

APPENDIX E

Environmental Overview

Preliminary Environmental Overview

Wasilla Airport Master Plan

The following environmental overview includes an inventory of existing environmental resources in the vicinity of the Wasilla Airport. Prior to construction, all development projects proposed in the Airport Master Plan will require compliance with applicable environmental regulations, including the National Environmental Policy Act (NEPA), a law that requires federal agencies to evaluate and consider the environmental impact of their actions. As airport development projects are selected to receive funding and to advance, the preparation of a Categorical Exclusion, Environmental Assessment, or Environmental Impact Statement will be required, based on the potential extent of environmental impacts that a project poses. This planning-level analysis compiles environmental information and regulatory framework that will guide future NEPA environmental impacts analyses for development projects at the Wasilla Airport.

For the purpose of this master planning effort, reference to the Wasilla Airport includes the area within the airport property boundary, which is approximately 486 acres. References to the “study area or vicinity” are defined as the area within the airport property boundary as well as within a 0.5-mile buffer of the airport, as shown on Figure 1. The study area includes lands proposed for acquisition and areas likely to experience indirect impacts from airport projects. Land acquisition proposed in the master plan would support new airport development and the establishment of a runway protection zone (RPZ) associated with the proposed runway extension. The RPZ, a trapezoidal area extending from the end of the runway, restricts certain land uses to protect people and property on the ground in the event that an aircraft crashes or lands beyond the runway. A project study area will be defined to a more specific geographic location when a proposed project is selected to advance into the NEPA analysis stage, at which point it will be thoroughly evaluated for environmental and social impacts.

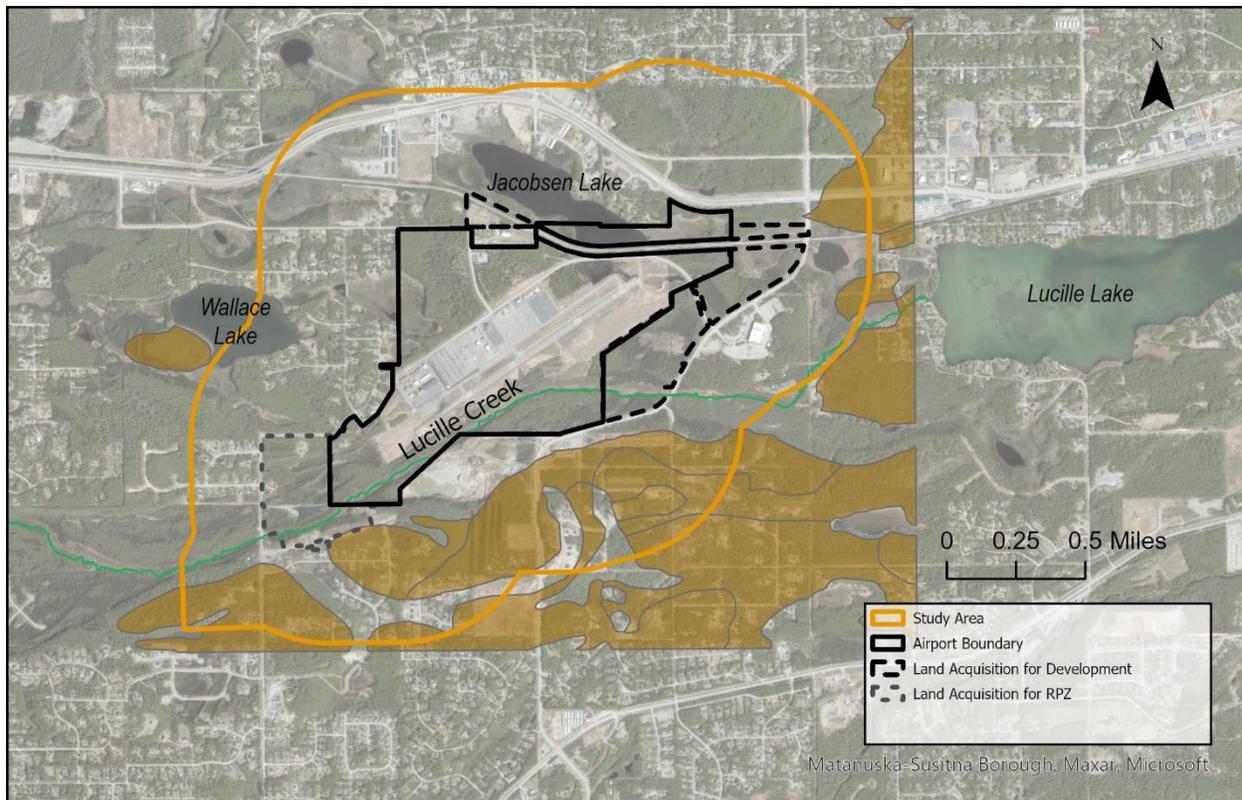


Figure 1: Study Area

Federal Aviation Administration (FAA) Orders 1050.1F (FAA 2015a), 5050.4B (FAA, 2006), FAA Advisory Circular (AC) 150/5070-6B, *Airport Master Plans* (FAA, 2015b) as well as the Environmental Desk Reference for Airport Actions (FAA 2007) were used to develop the list of environmental resource topics that may need to be evaluated in a future NEPA document. This environmental overview is in accordance with FAA AC 150/5070-6B, and is intended to provide a pre-NEPA review used to evaluate development alternatives and streamline future NEPA environmental impact analyses.

FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures* (FAA 2015a), outlines the following categories of potential impact that must be addressed in compliance with NEPA:

- Air Quality
- Biological resources
- Climate
- Coastal resources
- Department of Transportation Act, Section 4(f) resources
- Farmlands
- Hazardous materials, solid waste, and pollution prevention
- Historical, architectural, archaeological, and cultural resources
- Land use
- Natural resources and energy supply
- Noise and compatible land use
- Socioeconomics, environmental justice, and environmental health and safety risks

- Visual effects (including light emissions)
- Water resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers)

Consultation and/or agency approval from federal, state, and local agencies may be required in addition to NEPA documentation. The following is a preliminary list of agencies that may require regulatory authorization:

- Alaska Department of Environmental Conservation (ADEC), Section 401 Water Quality Certification
- Authorization of stormwater discharges under the Construction General Permit
- Contamination consultation
- Alaska Department of Fish and Game (ADF&G), Title 16 Fish Habitat Permits
- Alaska Department of Natural Resources (ADNR), Water Use Permit
- Alaska State Historic Preservation Office (SHPO) consultation, per Section 106 of the National Historic Preservation Act and the State Historic Preservation Act
- Matanuska-Susitna Borough (MSB), Flood Hazard Permit
- American Society for Testing and Materials (ASTM) Phase 1 Environmental Site Assessment
- U.S. Army Corps of Engineers (USACE), Section 404 permit
- U.S. Fish and Wildlife Service (USFWS) concurrence
- National Marine Fisheries Service (NMFS) concurrence

Air Quality

Pursuant to the Clean Air Act, the U.S. Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) for six “criteria” air pollutants. The State of Alaska has designated areas that are in attainment (areas that meet the NAAQS), Nonattainment (areas where concentration of one or more of the criteria air pollutants is higher than the NAAQS), or maintenance (an area previously designated as nonattainment and re-designated as a maintenance area because of an improvement in air quality) for each of the criteria pollutants.

The MSB is currently in attainment for all criteria pollutants. For proposed projects in air quality attainment areas, an air quality assessment may be required to demonstrate that a project would not significantly impact air quality. Projects that may exceed de minimis air quality thresholds must undergo an Attainment Area Screening to determine whether specific emission-producing thresholds would be exceeded. This screening identifies if an emission inventory is necessary (FAA, 2024). Proposed development projects that would increase airport capacity or add new emission sources, such as a runway extension, have the potential to impact air quality beyond de minimis thresholds and will require further analysis.

Short-term impacts to air quality, resulting from airborne dust and construction equipment operations during construction activities are also anticipated. Construction related air quality impacts are not expected to substantially increase emissions of EPA criteria pollutants.

Biological Resources

This section is an overview of the aquatic and terrestrial environments including plants, birds, and other wildlife.

Threatened and Endangered Species

A review of the USFWS Information for Planning and Consultation (IPaC) website (USFWS, 2023a) and the ADF&G special status species website did not identify any federal or state listed threatened or endangered species or critical habitats located within the vicinity of the airport (ADF&G 2023a).

Migratory Birds and Eagles' Nests

The Migratory Bird Treaty Act of 1918, as amended (16 USC 703-711) as well as the Bald and Golden Eagle Protection Acts (16 USC 668-668d) and Executive Order 13186 *Responsibilities of Federal Agencies to Protect Migratory Birds* require all federal agencies avoid to the extent possible, the "take" of migratory birds and bald and golden eagle, eggs, feathers, or nests.

A review of the USFWS IPaC webpage identified a diversity of migratory bird species in the vicinity of the airport (USFWS 2023a). Therefore, several migratory species may travel through the area and may be disturbed by future vegetation clearing operations. Birds are most sensitive during breeding and nesting, when vegetation clearing, ground disturbance, and other site construction activities can destroy active bird nests, eggs, or nestlings. The most effective way to protect nesting birds is to conduct these activities before or after the breeding season.

Vegetation clearing associated with future airport improvements is expected to follow USFWS recommended time periods for avoiding clearing in Southcentral Alaska, except as allowed by state, federal, local laws, and as approved by the Project Engineer. Below are date ranges that most birds are expected to be nesting, and which the USFWS recommends avoiding vegetation clearing/ground disturbing activities for different habitat types in Southcentral Alaska (USFWS 2022a):

- Forest/Woodland: May 1st- July 15th (*a, b, c)
- Shrub/Open: May 1st- July 15th(*a, b, c)
- Seabird Colonies: May 10th – September 15
- Eagles March 1st – August 31st (*e)

(*a) Raptors may nest 2+ months earlier than other birds

(*b) Canada geese and swans begin nesting April 20

(*c) Black scoter are known to nest through August 10

(*e) Eagles and eagle nests have additional protections under the Bald and Golden Eagle Protection Act, and a permit maybe required to conduct activities near an eagle nest.

Suitable eagle nesting habitat exists in the general project vicinity. Prior to construction of new airport infrastructure, an eagle's nest survey may be necessary to identify whether eagles or eagle nests are sighted within 660 feet of proposed project development. If eagles or eagle nests are present consultation with the USFWS on how to proceed with the project will be required (USFWS 2022b).

Anadromous Water Bodies and Essential Fish Habitat

Review of the Alaska Fish Resource Monitor (ADF&G 2023b) identified Lucille Creek (Anadromous Waters Catalog [AWC] code 247-50-10330-2050-3030), an anadromous stream within the airport property boundary (Figure 2). Lucille Creek supports the presence of sockeye (*Oncorhynchus nerka*) and Chinook (*O. tshawytscha*) salmon as well as rearing habitat for coho salmon (*O. kisutch*), and provides habitat for resident fish species. To the east of the airport, within the study area, is an unnamed pond (AWC code:

247-50-10330-2050-3030-4101-0010) and unnamed tributary (AWC code: 247-50-10330-2050-3030-4101) to Lucille Creek which are cataloged for coho salmon rearing habitat, and also support resident fish (Figure 2). Wallace Lake is situated west of the airport and is documented for resident fish presence. Jacobsen Lake, in the study area to the north, is not documented for fish presence.

The ADF&G has regulatory responsibility for protection of freshwater anadromous fish habitat, as well as fish passage for resident fish. A Title 16 Fish Habitat Permit is required for work within fish bearing water bodies. Any future projects that involve potential impacts to anadromous waters are required to be conducted during the fish window for Southcentral Alaska (May 15 to July 15) to minimize potential impacts to fish species. Additionally, anadromous water bodies are classified as Essential Fish Habitat (EFH). If future airport development projects pose adverse effects to EFH, consultation with NMFS would be required.

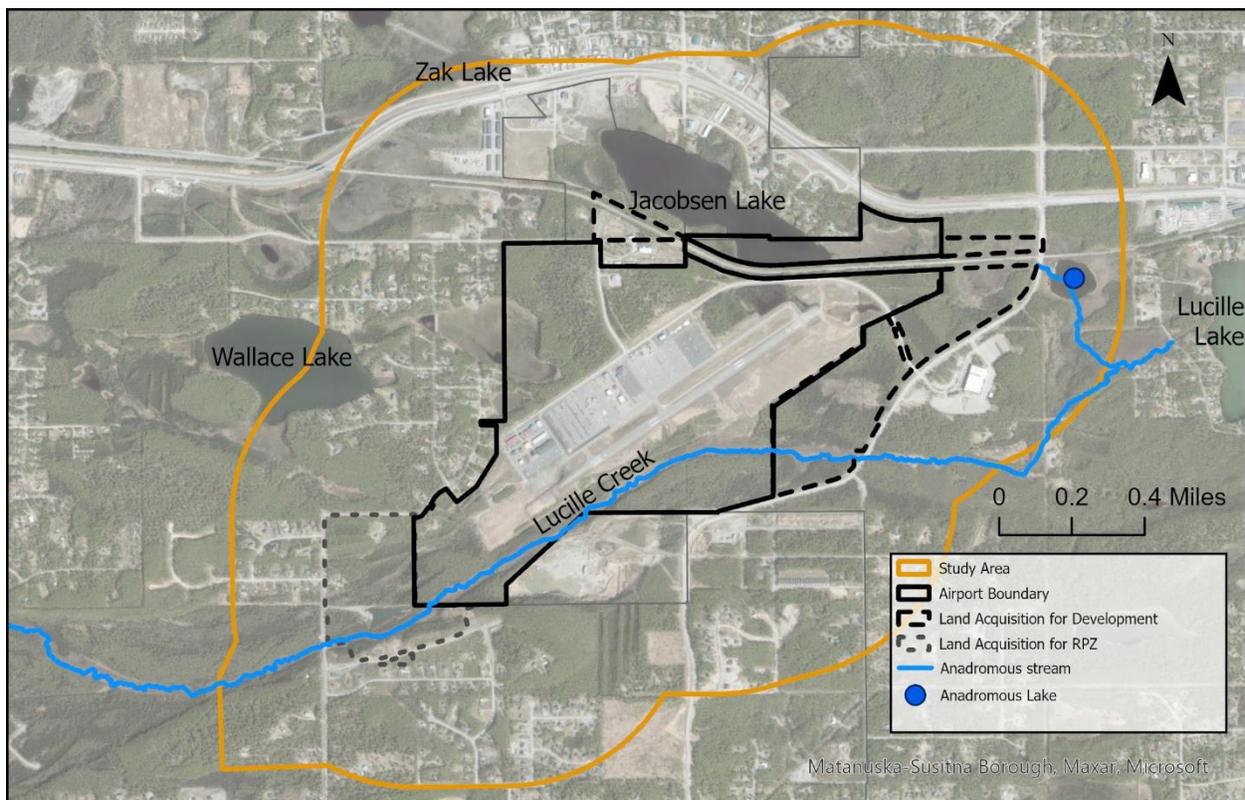


Figure 2: Anadromous Waters at the Wasilla Airport and the Surrounding Vicinity

Invasive Species

Review of the University of Alaska Anchorage Exotic Plants Information Clearinghouse Invasive Plants Mapper indicated there are two non-native species infestations within the vicinity of the Wasilla Airport (AKEPIC 2023). One infestation is located along W. Aviation Avenue, just east of the intersection between Aviation Avenue and Beacon Street. The second infestation is located on property adjacent to the airport at the northwest end of the airport property. Executive Order 13112 *Invasive Species* requires the FAA to ensure that ground disturbing activities are minimized to the extent practicable, and disturbed areas are re-vegetated with seed recommended for the region by ADNR; *A Revegetation Manual for Alaska* (Wright 2008).

Terrestrial Environment

The undeveloped properties in the airport vicinity are dominated by mixed spruce – birch woodland ecosystems. A natural corridor exists along Lucille Creek linking green spaces on the margin of Wasilla’s more developed areas. The undeveloped properties and natural corridor provide habitat for a variety of land mammals that have small individual ranges, and allow wider ranging species to connect habitat types along Lucille Creek. Portions of the airport property are fenced to prevent intrusion into unauthorized areas, which restricts movement through the area by larger terrestrial species.

Climate

Climate impacts related to aviation are generally associated with greenhouse gas (GHG) emissions and their potential to change atmospheric conditions. The FAA has a goal to reach net-zero GHG emissions from the U.S. Aviation sector by 2050 (FAA 2021). According to the FAA 1051.1F Desk Reference, a NEPA review should follow the basic procedure of evaluating the potential incremental change in GHG emissions resulting from proposed projects. When applicable, GHG emissions from the proposed project along with the effects of climate change, should be quantified. Proposed development alternatives that would result in changes in fleet mix and number of operations would add new GHG emission sources. Quantitative analysis of GHG emission impacts may be required during the NEPA analysis phase.

Climate change is leading to an increase in the intensity and frequency of severe weather events and higher temperatures. Severe weather impacts air travel with flight delays and interruptions to operations. The FAA has several programs to develop airport resilience to climate change, including ongoing research, energy efficiency assessments, sustainability planning, as well as low emissions and zero emissions programs. Participation in these programs will establish a baseline and framework for addressing the climate impacts of the Wasilla Airport and assist with developing strategies for sustainability.

Coastal Resources

Alaska withdrew from the voluntary National Coastal Zone Management Program on July 1, 2011. Therefore, the Coastal Zone Management Act federal consistency provision no longer applies in Alaska. Federal agencies no longer provide consistency determinations for coastal zone management in Alaska.

Department of Transportation Act Section 4(f) Resources

Section 4(f) of the Department of Transportation Act states that FAA cannot approve the use of publicly-owned wildlife refuges, parks and recreation areas, or historic sites eligible for the National Register of Historic Places (NRHP) unless there is no feasible and prudent alternative to using the land and the project includes all possible measures to minimize harm to the property.

One public facility exists in the study area: the Curtis D. Menard Memorial Recreation Center is on adjacent property to the east of the airport. The following resources were reviewed, and no additional publically owned properties protected under Section 4(f) were identified in the vicinity of the airport:

- USFWS National Wildlife Refuge System website (2023b)
- U.S. National Park Service (NPS) website (NPS 2023)
- ADF&G list of state game refuges, sanctuaries, critical habitat areas, and special areas (2023c)

- ADNR Division of Parks and Recreation website (ADNR 2023a)
- MSB Public Facilities map viewer (MSB 2023)
- U.S. Forest Service (USFS) website (USFS 2023)
- The Land and Water Conservation Fund website (Trust for Public Lands 2023)

Farmlands

According to the Natural Resources Conservation Service (NRCS), there are no designated prime or unique farmlands, or farmlands of statewide importance in Alaska. The Matanuska-Susitna Borough has adopted criteria for farmlands of local importance. According to the NRCS Web Soil Survey (NRCS 2024), there are soil classification that qualify as Farmland of Local Importance in the vicinity of the airport. None of these lands are within the existing airport property or areas proposed for expansion in the Airport Master Plan (Figure 3). While these areas are recognizes as suitable for agriculture, none of these lands are currently used for agricultural purposes.

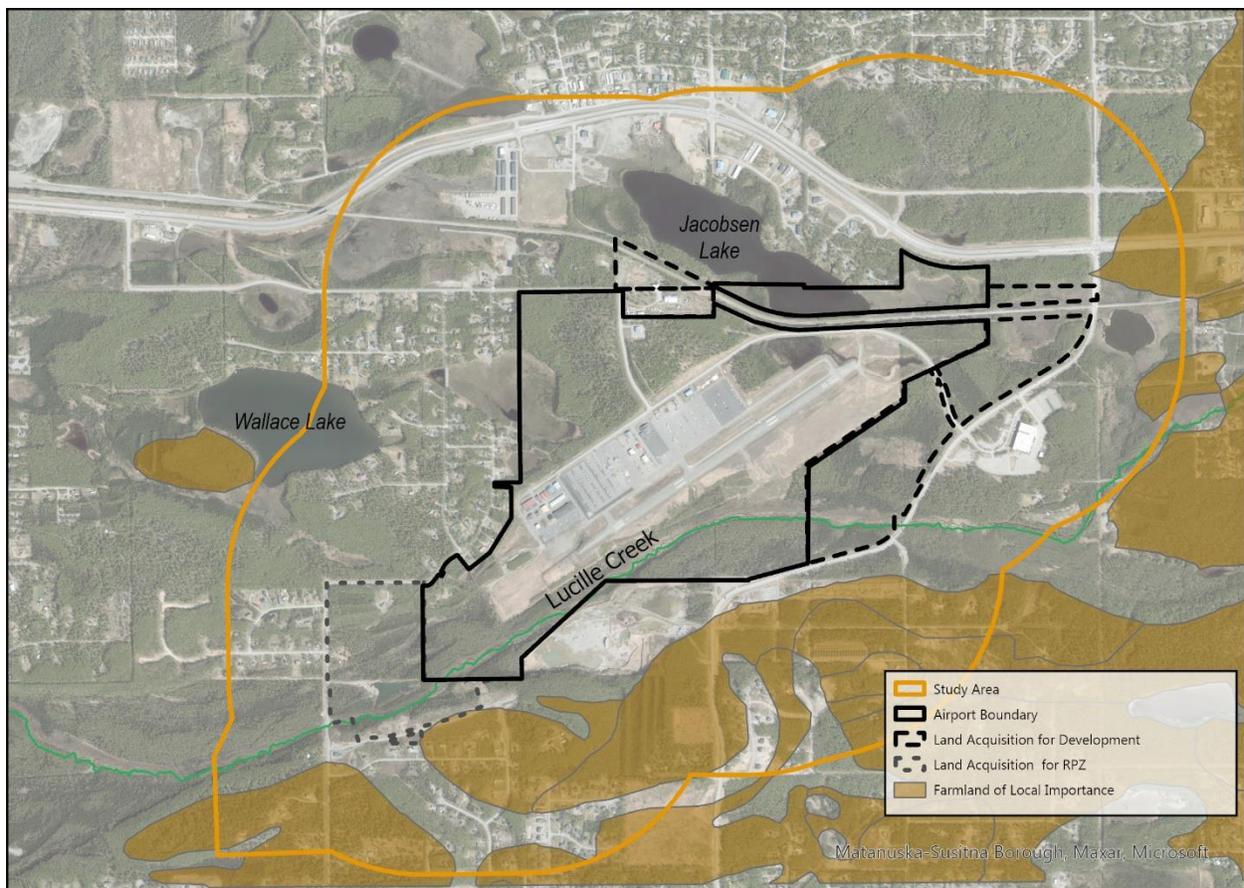


Figure 3: Farmlands of Local Importance in the Vicinity if the Wasilla Airport

Hazardous Waste

A search of ADEC’s Contaminated Sites Program database did not identify any known contaminated sites within the study area or within the 0.5 mile study area (ADEC 2023b). Consultation with ADEC is recommended, should the project encounter an area within the study area that presents recognized environmental conditions that warrant concern regarding environmental contamination. For new property acquisition, the COW will need to conduct a Phase I Environmental Site Assessment (ESA) that

is in accordance to American Society for Testing and Materials standards prior to purchasing. The Phase I ESA would identify risks related to environmental contamination.

Historic Properties, Archaeological and Cultural Resources

Previous cultural resource evaluation at the Wasilla Airport, in support of past airport development projects, have included review of the Alaska Department of Natural Resources (ADNR) Alaska Heritage Resource Survey (AHRS) online database and Phase I and II cultural resource evaluations of the various portions of the existing airport property. Cultural and historic resources have been identified on airport property and on nearby properties proposed for acquisition and future airport development. Additional project-specific cultural resource identification will be required, as projects advance. Historic and cultural resources can include sensitive information and therefore are not included in figures in this document.

In accordance with Section 106 of the National Historic Preservation Act (NHPA), FAA is required to consult with the ADNR, Office of History and Archaeology, SHPO, and other interested parties (including Tribes, Certified Local Governments, and ANSCA Cooperation's) regarding potential impacts to cultural and historic resources.

Land Use

The City of Wasilla land development code classifies land use through zoning under municipal code 16.20.010. The airport property is classified as Industrial, which is further described in code as:

The intent of the industrial district is to provide for and protect productive industrial areas. These areas are usually served by major highways or collector streets, the Alaska Railroad, the airport and public or community water or sewer. The designation of an area as industrial must contain specific provisions for traffic circulation and buffering of nearby non-industrial areas and uses from traffic, noise, dust, vibration, glare, pollution, and unsightly uses or activities.

The bulk of the airport is within the Wasilla city limits, west of downtown Wasilla. A 70 acre parcel (MSB account ID: 17N02W12D006) owned by the City of Wasilla is adjacent to the airport to the north, and considered part of the airport property. This property is outside the city limits, so may be a potential candidate for annexation by the city (Figure 4). This property is within the Meadow Lakes Community Council (MLCC) area, under the municipal authority of the MSB. The MLCC area borders the airport along the western airport boundary as well as portions of the northern and southern airport boundaries. Proposed projects may necessitate plan reviews for the MLCC, MSB and the City of Wasilla, and may require construction permits from the MSB and City of Wasilla.

Land use surrounding the airport is composed of undeveloped land, residential land, and light commercial. Undeveloped land includes a mix of public and privately owned parcels, with contiguous lack of development along Lucille Creek. Residential land use in the vicinity of the airport is generally located outside the Wasilla city limits. Residential parcel sizes range from less than an acre to 40 acre tracts. Commercial land use is primarily arranged along the Parks Highway to the north, with one active material site south of Lucille Creek. The Museum of Alaska Transportation and Industry and the Curtis D. Menard Memorial Recreation Center are both located in the vicinity of the airport. The Alaska Railroad right-of-way is adjacent to the airport property boundary.

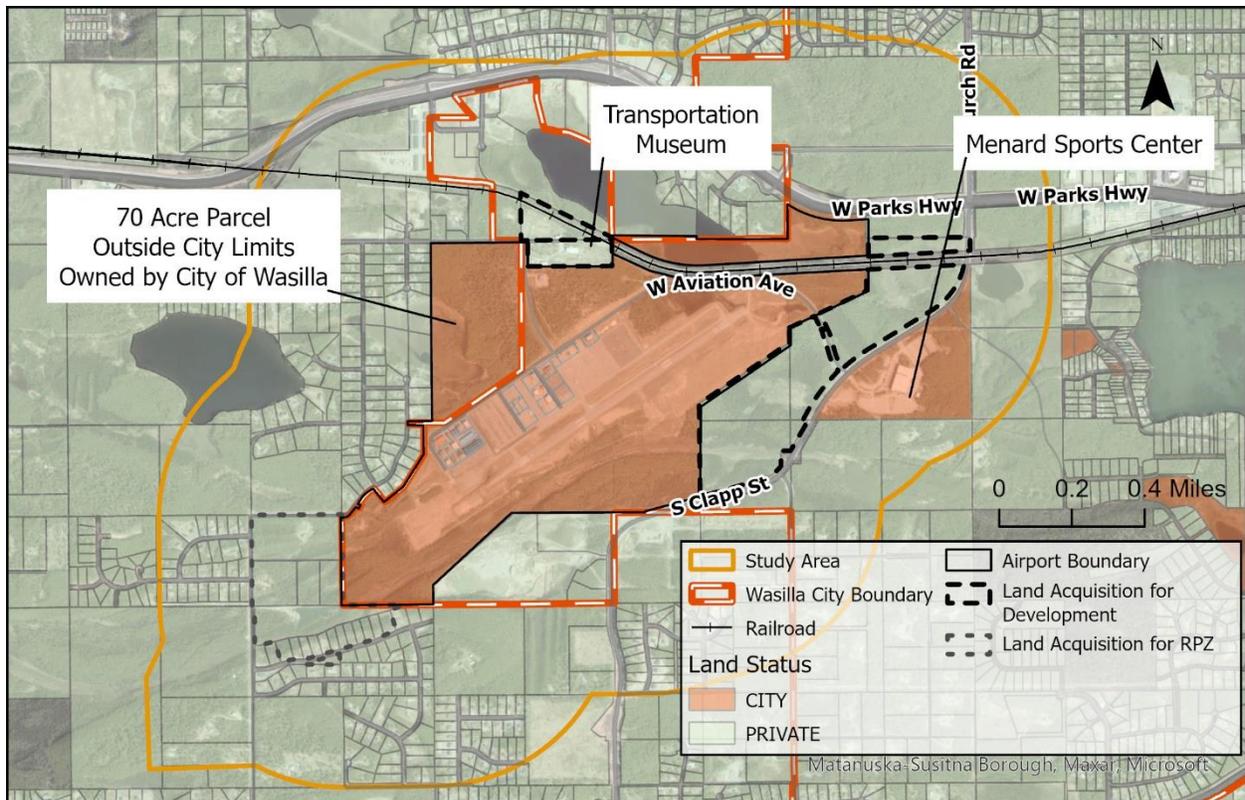


Figure 4: Land Status at the Wasilla Airport and the Surrounding Vicinity

Natural Resources and Energy Supply

Natural resource availability in the vicinity of the airport is primarily associated with earth material resources extraction. An existing material source is located on an adjacent 63 acre property to the south of the airport on the opposite side of Lucille Creek. Other material source sites exist nearby but outside the 0.5 mile airport vicinity.

Energy supply for the airport property is through the established grid with electric power supplied by the Matanuska Electric Association and gas supplied by ESTAR Natural Gas. Aviation gas and other bulk fuels are provided by Crowley Fuels Alaska.

Noise and Compatible Land Use

Pursuant to FAA Order 5050.4B (2006), a noise analysis may be required for actions involving a new airport location, a new runway, a major runway extension, or runway strengthening; or, when annual operations exceed 90,000 propeller operations or 700 jet operations and the project would result in a change in operations.

The compatibility of existing and planned land uses near an airport are typically associated with the extent of the airport's noise impacts. The airport is located on the border of the Wasilla city limits. Properties outside the city limits are under the municipal authority of the MSB and do not have land use zoning. This could potentially present challenges with compatibility for planned land uses, as residential neighborhoods are within the study area in close proximity to the airport. Projects that will change the

fleet configuration and number of operations, such as a runway extension, may be controversial. It is expected that a noise analysis would be required for this type of project.

Socioeconomic Impacts

The City of Wasilla has a population of approximately 9,500 people. EPA demographic data indicates that 32% of the population are low income, 10% are unemployed, 23% are people of color, 18% are persons with disabilities, and the per capita annual income is \$35,755. There are 3,903 households, and 54% are owner occupied. Environmental justice indexes evaluating concerns and vulnerability for low income and people of color show relatively high percentiles (>50th percentile for the state) for indicators such as diesel particulate matter, air toxics cancer risk, traffic proximity, and superfund proximity (EPA 2023). Wasilla is well connected by land to surrounding communities. The George Parks Highway and Glenn Highway connect Wasilla to Anchorage, Fairbanks, Palmer, and smaller communities on the road system. The Alaska Railroad serves Wasilla on the Anchorage to Fairbanks route, while Mat-Su Valley Public Transportation provides bus service between Wasilla, Palmer, and Anchorage (Division of Community and Regional Affairs [DCRA] 2022).

Future development and capacity enhancements at the Wasilla Airport will likely have beneficial socioeconomic impacts for the community. Construction and maintenance activities have potential to create employment opportunities for residents. Enhanced airport capacity may offer additional employment for transportation and service industry personnel. Furthermore airport improvements may increase travel options for the local population, such as commercial air service with more connections to other communities.

Visual Impacts

The Wasilla Airport is located on a flat terrace above Lucille Creek among rolling hills west of downtown Wasilla. The airport is visible from residential areas on higher knolls in the vicinity, and appears as an industrial landscape with limited development around the perimeter. The existing runway and taxiways have medium intensity edge lighting. All lighting systems are pilot activated by radio frequency upon approach to the airport. This minimizes the lighting during low light or no light conditions. Airport lighting is considered consistent with a small, community airport. Visual impacts that could occur from any proposed project would be evaluated to determine potential effects to sensitive viewers.

Water Resources

Navigable Waters

Review of ADNR's Alaska Mapper Navigable Waters Layer did not identify any navigable waters at the Wasilla Airport or in the surrounding vicinity (ADNR 2023b).

Wetlands and Other Waters of the U.S.

A review Cook Inlet Wetlands (Gracz 2013) and the National Wetlands Inventory (NWI) (USFWS 2023c) databases identify several wetland complexes within and immediately adjacent to the airport property boundary (Figure 5). A wetland delineation will be necessary to ground truth identified wetland boundaries, inform design to support avoidance and minimization of impacts to wetlands, and to evaluate impacts where necessary. Should the project involve dredge and/or fill within wetlands and/or waters of the U.S. authorization under USACE Section 404 permit and ADEC Section 401 will be required.

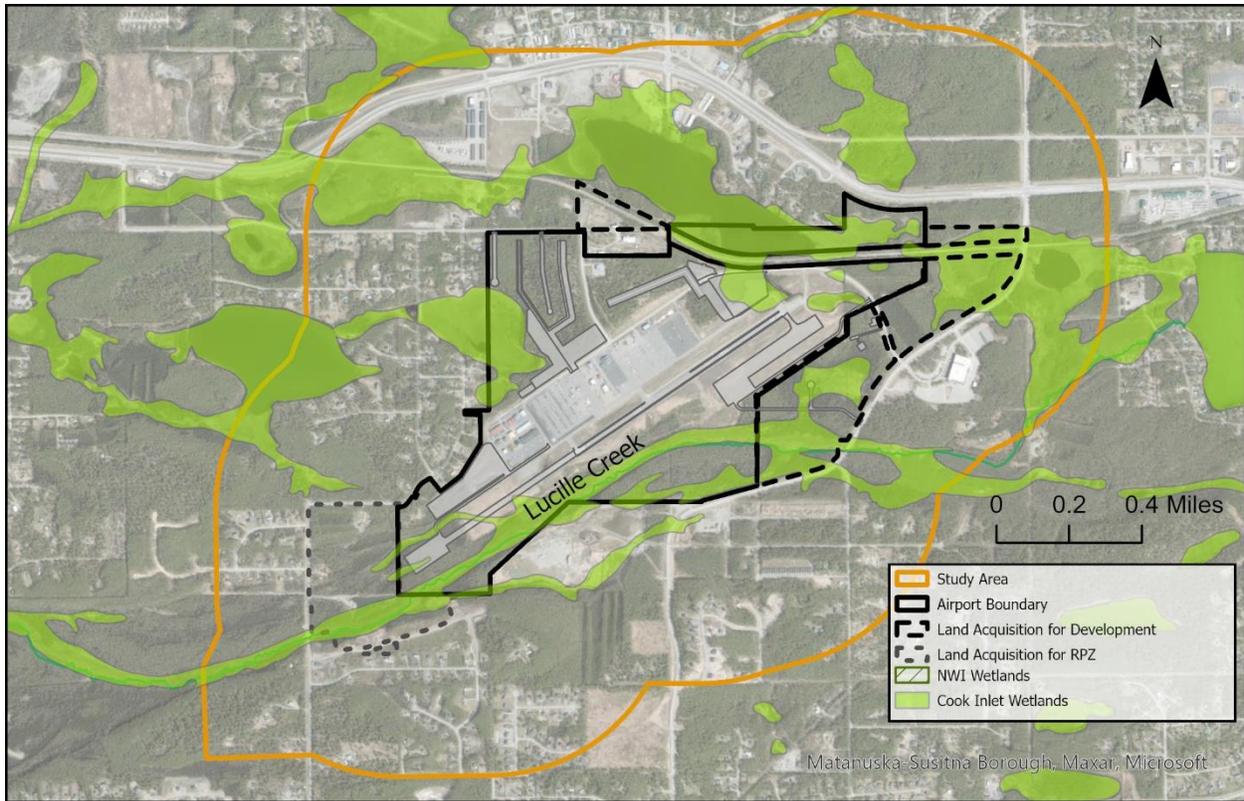


Figure 5: Wetlands at the Wasilla Airport and the Surrounding Vicinity

Floodplain and Regulatory Floodway

Review of the Federal Emergency Management Agency (FEMA) determined Wasilla Airport is located on FEMA Flood Insurance Rate Map (FIRM) 02170C8060F. This FIRM identified a Special Flood Hazard Area (SFHA) within the Wasilla airport property boundary which is associated with Lucille Creek (Figure 6). This SFHA, identified as Zone A, is defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance flood is also referred to as the base flood or 100-year flood (FEMA 2023).

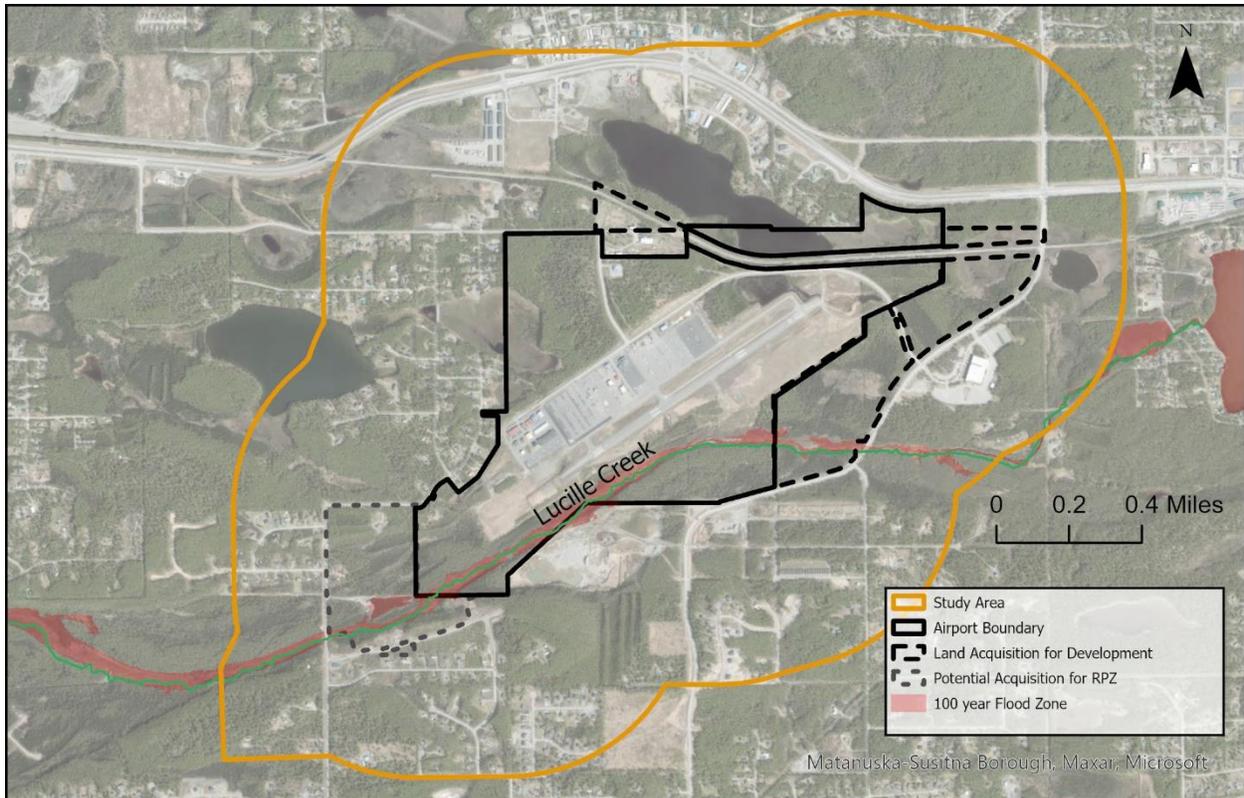


Figure 6: Mapped Special Flood Hazard Areas at the Wasilla Airport and the Surrounding Vicinity

Water Quality

The project is located within the Lucille Creek watershed, which ultimately drains to the Knik Arm of Cook Inlet. Review of Alaska’s Final 2018 Integrated Water Quality Monitoring and Assessment Report (approved June 2020), identifies Lucille Lake, located about 0.75 miles east of the Wasilla Airport, as a 303-listed waterbody containing elevated zinc, lead, and aromatic hydrocarbons (ADEC 2023c). Lucille Lake has a surface water connection to Lucille Creek, and is located upstream of the Wasilla Airport (Figure 1).

Wild and Scenic Rivers

A review of the NPS website for Wild and Scenic Rivers indicated that there are no designated Wild and Scenic Rivers within the study area.

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