6	5	2	2240	Signal Boards/Light Plants	23	5	0	0.257233527	g/hr
1	2029	7	5	2	2240	Signal Boards/Light Plants	23	5	0	0.257232558	g/hr
1	2029	8	5	2	2240	Signal Boards/Light Plants	23	5	0	0.257232558	g/hr
1	2029	9	5	2	2240	Signal Boards/Light Plants	23	5	0	0.25723381	g/hr
1	2029	10	5	2	2240	Signal Boards/Light Plants	23	5	0	0.257232195	g/hr
1	2026	5	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.39326	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	6	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.377463	g/hr
1	2026	7	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.382162	g/hr
1	2026	8	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.382162	g/hr
1	2026	9	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.37336	g/hr
1	2026	10	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.386933	g/hr
1	2027	5	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.544785	g/hr
1	2027	6	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.53286	g/hr
1	2027	7	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.522124	g/hr
1	2027	8	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.522124	g/hr
1	2027	9	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.534428	g/hr
1	2027	10	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.515877	g/hr
1	2028	5	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.633758	g/hr
1	2028	6	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.620787	g/hr
1	2028	7	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.617703	g/hr
1	2028	8	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.617703	g/hr
1	2028	9	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.632883	g/hr
1	2028	10	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.608282	g/hr
1	2029	5	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.696748	g/hr
1	2029	6	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.680693	g/hr
1	2029	7	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.677972	g/hr
1	2029	8	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.677972	g/hr
1	2029	9	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.686607	g/hr
1	2029	10	5	2	2240	Signal Boards/Light Plants	23	90	0	6047.68129	g/hr
1	2026	5	5	2	2240	Tampers/Rammers	23	1	0	1.355682731	g/hr
1	2026	6	5	2	2240	Tampers/Rammers	23	1	0	1.35568653	g/hr
1	2026	7	5	2	2240	Tampers/Rammers	23	1	0	1.355685312	g/hr
1	2026	8	5	2	2240	Tampers/Rammers	23	1	0	1.355685312	g/hr
1	2026	9	5	2	2240	Tampers/Rammers	23	1	0	1.355683098	g/hr
1	2026	10	5	2	2240	Tampers/Rammers	23	1	0	1.355689088	g/hr
1	2027	5	5	2	2240	Tampers/Rammers	23	1	0	1.35720328	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2027	6	5	2	2240	Tampers/Rammers	23	1	0	1.357202085	g/hr
1	2027	7	5	2	2240	Tampers/Rammers	23	1	0	1.357205413	g/hr
1	2027	8	5	2	2240	Tampers/Rammers	23	1	0	1.357205413	g/hr
1	2027	9	5	2	2240	Tampers/Rammers	23	1	0	1.357205932	g/hr
1	2027	10	5	2	2240	Tampers/Rammers	23	1	0	1.357212239	g/hr
1	2028	5	5	2	2240	Tampers/Rammers	23	1	0	1.358129074	g/hr
1	2028	6	5	2	2240	Tampers/Rammers	23	1	0	1.358130579	g/hr
1	2028	7	5	2	2240	Tampers/Rammers	23	1	0	1.358137425	g/hr
1	2028	8	5	2	2240	Tampers/Rammers	23	1	0	1.358137425	g/hr
1	2028	9	5	2	2240	Tampers/Rammers	23	1	0	1.358133126	g/hr
1	2028	10	5	2	2240	Tampers/Rammers	23	1	0	1.35813403	g/hr
1	2029	5	5	2	2240	Tampers/Rammers	23	1	0	1.358068997	g/hr
1	2029	6	5	2	2240	Tampers/Rammers	23	1	0	1.358066264	g/hr
1	2029	7	5	2	2240	Tampers/Rammers	23	1	0	1.358063139	g/hr
1	2029	8	5	2	2240	Tampers/Rammers	23	1	0	1.358063139	g/hr
1	2029	9	5	2	2240	Tampers/Rammers	23	1	0	1.358063291	g/hr
1	2029	10	5	2	2240	Tampers/Rammers	23	1	0	1.358060218	g/hr
1	2026	5	5	2	2240	Tampers/Rammers	23	3	0	7.628686291	g/hr
1	2026	6	5	2	2240	Tampers/Rammers	23	3	0	7.628715011	g/hr
1	2026	7	5	2	2240	Tampers/Rammers	23	3	0	7.62870002	g/hr
1	2026	8	5	2	2240	Tampers/Rammers	23	3	0	7.62870002	g/hr
1	2026	9	5	2	2240	Tampers/Rammers	23	3	0	7.628684406	g/hr
1	2026	10	5	2	2240	Tampers/Rammers	23	3	0	7.628715635	g/hr
1	2027	5	5	2	2240	Tampers/Rammers	23	3	0	7.602865868	g/hr
1	2027	6	5	2	2240	Tampers/Rammers	23	3	0	7.602864206	g/hr
1	2027	7	5	2	2240	Tampers/Rammers	23	3	0	7.602890864	g/hr
1	2027	8	5	2	2240	Tampers/Rammers	23	3	0	7.602890864	g/hr
1	2027	9	5	2	2240	Tampers/Rammers	23	3	0	7.602896478	g/hr
1	2027	10	5	2	2240	Tampers/Rammers	23	3	0	7.602868652	g/hr
1	2028	5	5	2	2240	Tampers/Rammers	23	3	0	7.581861265	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	6	5	2	2240	Tampers/Rammers	23	3	0	7.581863468	g/hr
1	2028	7	5	2	2240	Tampers/Rammers	23	3	0	7.581887144	g/hr
1	2028	8	5	2	2240	Tampers/Rammers	23	3	0	7.581887144	g/hr
1	2028	9	5	2	2240	Tampers/Rammers	23	3	0	7.581930924	g/hr
1	2028	10	5	2	2240	Tampers/Rammers	23	3	0	7.581914911	g/hr
1	2029	5	5	2	2240	Tampers/Rammers	23	3	0	7.566215296	g/hr
1	2029	6	5	2	2240	Tampers/Rammers	23	3	0	7.566212225	g/hr
1	2029	7	5	2	2240	Tampers/Rammers	23	3	0	7.566148522	g/hr
1	2029	8	5	2	2240	Tampers/Rammers	23	3	0	7.566148522	g/hr
1	2029	9	5	2	2240	Tampers/Rammers	23	3	0	7.566136994	g/hr
1	2029	10	5	2	2240	Tampers/Rammers	23	3	0	7.566168275	g/hr
1	2026	5	5	2	2240	Tampers/Rammers	23	5	0	0.130262581	g/hr
1	2026	6	5	2	2240	Tampers/Rammers	23	5	0	0.130262638	g/hr
1	2026	7	5	2	2240	Tampers/Rammers	23	5	0	0.130262974	g/hr
1	2026	8	5	2	2240	Tampers/Rammers	23	5	0	0.130262974	g/hr
1	2026	9	5	2	2240	Tampers/Rammers	23	5	0	0.130262477	g/hr
1	2026	10	5	2	2240	Tampers/Rammers	23	5	0	0.130262432	g/hr
1	2027	5	5	2	2240	Tampers/Rammers	23	5	0	0.131485585	g/hr
1	2027	6	5	2	2240	Tampers/Rammers	23	5	0	0.131485062	g/hr
1	2027	7	5	2	2240	Tampers/Rammers	23	5	0	0.131485427	g/hr
1	2027	8	5	2	2240	Tampers/Rammers	23	5	0	0.131485427	g/hr
1	2027	9	5	2	2240	Tampers/Rammers	23	5	0	0.131485183	g/hr
1	2027	10	5	2	2240	Tampers/Rammers	23	5	0	0.131485841	g/hr
1	2028	5	5	2	2240	Tampers/Rammers	23	5	0	0.132402396	g/hr
1	2028	6	5	2	2240	Tampers/Rammers	23	5	0	0.132402137	g/hr
1	2028	7	5	2	2240	Tampers/Rammers	23	5	0	0.132403123	g/hr
1	2028	8	5	2	2240	Tampers/Rammers	23	5	0	0.132403123	g/hr
1	2028	9	5	2	2240	Tampers/Rammers	23	5	0	0.132402655	g/hr
1	2028	10	5	2	2240	Tampers/Rammers	23	5	0	0.132402596	g/hr
1	2029	5	5	2	2240	Tampers/Rammers	23	5	0	0.132899256	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2029	6	5	2	2240	Tampers/Rammers	23	5	0	0.132898731	g/hr
1	2029	7	5	2	2240	Tampers/Rammers	23	5	0	0.132898749	g/hr
1	2029	8	5	2	2240	Tampers/Rammers	23	5	0	0.132898749	g/hr
1	2029	9	5	2	2240	Tampers/Rammers	23	5	0	0.1328986	g/hr
1	2029	10	5	2	2240	Tampers/Rammers	23	5	0	0.132897854	g/hr
1	2026	5	5	2	2240	Tampers/Rammers	23	90	0	1061.883082	g/hr
1	2026	6	5	2	2240	Tampers/Rammers	23	90	0	1061.886967	g/hr
1	2026	7	5	2	2240	Tampers/Rammers	23	90	0	1061.889591	g/hr
1	2026	8	5	2	2240	Tampers/Rammers	23	90	0	1061.889591	g/hr
1	2026	9	5	2	2240	Tampers/Rammers	23	90	0	1061.8835	g/hr
1	2026	10	5	2	2240	Tampers/Rammers	23	90	0	1061.883235	g/hr
1	2027	5	5	2	2240	Tampers/Rammers	23	90	0	1061.879471	g/hr
1	2027	6	5	2	2240	Tampers/Rammers	23	90	0	1061.879385	g/hr
1	2027	7	5	2	2240	Tampers/Rammers	23	90	0	1061.878216	g/hr
1	2027	8	5	2	2240	Tampers/Rammers	23	90	0	1061.878216	g/hr
1	2027	9	5	2	2240	Tampers/Rammers	23	90	0	1061.879884	g/hr
1	2027	10	5	2	2240	Tampers/Rammers	23	90	0	1061.883101	g/hr
1	2028	5	5	2	2240	Tampers/Rammers	23	90	0	1061.876607	g/hr
1	2028	6	5	2	2240	Tampers/Rammers	23	90	0	1061.877376	g/hr
1	2028	7	5	2	2240	Tampers/Rammers	23	90	0	1061.877918	g/hr
1	2028	8	5	2	2240	Tampers/Rammers	23	90	0	1061.877918	g/hr
1	2028	9	5	2	2240	Tampers/Rammers	23	90	0	1061.877017	g/hr
1	2028	10	5	2	2240	Tampers/Rammers	23	90	0	1061.882474	g/hr
1	2029	5	5	2	2240	Tampers/Rammers	23	90	0	1061.881813	g/hr
1	2029	6	5	2	2240	Tampers/Rammers	23	90	0	1061.878595	g/hr
1	2029	7	5	2	2240	Tampers/Rammers	23	90	0	1061.874725	g/hr
1	2029	8	5	2	2240	Tampers/Rammers	23	90	0	1061.874725	g/hr
1	2029	9	5	2	2240	Tampers/Rammers	23	90	0	1061.874674	g/hr
1	2029	10	5	2	2240	Tampers/Rammers	23	90	0	1061.874922	g/hr

Note: The emission factors were calculated by averaging the MOVES4 output over four-and-one-sixth years (between April 2026 and June 2030; 4.167 months).

Pollutant ID	
1	Total gaseous hydrocarbons
3	NO_x
5	CH_4
90	CO_2

Fuel Type	
23	Diesel

Emission factor averaged over three years (g/hr)

Equipment	Fuel	Total Gaseous Hydrocarbons (1)	NOx (3)	CH_4 (5)	CO_2 (90)
Rough Terrain Forklift	Diesel	1.413823998	49.34146328	0.14471477	32517.35071

MOVES4 Output

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Descripon	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	3	5	2	2240	Rough Terrain Forklifts	23	1	0	2.05024361	g/hr
1	2026	4	5	2	2240	Rough Terrain Forklifts	23	1	0	2.050243807	g/hr
1	2026	5	5	2	2240	Rough Terrain Forklifts	23	1	0	2.05024361	g/hr
1	2026	6	5	2	2240	Rough Terrain Forklifts	23	1	0	2.050234614	g/hr
1	2026	7	5	2	2240	Rough Terrain Forklifts	23	1	0	2.050250678	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	8	5	2	2240	Rough Terrain Forklifts	23	1	0	2.050250678	g/hr
1	2026	9	5	2	2240	Rough Terrain Forklifts	23	1	0	2.050247036	g/hr
1	2026	10	5	2	2240	Rough Terrain Forklifts	23	1	0	2.050247578	g/hr
1	2026	11	5	2	2240	Rough Terrain Forklifts	23	1	0	2.050247036	g/hr
1	2026	12	5	2	2240	Rough Terrain Forklifts	23	1	0	2.05024836	g/hr
1	2027	3	5	2	2240	Rough Terrain Forklifts	23	1	0	1.634724028	g/hr
1	2027	4	5	2	2240	Rough Terrain Forklifts	23	1	0	1.634731368	g/hr
1	2027	5	5	2	2240	Rough Terrain Forklifts	23	1	0	1.634724028	g/hr
1	2027	6	5	2	2240	Rough Terrain Forklifts	23	1	0	1.634725291	g/hr
1	2027	7	5	2	2240	Rough Terrain Forklifts	23	1	0	1.634722562	g/hr
1	2027	8	5	2	2240	Rough Terrain Forklifts	23	1	0	1.634722562	g/hr
1	2027	9	5	2	2240	Rough Terrain Forklifts	23	1	0	1.634734625	g/hr
1	2027	10	5	2	2240	Rough Terrain Forklifts	23	1	0	1.634728495	g/hr
1	2027	11	5	2	2240	Rough Terrain Forklifts	23	1	0	1.634734625	g/hr
1	2027	12	5	2	2240	Rough Terrain Forklifts	23	1	0	1.63473435	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	3	5	2	2240	Rough Terrain Forklifts	23	1	0	1.299178709	g/hr
1	2028	4	5	2	2240	Rough Terrain Forklifts	23	1	0	1.299184938	g/hr
1	2028	5	5	2	2240	Rough Terrain Forklifts	23	1	0	1.299178709	g/hr
1	2028	6	5	2	2240	Rough Terrain Forklifts	23	1	0	1.299179785	g/hr
1	2028	7	5	2	2240	Rough Terrain Forklifts	23	1	0	1.299178049	g/hr
1	2028	8	5	2	2240	Rough Terrain Forklifts	23	1	0	1.299178049	g/hr
1	2028	9	5	2	2240	Rough Terrain Forklifts	23	1	0	1.299183854	g/hr
1	2028	10	5	2	2240	Rough Terrain Forklifts	23	1	0	1.299185278	g/hr
1	2028	11	5	2	2240	Rough Terrain Forklifts	23	1	0	1.299183854	g/hr
1	2028	12	5	2	2240	Rough Terrain Forklifts	23	1	0	1.299180361	g/hr
1	2029	3	5	2	2240	Rough Terrain Forklifts	23	1	0	1.100521506	g/hr
1	2029	4	5	2	2240	Rough Terrain Forklifts	23	1	0	1.100518144	g/hr
1	2029	5	5	2	2240	Rough Terrain Forklifts	23	1	0	1.100521506	g/hr
1	2029	6	5	2	2240	Rough Terrain Forklifts	23	1	0	1.10052009	g/hr
1	2029	7	5	2	2240	Rough Terrain Forklis	23	1	0	1.1005237	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2029	8	5	2	2240	Rough Terrain Forklifts	23	1	0	1.1005237	g/hr
1	2029	9	5	2	2240	Rough Terrain Forklifts	23	1	0	1.100516589	g/hr
1	2029	10	5	2	2240	Rough Terrain Forklifts	23	1	0	1.10051748	g/hr
1	2029	11	5	2	2240	Rough Terrain Forklifts	23	1	0	1.100516589	g/hr
1	2029	12	5	2	2240	Rough Terrain Forklifts	23	1	0	1.10051809	g/hr
1	2030	3	5	2	2240	Rough Terrain Forklifts	23	1	0	0.984444657	g/hr
1	2030	4	5	2	2240	Rough Terrain Forklifts	23	1	0	0.984445077	g/hr
1	2030	5	5	2	2240	Rough Terrain Forklifts	23	1	0	0.984444657	g/hr
1	2030	6	5	2	2240	Rough Terrain Forklifts	23	1	0	0.984446857	g/hr
1	2030	7	5	2	2240	Rough Terrain Forklifts	23	1	0	0.984443833	g/hr
1	2030	8	5	2	2240	Rough Terrain Forklifts	23	1	0	0.984443833	g/hr
1	2030	9	5	2	2240	Rough Terrain Forklifts	23	1	0	0.9844462	g/hr
1	2030	10	5	2	2240	Rough Terrain Forklifts	23	1	0	0.984445959	g/hr
1	2030	11	5	2	2240	Rough Terrain Forklifts	23	1	0	0.9844462	g/hr
1	2030	12	5	2	2240	Rough Terrain Forklifts	23	1	0	0.984444719	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	3	5	2	2240	Rough Terrain Forklifts	23	3	0	56.77431886	g/hr
1	2026	4	5	2	2240	Rough Terrain Forklifts	23	3	0	56.77422589	g/hr
1	2026	5	5	2	2240	Rough Terrain Forklifts	23	3	0	56.77431886	g/hr
1	2026	6	5	2	2240	Rough Terrain Forklifts	23	3	0	56.77402422	g/hr
1	2026	7	5	2	2240	Rough Terrain Forklifts	23	3	0	56.77443046	g/hr
1	2026	8	5	2	2240	Rough Terrain Forklifts	23	3	0	56.77443046	g/hr
1	2026	9	5	2	2240	Rough Terrain Forklifts	23	3	0	56.77420334	g/hr
1	2026	10	5	2	2240	Rough Terrain Forklifts	23	3	0	56.77427886	g/hr
1	2026	11	5	2	2240	Rough Terrain Forklifts	23	3	0	56.77420334	g/hr
1	2026	12	5	2	2240	Rough Terrain Forklifts	23	3	0	56.77426929	g/hr
1	2027	3	5	2	2240	Rough Terrain Forklifts	23	3	0	52.14501857	g/hr
1	2027	4	5	2	2240	Rough Terrain Forklifts	23	3	0	52.14504463	g/hr
1	2027	5	5	2	2240	Rough Terrain Forklifts	23	3	0	52.14501857	g/hr
1	2027	6	5	2	2240	Rough Terrain Forklifts	23	3	0	52.14493193	g/hr
1	2027	7	5	2	2240	Rough Terrain Forklifts	23	3	0	52.14474538	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2027	8	5	2	2240	Rough Terrain Forklifts	23	3	0	52.14474538	g/hr
1	2027	9	5	2	2240	Rough Terrain Forklifts	23	3	0	52.14495457	g/hr
1	2027	10	5	2	2240	Rough Terrain Forklifts	23	3	0	52.14497835	g/hr
1	2027	11	5	2	2240	Rough Terrain Forklifts	23	3	0	52.14495457	g/hr
1	2027	12	5	2	2240	Rough Terrain Forklifts	23	3	0	52.14500091	g/hr
1	2028	3	5	2	2240	Rough Terrain Forklifts	23	3	0	48.04228442	g/hr
1	2028	4	5	2	2240	Rough Terrain Forklifts	23	3	0	48.04225912	g/hr
1	2028	5	5	2	2240	Rough Terrain Forklifts	23	3	0	48.04228442	g/hr
1	2028	6	5	2	2240	Rough Terrain Forklifts	23	3	0	48.04225164	g/hr
1	2028	7	5	2	2240	Rough Terrain Forklifts	23	3	0	48.04214107	g/hr
1	2028	8	5	2	2240	Rough Terrain Forklifts	23	3	0	48.04214107	g/hr
1	2028	9	5	2	2240	Rough Terrain Forklifts	23	3	0	48.0423093	g/hr
1	2028	10	5	2	2240	Rough Terrain Forklifts	23	3	0	48.04223083	g/hr
1	2028	11	5	2	2240	Rough Terrain Forklifts	23	3	0	48.0423093	g/hr
1	2028	12	5	2	2240	Rough Terrain Forklis	23	3	0	48.04232376	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2029	3	5	2	2240	Rough Terrain Forklifts	23	3	0	45.60768873	g/hr
1	2029	4	5	2	2240	Rough Terrain Forklifts	23	3	0	45.60765203	g/hr
1	2029	5	5	2	2240	Rough Terrain Forklifts	23	3	0	45.60768873	g/hr
1	2029	6	5	2	2240	Rough Terrain Forklifts	23	3	0	45.60786429	g/hr
1	2029	7	5	2	2240	Rough Terrain Forklifts	23	3	0	45.60774911	g/hr
1	2029	8	5	2	2240	Rough Terrain Forklifts	23	3	0	45.60774911	g/hr
1	2029	9	5	2	2240	Rough Terrain Forklifts	23	3	0	45.60768228	g/hr
1	2029	10	5	2	2240	Rough Terrain Forklifts	23	3	0	45.60767839	g/hr
1	2029	11	5	2	2240	Rough Terrain Forklifts	23	3	0	45.60768228	g/hr
1	2029	12	5	2	2240	Rough Terrain Forklifts	23	3	0	45.60769708	g/hr
1	2030	3	5	2	2240	Rough Terrain Forklifts	23	3	0	44.13812702	g/hr
1	2030	4	5	2	2240	Rough Terrain Forklifts	23	3	0	44.13814536	g/hr
1	2030	5	5	2	2240	Rough Terrain Forklifts	23	3	0	44.13812702	g/hr
1	2030	6	5	2	2240	Rough Terrain Forklifts	23	3	0	44.13818025	g/hr
1	2030	7	5	2	2240	Rough Terrain Forklifts	23	3	0	44.13803979	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2030	8	5	2	2240	Rough Terrain Forklifts	23	3	0	44.13803979	g/hr
1	2030	9	5	2	2240	Rough Terrain Forklifts	23	3	0	44.13820835	g/hr
1	2030	10	5	2	2240	Rough Terrain Forklifts	23	3	0	44.1381209	g/hr
1	2030	11	5	2	2240	Rough Terrain Forklifts	23	3	0	44.13820835	g/hr
1	2030	12	5	2	2240	Rough Terrain Forklifts	23	3	0	44.13820369	g/hr
1	2026	3	5	2	2240	Rough Terrain Forklifts	23	5	0	0.199345171	g/hr
1	2026	4	5	2	2240	Rough Terrain Forklifts	23	5	0	0.199345594	g/hr
1	2026	5	5	2	2240	Rough Terrain Forklifts	23	5	0	0.199345171	g/hr
1	2026	6	5	2	2240	Rough Terrain Forklifts	23	5	0	0.199344644	g/hr
1	2026	7	5	2	2240	Rough Terrain Forklifts	23	5	0	0.199346354	g/hr
1	2026	8	5	2	2240	Rough Terrain Forklifts	23	5	0	0.199346354	g/hr
1	2026	9	5	2	2240	Rough Terrain Forklifts	23	5	0	0.199345729	g/hr
1	2026	10	5	2	2240	Rough Terrain Forklifts	23	5	0	0.199345162	g/hr
1	2026	11	5	2	2240	Rough Terrain Forklifts	23	5	0	0.199345729	g/hr
1	2026	12	5	2	2240	Rough Terrain Forklifts	23	5	0	0.199346295	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2027	3	5	2	2240	Rough Terrain Forklift	23	5	0	0.165284616	g/hr
1	2027	4	5	2	2240	Rough Terrain Forklifts	23	5	0	0.16528511	g/hr
1	2027	5	5	2	2240	Rough Terrain Forklifts	23	5	0	0.165284616	g/hr
1	2027	6	5	2	2240	Rough Terrain Forklifts	23	5	0	0.165285115	g/hr
1	2027	7	5	2	2240	Rough Terrain Forklifts	23	5	0	0.165284286	g/hr
1	2027	8	5	2	2240	Rough Terrain Forklifts	23	5	0	0.165284286	g/hr
1	2027	9	5	2	2240	Rough Terrain Forklifts	23	5	0	0.16528511	g/hr
1	2027	10	5	2	2240	Rough Terrain Forklifts	23	5	0	0.165284901	g/hr
1	2027	11	5	2	2240	Rough Terrain Forklifts	23	5	0	0.16528511	g/hr
1	2027	12	5	2	2240	Rough Terrain Forklifts	23	5	0	0.165284535	g/hr
1	2028	3	5	2	2240	Rough Terrain Forklifts	23	5	0	0.135004569	g/hr
1	2028	4	5	2	2240	Rough Terrain Forklifts	23	5	0	0.135004469	g/hr
1	2028	5	5	2	2240	Rough Terrain Forklifts	23	5	0	0.135004569	g/hr
1	2028	6	5	2	2240	Rough Terrain Forklifts	23	5	0	0.135004292	g/hr
1	2028	7	5	2	2240	Rough Terrain Forklifts	23	5	0	0.135004144	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	8	5	2	2240	Rough Terrain Forklifts	23	5	0	0.135004144	g/hr
1	2028	9	5	2	2240	Rough Terrain Forklifts	23	5	0	0.13500392	g/hr
1	2028	10	5	2	2240	Rough Terrain Forklifts	23	5	0	0.135004545	g/hr
1	2028	11	5	2	2240	Rough Terrain Forklifts	23	5	0	0.13500392	g/hr
1	2028	12	5	2	2240	Rough Terrain Forklifts	23	5	0	0.13500452	g/hr
1	2029	3	5	2	2240	Rough Terrain Forklifts	23	5	0	0.117217635	g/hr
1	2029	4	5	2	2240	Rough Terrain Forklifts	23	5	0	0.117217145	g/hr
1	2029	5	5	2	2240	Rough Terrain Forklifts	23	5	0	0.117217635	g/hr
1	2029	6	5	2	2240	Rough Terrain Forklifts	23	5	0	0.117217589	g/hr
1	2029	7	5	2	2240	Rough Terrain Forklifts	23	5	0	0.117217589	g/hr
1	2029	8	5	2	2240	Rough Terrain Forklifts	23	5	0	0.117217589	g/hr
1	2029	9	5	2	2240	Rough Terrain Forklifts	23	5	0	0.117216928	g/hr
1	2029	10	5	2	2240	Rough Terrain Forklifts	23	5	0	0.11721699	g/hr
1	2029	11	5	2	2240	Rough Terrain Forklifts	23	5	0	0.117216928	g/hr
1	2029	12	5	2	2240	Rough Terrain Forklifts	23	5	0	0.117217269	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2030	3	5	2	2240	Rough Terrain Forklifts	23	5	0	0.106721999	g/hr
1	2030	4	5	2	2240	Rough Terrain Forklifts	23	5	0	0.106721705	g/hr
1	2030	5	5	2	2240	Rough Terrain Forklifts	23	5	0	0.106721999	g/hr
1	2030	6	5	2	2240	Rough Terrain Forklifts	23	5	0	0.106721804	g/hr
1	2030	7	5	2	2240	Rough Terrain Forklifts	23	5	0	0.106721235	g/hr
1	2030	8	5	2	2240	Rough Terrain Forklifts	23	5	0	0.106721235	g/hr
1	2030	9	5	2	2240	Rough Terrain Forklifts	23	5	0	0.10672212	g/hr
1	2030	10	5	2	2240	Rough Terrain Forklifts	23	5	0	0.106722006	g/hr
1	2030	11	5	2	2240	Rough Terrain Forklifts	23	5	0	0.10672212	g/hr
1	2030	12	5	2	2240	Rough Terrain Forklifts	23	5	0	0.106722006	g/hr
1	2026	3	5	2	2240	Rough Terrain Forklifts	23	90	0	32515.33181	g/hr
1	2026	4	5	2	2240	Rough Terrain Forklifts	23	90	0	32515.34404	g/hr
1	2026	5	5	2	2240	Rough Terrain Forklifts	23	90	0	32515.33181	g/hr
1	2026	6	5	2	2240	Rough Terrain Forklifts	23	90	0	32515.245	g/hr
1	2026	7	5	2	2240	Rough Terrain Forklifts	23	90	0	32515.48255	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	8	5	2	2240	Rough Terrain Forklifts	23	90	0	32515.48255	g/hr
1	2026	9	5	2	2240	Rough Terrain Forklifts	23	90	0	32515.3457	g/hr
1	2026	10	5	2	2240	Rough Terrain Forklifts	23	90	0	32515.38319	g/hr
1	2026	11	5	2	2240	Rough Terrain Forklifts	23	90	0	32515.3457	g/hr
1	2026	12	5	2	2240	Rough Terrain Forklifts	23	90	0	32515.34769	g/hr
1	2027	3	5	2	2240	Rough Terrain Forklifts	23	90	0	32516.65001	g/hr
1	2027	4	5	2	2240	Rough Terrain Forklifts	23	90	0	32516.71089	g/hr
1	2027	5	5	2	2240	Rough Terrain Forklifts	23	90	0	32516.65001	g/hr
1	2027	6	5	2	2240	Rough Terrain Forklifts	23	90	0	32516.57932	g/hr
1	2027	7	5	2	2240	Rough Terrain Forklifts	23	90	0	32516.49203	g/hr
1	2027	8	5	2	2240	Rough Terrain Forklifts	23	90	0	32516.49203	g/hr
1	2027	9	5	2	2240	Rough Terrain Forklifts	23	90	0	32516.7041	g/hr
1	2027	10	5	2	2240	Rough Terrain Forklifts	23	90	0	32516.64648	g/hr
1	2027	11	5	2	2240	Rough Terrain Forklifts	23	90	0	32516.7041	g/hr
1	2027	12	5	2	2240	Rough Terrain Forklifts	23	90	0	32516.60687	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2028	3	5	2	2240	Rough Terrain Forklifts	23	90	0	32517.7832	g/hr
1	2028	4	5	2	2240	Rough Terrain Forklifts	23	90	0	32517.70918	g/hr
1	2028	5	5	2	2240	Rough Terrain Forklifts	23	90	0	32517.7832	g/hr
1	2028	6	5	2	2240	Rough Terrain Forklifts	23	90	0	32517.69301	g/hr
1	2028	7	5	2	2240	Rough Terrain Forklifts	23	90	0	32517.6409	g/hr
1	2028	8	5	2	2240	Rough Terrain Forklifts	23	90	0	32517.6409	g/hr
1	2028	9	5	2	2240	Rough Terrain Forklifts	23	90	0	32517.69272	g/hr
1	2028	10	5	2	2240	Rough Terrain Forklifts	23	90	0	32517.69496	g/hr
1	2028	11	5	2	2240	Rough Terrain Forklifts	23	90	0	32517.69272	g/hr
1	2028	12	5	2	2240	Rough Terrain Forklifts	23	90	0	32517.65461	g/hr
1	2029	3	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.3092	g/hr
1	2029	4	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.35698	g/hr
1	2029	5	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.3092	g/hr
1	2029	6	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.43226	g/hr
1	2029	7	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.40729	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2029	8	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.40729	g/hr
1	2029	9	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.29444	g/hr
1	2029	10	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.35992	g/hr
1	2029	11	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.29444	g/hr
1	2029	12	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.40818	g/hr
1	2030	3	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.74313	g/hr
1	2030	4	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.67887	g/hr
1	2030	5	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.74313	g/hr
1	2030	6	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.79331	g/hr
1	2030	7	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.64231	g/hr
1	2030	8	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.64231	g/hr
1	2030	9	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.71081	g/hr
1	2030	10	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.68007	g/hr
1	2030	11	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.71081	g/hr
1	2030	12	5	2	2240	Rough Terrain Forklifts	23	90	0	32518.75011	g/hr

MOVES Run ID	Year ID	Month ID	Day ID	State ID	County ID	Equipment Description	Fuel Type ID	Pollutant ID	Process ID	Emission Rate	Emission Rate Units
1	2026	3	5	2	2240	Rough Terrain Forklifts	23	1	0	2.05024361	g/hr
1	2026	4	5	2	2240	Rough Terrain Forklifts	23	1	0	2.050243807	g/hr
1	2026	5	5	2	2240	Rough Terrain Forklifts	23	1	0	2.05024361	g/hr
1	2026	6	5	2	2240	Rough Terrain Forklifts	23	1	0	2.050234614	g/hr
1	2026	7	5	2	2240	Rough Terrain Forklifts	23	1	0	2.050250678	g/hr
1	2026	8	5	2	2240	Rough Terrain Forklifts	23	1	0	2.050250678	g/hr
1	2026	9	5	2	2240	Rough Terrain Forklifts	23	1	0	2.050247036	g/hr
1	2026	10	5	2	2240	Rough Terrain Forklifts	23	1	0	2.050247578	g/hr
1	2026	11	5	2	2240	Rough Terrain Forklifts	23	1	0	2.050247036	g/hr
1	2026	12	5	2	2240	Rough Terrain Forklifts	23	1	0	2.05024836	g/hr
1	2027	3	5	2	2240	Rough Terrain Forklifts	23	1	0	1.634724028	g/hr
1	2027	4	5	2	2240	Rough Terrain Forklifts	23	1	0	1.634731368	g/hr
1	2027	5	5	2	2240	Rough Terrain Forklifts	23	1	0	1.634724028	g/hr

CONSTRUCTION EQUIPMENT EMISSIONS

Construction Equipment	Fuel Usage	MOVES4 Emission Rates (averaged over four years)			Emissions Factors		
	gallons/hour	g/hour			kg/gallon of fuel		
	gallons/hour	CO_2	CH_4	NO_X	CO_2	CH_4	NO_X
Paving Equipment*	8.5	22847.79186	0.235907104	39.32662266	2.687975513	2.77538E-05	0.004626661
Trenchers	10.5	25775.30037	0.303987329	76.65015835	2.454790511	2.89512E-05	0.007300015
Concrete/Industrial Saws	0.45	16419.95134	0.251081102	54.84885046	36.48878075	0.000557958	0.121886334
Cement & Mortar Mixers	4.5	7280.112568	0.27064653	42.55418359	1.617802793	6.01437E-05	0.009456485
Cranes**	4	52911.61817	0.162224879	43.78519205	13.22790454	4.05562E-05	0.010946298
Rough Terrain Forklift	2.6	32517.35071	0.14471477	49.34146328	12.50667335	5.56595E-05	0.018977486
Tractors/Loaders/Backhoes	12	13058.06194	0.254849343	34.44747274	1.088171828	2.12374E-05	0.002870623
Dumpers/Tenders	8.5	4724.971364	0.231053672	25.57128842	0.555878984	2.71828E-05	0.003008387
Other Construction Equipment***	5	104840.8452	0.642870882	176.9146145	20.96816904	0.000128574	0.035382923
Excavators	4	54615.93823	0.113778744	33.59843773	13.65398456	2.84447E-05	0.008399609
Graders/Rollers	16	47723.8143	0.137285336	34.08948818	2.982738394	8.58033E-06	0.002130593
Crawler Tractor/Dozers	5	82670.64038	0.214275121	82.52385876	16.53412808	4.2855E-05	0.016504772
Generators****	11	N/A	N/A	N/A	10.21	0.00101	0.00094

Sources: Central Power, 2021; Alllift, 2021; Snyder, 2014; Moore, 2012; Kenworth, 2015; and Parekh, 2023

*Fuel consumption assumed to be the same as a dump truck.

**Fuel consumption assumed to be the same as an excavator.

***Fuel consumption assumed to be the same as a dozer.

****Fuel consumption assumed for 200 kW generators, operating at 3/4 load. As generator emissions factors were unavailable in MOVES, a general emissions factor was used.

Construction Equipment GHG Emissions Calculations

Conversions to CO_2e	
CH_4	28
N_2O	265

Source: EPA, 2024

Construction Equipment	Operational hours per day	Days per week	Weeks per Year	Vehicles in Operation per Day	Annual Vehicle hours	Annual Gallons of Fuel	Project Years	Project Gallons of Fuel
Paving Equipment	8	6	26	2	2,496	21216	4	84864
Trenchers	8	6	26	1	1,248	13104	4	52416
Concrete/Industrial Saws	8	6	26	4	4,992	2246	4	8986
Cement & Mortar Mixers	8	6	26	5	6,240	28080	4	112320
Cranes	8	6	26	2	2,496	9984	4	39936
Rough Terrain Forklift	8	6	52	3	7,488	19469	4.17	81120
Tractors/Loaders/Backhoes	8	6	26	3	3,744	44928	4	179712
Dumpers/Tenders	8	6	26	5	6,240	53040	4	212160
Other Construction Equipment	8	6	26	4	4,992	24960	4	99840
Excavators	8	6	26	3	3,744	14976	4	59904
Graders/Rollers	8	6	26	3	3,744	59904	4	239616
Crawler Tractor/Dozers	8	6	26	2	2,496	12480	4	49920
Generators	8	6	52	3	7,488	82368	4.17	343200

	Annual					Project	
Construction Equipment GHG Emissions	CO_2 (kg)	CH_4 (kg)	N_2O (kg)	Total (tons)[a]	Total (metric ton)	Total (tons)	Total (metric ton)
Paving Equipment	57,028.088	0.589	98.159	91.554	83.057	332.227	301.391
Trenchers	32,167.575	0.379	95.659	63.414	57.528	230.112	208.754
Concrete/Industrial Saws	81,968.397	1.253	273.805	170.375	154.562	618.248	560.865
Cement & Mortar Mixers	45,427.902	1.689	265.538	127.695	115.843	463.371	420.363
Cranes	132,067.399	0.405	109.288	177.516	161.040	644.160	584.372
Rough Terrain Forklift	243,489.922	1.084	369.469	376.362	341.430	1,422.623	1,290.582
Tractors/Loaders/Backhoes	48,889.384	0.954	128.971	91.595	83.094	332.374	301.525
Dumpers/Tenders	29,483.821	1.442	159.565	79.156	71.809	287.235	260.576
Other Construction Equipment	523,365.499	3.209	883.158	834.992	757.492	3,029.969	2,748.742

Construction Equipment GHG Emissions	Annual					Project	
	CO_2 (kg)	CH_4 (kg)	N_2O (kg)	Total (tons)[a]	Total (metric ton)	Total (tons)	Total (metric ton)
Excavators	204,482.073	0.426	125.793	262.162	237.829	951.316	863.020
Graders/Rollers	178,677.961	0.514	127.631	234.257	212.515	850.058	771.160
Crawler Tractor/Dozers	206,345.918	0.535	205.980	287.643	260.945	1,043.782	946.903
Generators	840,977.280	83.192	77.426	952.203	863.825	3,599.269	3,265.203
Total	2,624,371.220	95.671	2,920.442	2,796.7	3,401.0	13,804.7	12,523.5
Total in Metric Tons	2,624.371	0.096	2.920	--	--	--	--

[a] Formula includes CO_2e conversion factors.

CONSTRUCTION POV EMISSIONS

EPA Characterization	Emission		Unit
Motor Gasoline	CO_2	8.78	kg/gallon of fuel
Mobile Combustion	CH_4	7.95E-06	kg/vehicle-mile
Mobile Combustion	N_2O	4.18E-06	kg/vehicle-mile

Sources: EPA, 2024; EPA, 2023a; Parekh and T. Campau, 2023

Emission Factor

EPA Category	Year	CH_4	NO_2	Unit
Gasoline Passenger Cars	2011	0.0071	0.0046	g/vehicle-mile
	2012	0.0071	0.0046	g/vehicle-mile
	Average	0.0071	0.0046	g/vehicle-mile
Gasoline Light Duty Trucks	2011	0.0096	0.0034	g/vehicle-mile
	2012	0.0096	0.0033	g/vehicle-mile
	Average	0.0096	0.00335	g/vehicle-mile

Source: EPA, 2024

Note: POVs are assumed to be the average year of 12.5 years; as such, emissions factors are averaged between the years of 2011 and 2012 from EPA GHG emission factors.

Vehicle Market Share (June 2022)

EPA Category	Market Share	Percentage	
Gasoline Passenger Cars	Crossovers	45%	66%
	Small car	7%	
	Midsized car	8%	
	Luxury car	5%	
	Large car	1%	
Gasoline Light Duty Truck	Pickup	19%	34%
	SUV	10%	
	Van	4%	

Source: EPA, 2022; EPA, 2023a

Note: POVs emissions are averaged from the proportion of light vehicle market in June 2022 which are then characterized as either Gasoline Passenger Cars or Gasoline Light Duty Trucks.

EPA Average Fuel Economy POV	25.4	miles/gallon

Source: EPA, 2022

POV GHG Emissions

Miles per Day	Number of Vehicles	Days per Week	Weeks per Year	Project Years	Total Gallons	CO_2		CH_4		N_2O		Annual Total (tons)[a]	Annual Total (metric ton)	Project Total (tons)	Project Total (metric ton)
						kg	metric tons	kg	metric tons	kg	metric tons				
7	40	6	26	4.166	1719.685	15098.834	15.099	0.347	0.0003	0.183	0.0002	16.7	15.2	69.615	63.154

[a] Formula includes CO_2e conversion factors.

Note: Rounded to three decimal places to fit table.

HAUL TRUCK EMISSIONS

Emission	Factor	Unit
CO_2	10.21	kg/gallon of fuel
CH_4	0.0000095	kg/vehicle-mile
N_2O	0.000043	kg/vehicle-mile

Source: EPA, 2022

EPA Average Fuel Economy	6.24	miles/gallon

Source: EPA, 2022

Haul Truck GHG Emissions

Miles per Day	Number of Vehicles	Days per Week	Weeks per Year	Project Years	Total Gallons	CO_2		CH_4		N_2O		Annual Total (tons)[a]	Annual Total (metric ton)	Project Total (tons)	Project Total (tons)
						kg	metric tons	kg	metric tons	kg	metric tons				
400	20	6	26	4.167	200000	2042000	2042	11.856	0.012	53.788	0.054	2,267.0	2,056.6	9445.822	8569.108

[a] Formula includes CO_2e conversion factors.

Note: Rounded to three decimal places to fit table.

PROJECT GHG SUMMARY

Total GHG emissions	Tons	Metric Ton
Annual	5,080.4	5,472.7
Project	23320.2	21155.7

Note: Total includes construction equipment, construction POV, and haul truck emissions.

VEHICLE IDLING EMISSIONS

Idling Time (minutes)			
Vehicle Type	**POVs**	**Trucks/Commercial**	**Transit Buses**
Idling Time/Vehicle	3	5	5
Average Idling Time/Day Baseline	395.649436	90.5568941	1.067791042

Vehicle Fuel Consumption

Vehicle Type	Fuel Consumption	Unit
POVs	0.39	gallons per hour
Trucks/Commercial Vehicles	0.84	gallons per hour
Transit Buses	0.97	gallons per hour

Source: EPA, 2022

Vehicle Emissions Rates

Emission	Average POV Emissions		Average Trucks/Commercial Vehicles/Buses Emissions	
	grams per second	kg per hour	tons per vehicle annually	kg per vehicle hour
CO_2	0.588	2.1168	21	2.173329523
NO_X	0.0000097	0.00003492	0.3	0.031047565

Source: Gaines et al, 2022; EPA, 2023b

Note: CH_4 emission rates were not available for vehicle idling, as such it was not included in the calculations.

Baseline Vehicle Traffic*

Vehicle Type	Annual Sum	Average per Day	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
POVs	48169	131.8831453	591	658	1166	2400	6111	10763	11169	7975	3793	1889	980	674
Trucks/Commercial Vehicles	6615	18.11137882	386	380	532	661	714	667	670	443	612	546	564	440
Transit Buses	78	0.213558208	0	0	0	0	8	18	25	24	3	0	0	0

*Baseline year of 2023

Idling GHG Emissions (Baseline)

Vehicle Type	Annual Vehicles (Baseline)	Project Years	Average Idling Time per Vehicle (hours)	Annual Idling Time (hours)	CO_2 (kg)	N_2O (kg)	Annual Total (tons)[a]	Annual Total (metric ton)
POVs	48169	4.166666667	0.05	2408.45	5098.20696	0.084103074	5.6	5.1
Trucks/Commercial Vehicles	6615		0.083333333	551.25	1198.0479	17.11496999	6.3	5.7
Transit Buses	78		0.083333333	6.5	14.1266419	0.20180917	0.075	0.068
Total	--	--	--	--	6310.381501	17.40088224	12.0	10.9
Total in Metric Tons	--	--	--	--	6.310381501	0.017400882	--	--

[a] Formula includes CO_2e conversion factors.

No.	Assumption
1	All outdoor construction equipment (i.e., all equipment listed except for the forklift and generator) would be used 6 months per year (May thru October) and would operate for eight hours a day, six days a week, from April 2026 to September 2029 (24 months). The forklift and generator would be used eight hours a day, six days a week, 52 weeks a year, from April 2026 to June 2030 (40 months; due to MOVES limitations, approximately 10 months/year for four years were used for analysis). This was done to provide a conservative estimate of criteria pollutant and GHG emissions. Specific information about the types and number of vehicles required for construction activities was unknown at the time of the calculations.
2	Construction would begin in 2026 and end in June 2030; however, beyond September 2029 any work would be internal (e.g., phone, A/V, furniture installations, etc.). Furniture, fixtures, and equipment would be delivered by trucks during 2030 (from the Lower 48). The number of haul trucks transporting furniture, fixtures, and equipment during 2030 and the distance traveled were unavailable at the time of this analysis; thus, emissions calculations for this parameter were not performed.
3	All construction equipment, including haul trucks, would operate on diesel fuel, and privately-owned vehicles (POVs) would operate on gasoline.
4	Of the 40 construction personnel anticipated to be hired for the Project, it was assumed that all would travel in POVs to and from the project area six days a week over the course of the construction period. Each POV would travel a maximum distance of 7 mi daily for the commute.
5	Commuting distance for haul trucks, i.e., trucks shipping waste and construction materials to and from the site, is assumed to be 400 mi daily. An estimated 20 haul trucks per day (May thru October for 3 years [2026 thru 2028]) would be used. Haul trucks may travel to the nearest major cities in Alaska, such as Fairbanks or Anchorage, to source the construction materials or to ship the waste generated. The number of haul trucks transporting furniture, fixtures, and equipment during 2030 and the distance traveled were unavailable at the time of this analysis; thus, emissions calculations for this parameter were not preformed.
6	2023 was used as the baseline year for obtaining the number and types of vehicles crossing the LPOE annually.
7	The emission factors of criteria pollutants for non-road construction equipment were calculated by averaging the monthly values obtained over the construction period.
8	CO_2 emissions for non-road construction equipment were obtained directly from the MOVES software.
9	CO_2 emissions for POVs were calculated using the emission factor inventory information and the fuel economy data on EPA's website.

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APPENDIX G-3: SOCIAL COST OF GHG EMISSIONS CALCULATIONS

Note: The numbers in the tables below are the raw output from the calculations and do not include any adjustments or rounding.

Present Value Year	2026
Dollar Year	2023

	Emission Changes (metric tons)		
Year	**CO_2**	**CH_4**	**N_2O**
2026	4,688	0	3
2027	4,688	0	3
2028	4,688	0	3
2029	4,688	0	3
2030	184	0	0
Totals	18,935	0	12

	Undiscounted, Monetized Value of CO_2 Emissions Changes (millions, 2023$)			**Undiscounted, Monetized Value of CH_4 Emissions Changes (millions, 2023$)**			**Undiscounted, Monetized Value of N_2O Emissions Changes (millions, 2023$)**		
	CO_2	**CO_2**	**CO_2**	**CH_4**	**CH_4**	**CH_4**	**N_2O**	**N_2O**	**N_2O**
	Near-Term Ramsey Discount Rate			**Near-Term Ramsey Discount Rate**			**Near-Term Ramsey Discount Rate**		
Year	**2.5%**	**2.0%**	**1.5%**	**2.5%**	**2.0%**	**1.5%**	**2.5%**	**2.0%**	**1.5%**
2026	$0.72	$1.17	$1.99	$0.00	$0.00	$0.00	$0.14	$0.21	$0.34
2027	$0.74	$1.19	$2.01	$0.00	$0.00	$0.00	$0.15	$0.22	$0.34
2028	$0.76	$1.21	$2.04	$0.00	$0.00	$0.00	$0.15	$0.22	$0.35
2029	$0.77	$1.23	$2.07	$0.00	$0.00	$0.00	$0.15	$0.23	$0.35
2030	$0.03	$0.05	$0.08	$0.00	$0.00	$0.00	$0.00	$0.01	$0.01

Constant discounting			
Number of years (N)	5	5	5
Discount Rate	2.5%	2.0%	1.5%
Present and Annualized Values of CO_2 Emission Changes (millions, 2023$)			
GHG	CO_2	CO_2	CO_2
Discount Rate	2.5%	2.0%	1.5%
Present Value in 2026 (2023$)	$2.90	$4.71	$8.00
Annualized Value (5 Years, 2023$)	$0.63	$1.00	$1.67
Present and Annualized Values of CH_4 Emission Changes (millions, 2023$)			
GHG	CH_4	CH_4	CH_4
Discount Rate	2.5%	2.0%	1.5%
Present Value in 2026 (2023$)	$0.00	$0.00	$0.00
Annualized Value (5 Years, 2023$)	$0.00	$0.00	$0.00
Present and Annualized Values of N_2O Emission Changes (millions, 2023$)			
GHG	N_2O	N_2O	N_2O
Discount Rate	2.5%	2.0%	1.5%
Present Value in 2026 (2023$)	$0.57	$0.86	$1.36
Annualized Value (5 Years, 2023$)	$0.12	$0.18	$0.28
Total Present and Annualized Values of all GHG Emission Changes (CO_2, CH_4, and N_2O) (millions, 2023$)			
GHG	**Total**	**Total**	**Total**
Discount Rate	2.5%	2.0%	1.5%
Present Value in 2026 (2023$)	$3.47	$5.57	$9.36
Annualized Value (5 Years, 2023$)	$0.75	$1.18	$1.96

Discounted, Monetized Value of Emission Changes, discounted to 2026 (millions, 2023$) - Constant Discounting									
	Discounted, Monetized Value of CO_2 Emissions Changes (millions, 2023$)			**Discounted, Monetized Value of CH_4 Emissions Changes (millions, 2023$)**			**Discounted, Monetized Value of N_2O Emissions Changes (millions, 2023$)**		
	Discounted Back to 2026			**Discounted Back to 2026**			**Discounted Back to 2026**		
	CO_2	**CO_2**	**CO_2**	**CH_4**	**CH_4**	**CH_4**	**N_2O**	**N_2O**	**N_2O**
Year	**2.5%**	**2.0%**	**1.5%**	**2.5%**	**2.0%**	**1.5%**	**2.5%**	**2.0%**	**1.5%**
2026	$0.72	$1.17	$1.99	$0.00	$0.00	$0.00	$0.14	$0.21	$0.34
2027	$0.72	$1.17	$1.98	$0.00	$0.00	$0.00	$0.14	$0.21	$0.34
2028	$0.72	$1.17	$1.98	$0.00	$0.00	$0.00	$0.14	$0.21	$0.34
2029	$0.71	$1.16	$1.98	$0.00	$0.00	$0.00	$0.14	$0.21	$0.34
2030	$0.03	$0.05	$0.08	$0.00	$0.00	$0.00	$0.00	$0.01	$0.01
Totals	**$2.90**	**$4.71**	**$8.00**	**$0.00**	**$0.00**	**$0.00**	**$0.57**	**$0.86**	**$1.36**

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