

**FINAL
ENVIRONMENTAL ASSESSMENT
FOR THE
MILITARY HOUSING
PRIVATIZATION INITIATIVE (MHPI)
EIELSON AIR FORCE BASE, ALASKA**



MAY 2011

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Finding of No Significant Impact

Eielson Air Force Base, Alaska

Military Housing Privatization Initiative (MHPI)

Eielson Air Force Base (AFB) has prepared an environmental assessment (EA) that evaluates the potential environmental impacts associated with the implementation of the Military Housing Privatization Initiative (MHPI) at Eielson AFB.

Description of the Proposed Action – Section 2.2 of the EA

The United States Air Force, Pacific Air Forces Command, proposes to privatize its military family housing at Eielson AFB, Alaska. The Air Force is considering two action alternatives for implementing the MHPI Proposed Action. Both alternatives include the conveyance of up to 974 housing units and lease of the underlying land to the developer for a period of 50 years.

The National Defense Authorization Act of 1996 authorized the Department of Defense to engage private sector businesses through a process of housing privatization wherein private sector housing developers would renovate or demolish existing housing units, build new units, and provide the infrastructure needed to support such developments. The developer would own the units, lease the land from the Air Force, and collect rent from service members while providing maintenance and management.

Alternative 1: Status Quo – Section 2.5 of the EA

Alternative 1 (Status Quo) would include conveyance of all housing units to the private developer, lease of associated land area (279 acres) for up to 50 years, and developer demolition of 36 housing units (170,238 square feet) located at the Century Park South housing area.

Alternative 2: TLF Conversion – Section 2.5 of the EA

Alternative 2 (Temporary Lodging Facility [TLF] Conversion) would be the same as Alternative 1, except that the Air Force would not convey 40 housing units and would lease associated land areas of Century Park South and Galaxy Heights to the developer; these units would be converted to TLFs. Thus, under this alternative, these

land areas and associated housing units would not be included in the MHPI and the Air Force would then convey only 934 units and lease 265 acres.

No Action Alternative – Section 2.5 of the EA

Under the No Action Alternative, the Air Force would not implement the MHPI program at Eielson AFB and would manage and maintain existing and newly constructed housing in accordance with existing Air Force policy. New housing construction via ongoing military construction (MILCON) activities would continue until completed. Ongoing MILCON for replacement housing was previously assessed and approved through the National Environmental Policy Act process. Since the Air Force needs to remove 36 units, it is reasonable to assume that these units would be demolished in the near future. Therefore, the demolition of these units (approximately 170,238 square feet as described under Alternative 1 and Alternative 2) is addressed under the No Action Alternative.

Environmental Consequences – Chapter 4 of the EA

Alternative 1: Status Quo

No significant adverse impacts have been identified under Alternative 1. No new construction would occur, and conveyance of housing units and lease of land area would not result in any impacts to resource areas. Potential impacts under this alternative are associated with demolition activities and the potential for 1) temporary air quality impacts from particulate matter; 2) potential for temporary erosion impacts to surface waters and wetlands; 3) impacts associated with contaminated Environmental Restoration Program sites, and 4) generation of solid waste from demolition activities. Based on the results of analysis presented in Chapter 4 of the EA, the Air Force considers the potential for impacts to these resource areas to be minimal with implementation of regulatory requirements and standard practices.

Alternative 2: TLF Conversion

No significant adverse impacts have been identified under Alternative 2. Project activities would essentially be the same as Alternative 1, except for the conversion of 40 housing units to TLFs under a separate project (resulting in conveyance of only 934 housing units). As a result, the Air Force anticipates that impacts under Alternative 2 would be similar to those described for Alternative 1.

No Action Alternative

Although MHPI would not be implemented, demolition of surplus units would likely still occur. Consequently, the Air Force anticipates that impacts associated with the No Action Alternative would be the same as those described for Alternative 1, that is, no significant impacts would occur.

Public / Agency Review

The Air Force published a public notice in the *Fairbanks Daily Newsminer* on 3 April 2011, inviting the public to review and comment upon the EA (located at the Noel Wien Library-Main Branch located in Fairbanks). The Air Force also provided the following agencies copies of the EA for review and comment: Alaska Department of Environmental Conservation. The public comment and agency review period ended on 2 May 2011. No comments were received by the public or regulatory agencies.

Restrictions/Requirements

Demolition activities under the Proposed Action are anticipated to disturb over 1 acre of land and would require an Alaska Pollutant Discharge Elimination System Permit for Construction Activities from the Alaska Department of Environmental Conservation.

Conclusion

The attached EA was prepared pursuant to Title 32 Code of Federal Regulations (CFR) Part 989 and U.S. Council on Environmental Quality regulations (40 CFR 1500-1508) for implementing the procedural requirements of the National Environmental Policy Act. The finding of the EA is that implementation of the Proposed Action under any alternative would not have significant impact on the human or natural environment. This Finding of No Significant Impact is hereby issued, and no environmental impact statement is required.

for: L. J. Post, Col, USAF

JAMES N. POST, III
Brigadier General, USAF
Command

22 Jun 11

Date

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Acronyms, Abbreviations, and Symbols

ACAM	Air Conformity Applicability Model
ACM	Asbestos-Containing Material
ADEC	Alaska Department of Conservation
AFB	Air Force Base
AFI	Air Force Instruction
AFOSH	Air Force Occupational and Environmental Safety, Fire Protection, and Health
AFPD	Air Force Policy Directive
BMP	Best Management Practice
C&D	Construction and Demolition
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	Contracting Officer
DESC	Defense Energy Support Center
DoD	Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EO	Executive Order
ERP	Environmental Restoration Program
FONSI	Finding of No Significant Impact
FY	Fiscal Year
HRMA	Housing Requirements and Market Analysis
HWF	Hazardous Waste Facility
LBP	Lead-Based Paint
lb/ft³	Pounds per Cubic Foot
lb/ft²	Pounds per Square Foot
MFH	Military Family Housing
MHPI	Military Housing Privatization Initiative
MILCON	Military Construction
N/A	Not Applicable
NEI	National Emissions Inventory
NEPA	National Environmental Policy Act
NESHAP	National Emissions Standards for Hazardous Air Pollutants
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
pCi/L	Picocuries per Liter
RCRA	Resource Conservation and Recovery Act
ROI	Region of Influence
TLF	Temporary Lodging Facility
U.S.	United States
USC	United States Code
USEPA	U.S. Environmental Protection Agency

1. PURPOSE AND NEED FOR ACTION

1.1 INTRODUCTION

The United States Air Force, Pacific Air Forces Command proposes to privatize its military family housing (MFH) at Eielson Air Force Base (AFB), Alaska.

The Air Force is considering two action alternatives for implementing the MHPI Proposed Action. Both alternatives include the conveyance of up to 974 housing units. Alternative 1 (Status Quo) would include conveyance of all housing units to the private developer and lease of the underlying land to the developer for a period of 50 years, with developer demolition of 36 units. Alternative 2 (Temporary Lodging Facility [TLF] Conversion) would involve the same activities as Alternative 1 except that only 934 housing units would be conveyed, and the Air Force would convert 40 housing units to TLFs under a separate project. Detailed information regarding the Proposed Action and alternatives is provided in Chapter 2 of this document.

The National Defense Authorization Act of 1996 authorized the Department of Defense (DoD) to engage private sector businesses through a process of housing privatization wherein private sector housing developers would renovate or demolish existing housing units, build new units, and provide the infrastructure needed to support such developments. The developer would own the units, lease the land from the Air Force, and collect rent from service members while providing maintenance and management. Furthermore, government officials have determined that privatization is the best solution for leveraging resources to meet these goals in a timely manner. Additional information and details regarding the Military Housing Privatization Initiative (MHPI) can be found on the DoD housing privatization website at: <http://www.acq.osd.mil/housing>.

The proposed privatization activities at Eielson AFB are part of a larger privatization effort that includes Edwards AFB, California; Eglin AFB, Florida; Hurlburt Field, Florida; McConnell AFB, Kansas; and Seymour Johnson AFB, North Carolina. All six bases are grouped together as part of a single privatization Request for Proposal. However, environmental and socioeconomic impacts associated with the privatization action are specific to each installation; therefore, impacts associated with privatization at each installation are analyzed separately for purposes of National Environmental Policy Act (NEPA) documentation.

1.2 LOCATION OF THE PROPOSED ACTION

Eielson AFB is located in the Tanana River Valley on a low, relatively flat, floodplain terrace approximately 2 miles north of the active river channel. Communities near Eielson AFB include Moose Creek to the north and Salcha to the south. Base lands include 19,790 contiguous acres bounded on the west by the Richardson Highway and on the north and east by Army lands (Yukon Training Area). To the south, the community of Salcha borders Eielson AFB. The developed portion of Eielson AFB is primarily an area filled by gravel to elevate potential building sites above the 100-year floodplain of nearby watersheds. In addition, more than 90 percent of the lands that constitute Eielson AFB were previously classified as wetlands. Of the remaining undeveloped portions of the base, 79 percent are wetlands. As a consequence, land planning and utilization of Eielson AFB lands is challenging if siting facilities in wetlands and floodplains is to be entirely avoided. Figure 1-1 shows the location of Eielson AFB and the surrounding area; Figure 1-2 shows housing areas.

1.3 PURPOSE AND NEED FOR THE ACTION

The purpose of the Proposed Action is to provide access to safe, quality, well-maintained housing in a community where Air Force members and their families will choose to live, a community consisting of neighborhood settings that include amenities such as common areas and recreational opportunities. Determining the specific need for required housing at Eielson AFB involved estimating the number of appropriate private sector housing units available to military families within 20 miles, or a 60-minute commute. To accomplish this, a Housing Requirements and Market Analysis (HRMA) was conducted for Eielson AFB in December 2005 to identify the housing units available to military members in the private community and determine the number of units that the Air Force needs to provide at Eielson AFB.

The total MFH requirement for Eielson AFB factored in shortfalls in the available private sector housing, resulting in a housing requirement on Eielson AFB of 1,082 units, with a “Smart Scope” reduction to an 866-unit requirement. Prior to 2005, and ongoing currently, Eielson AFB began a military construction (MILCON) process to demolish and construct several new homes within the MFH areas. The MILCON process is separate from the MHPI and has been evaluated in previous NEPA documentation. At the conclusion of the MILCON process, Eielson AFB will have a total of up to 974 housing units (via a combination of older units and newly constructed units) distributed throughout nine different housing areas.

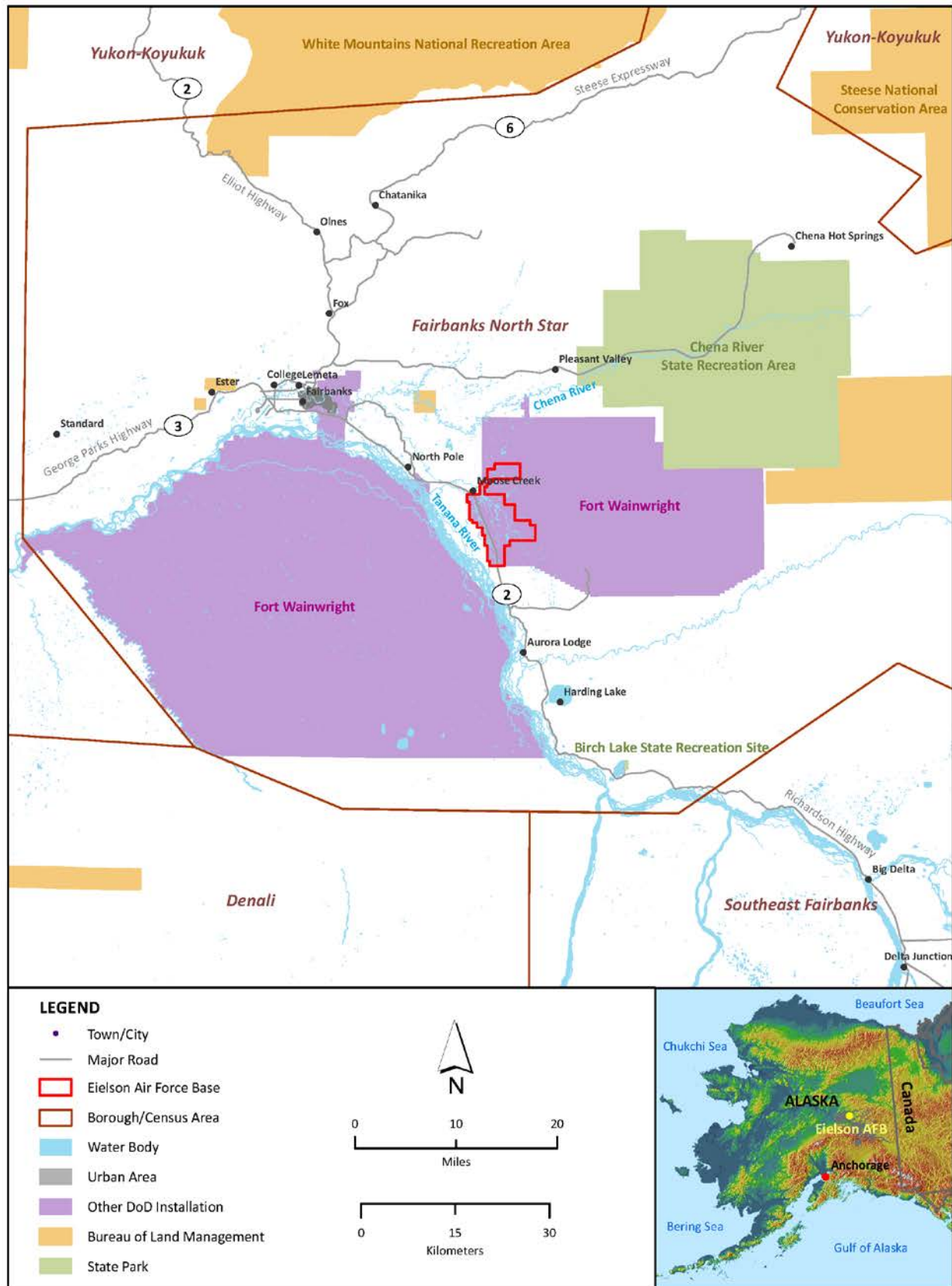


Figure 1-1. Location of Eielson AFB, Alaska

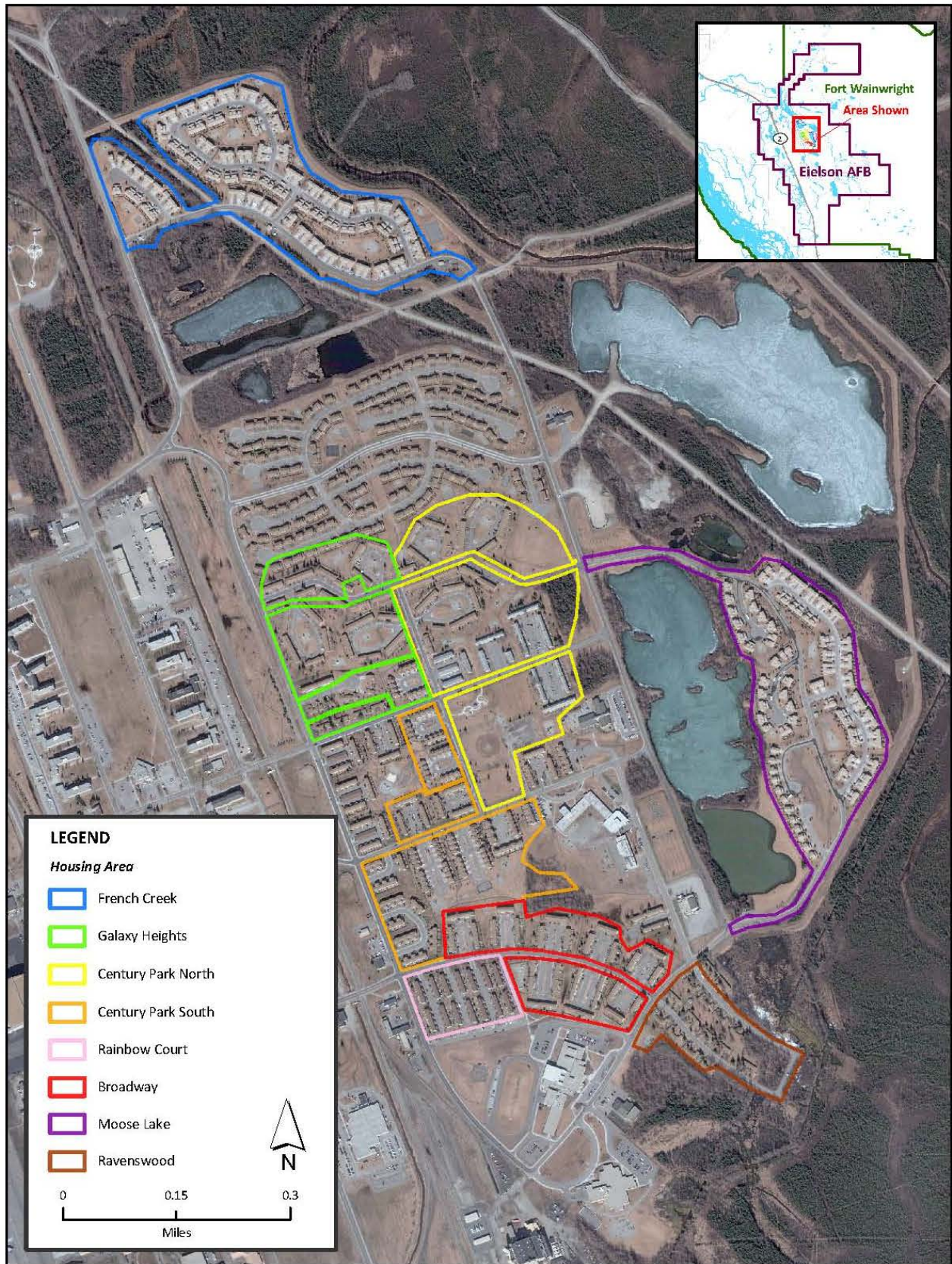


Figure 1-2. Location of Housing Areas at Eielson AFB, Alaska

1.4 SCOPE OF THE ENVIRONMENTAL REVIEW

This Environmental Assessment (EA) identifies, describes, and evaluates the potential environmental impacts that may result from the implementation of MFH privatization under two action alternatives, as well as a No Action Alternative. As appropriate, the affected environment and environmental consequences of the action alternatives may be described in terms of site-specific descriptions or regional overview. Finally, this document identifies measures that would prevent or minimize environmental impacts.

Federal agencies are required to consider the environmental consequences of proposed actions in the decision-making process under NEPA, 42 United States Code (USC) 4321, et seq. The Council on Environmental Quality (CEQ) was established under NEPA, 42 USC 4342, et seq., to implement and oversee federal policy in this process. In 1978, the CEQ issued regulations implementing the NEPA process under 40 Code of Federal Regulations (CFR) Parts 1500–1508. The CEQ regulations require that the federal agency considering an action evaluate or assess the potential consequences of the action or alternatives to the action, which may result in the need for an EA or environmental impact statement. Under 40 CFR:

- An EA must briefly provide sufficient evidence and analysis to determine whether a finding of no significant impact (FONSI) or environmental impact statement (EIS) should be prepared.
- An EA must facilitate the preparation of an EIS if required.

The proposed activities addressed within this document constitute a federal action and, therefore, must be assessed in accordance with NEPA. To comply with NEPA, as well as other pertinent environmental requirements, the decision-making process for the Proposed Action must include the development of an EA to address the environmental issues related to the proposed activities. The Air Force Environmental Impact Analysis Process (EIAP) is accomplished through adherence to the procedures set forth in CEQ regulations and 32 CFR 989, Air Force Environmental Impact Analysis Process.

The following environmental features were identified for analysis in this EA: air quality, water resources, soils, hazardous materials, solid waste, and Environmental Restoration Program (ERP) sites.

1.4.1 Issues Not Carried Forward for Detailed Analyses

Issues with minimal or no impacts were identified through a preliminary screening process. The following describes those issues not carried forward for a detailed analysis, along with the rationale associated with their elimination.

Cultural Resources: Based on interviews with Eielson AFB personnel and survey information in the installation's *Integrated Cultural Resources Management Plan*, no historical, archaeological, or tribal resources are located within or adjacent to the proposed Eielson AFB MHPI action areas (Gunderson, 2010a; U.S. Air Force, 2006a). As a result, no impacts to cultural resources are associated with implementing the Proposed Action under any of the alternatives.

Biological Resources: Based on interviews with Eielson AFB personnel and survey information in the installation's *Integrated Natural Resources Management Plan*, no threatened, endangered, or species of concern are located within or adjacent to the proposed Eielson AFB MHPI action areas (Gunderson, 2010b; U.S. Air Force, 2002). Additionally, the housing areas are all improved areas that do not provide habitat for wildlife species, and no undeveloped areas are proposed for use as housing. As a result, no impacts to biological resources would result from implementing the Proposed Action under any of the alternatives.

Land Use: All action areas associated with the MHPI at Eielson AFB are either currently utilized for housing or are improved grounds used for purposes similar to the expected final disposition under the Proposed Action. As a result, the Air Force does not anticipate changes in land use designations associated with MHPI, thus no impacts to internal or adjacent land would occur.

Transportation: In the housing areas, no changes in current residential traffic would occur. Intermittent traffic delays associated with construction activities are ongoing due to current MILCON activities within the housing areas, and some housing unit renovation and/or demolition activities associated with MHPI may result in similar impacts. However, any traffic delays would be temporary in nature, ending upon completion of MHPI-related activities. As a result, the Air Force does not anticipate any significant adverse impacts to Eielson AFB transportation.

Utilities and Infrastructure: Housing area utilities are provided by the installation's utility system. MHPI at Eielson AFB would not result in a net change in the number of personnel living on the installation and, thus, no net change in utility usage on the installation associated with the Proposed Action. Existing utility

infrastructure would be utilized to the greatest extent possible, and while there may be minor utility infrastructure work conducted at or near facilities being demolished and construction of a new housing office, no service interruption to residences would be anticipated.

Safety and Occupational Health: Day-to-day construction operations and maintenance activities at Eielson AFB are conducted in accordance with applicable Air Force safety regulations, published Air Force technical orders, and standards prescribed by Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) requirements. For construction and demolition (C&D) activities on the installation, appropriate job site safety plans are required; these plans explain how job safety will be ensured throughout the life of the project. Construction and demolition workers are also required to follow applicable Occupational Safety and Health Administration (OSHA) requirements. Occupational health and safety would be governed by the terms of the contract, which may incorporate Air Force regulations and technical orders, AFOSH standards, and OSHA standards. The Air Force does not anticipate impacts to safety, provided that all applicable AFOSH and OSHA requirements are implemented.

Noise: C&D noise would cause a temporary, short-term increase to the ambient sound environment. Workers associated with the construction activities would be expected to wear appropriate hearing protection as required by OSHA. C&D activities associated with the Proposed Action would be occurring in areas that either have no residents within the vicinity or are already experiencing construction noise due to ongoing MILCON activities. Additionally, project activities would occur during normal business hours and would not result in evening, early morning, or weekend noise issues. As a result, the Air Force does not anticipate noise impacts.

Socioeconomics: The Proposed Action would involve only minor demolition and renovation activities. While these actions would provide a small benefit to the local community should labor come from the surrounding community, the short-term nature of the project activities would not result in any long-term socioeconomic benefit. No adverse socioeconomic impacts would occur under the Proposed Action.

Environmental Justice: Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires federal agencies to identify community issues of concern during the NEPA process, particularly those issues relating to decisions that may have an impact on low-income or minority populations. The proposed C&D activities would occur within established areas of

Eielson AFB and would not affect communities outside Eielson AFB in any appreciable manner, including low-income or minority populations. Therefore, the Air Force does not anticipate environmental justice impacts under the Proposed Action.

1.5 APPLICABLE REGULATORY REQUIREMENTS

1.5.1 Environmental Coordination and Public Review

EO 12372, *Intergovernmental Review of Federal Programs*, requires intergovernmental notifications prior to making any detailed statement of environmental impacts. Through the process of Interagency and Intergovernmental Coordination for Environmental Planning, the proponent must notify concerned federal, state, and local agencies and allow them sufficient time to evaluate the potential environmental impacts of a proposed action. Comments from these agencies are subsequently incorporated into the EIAP. NEPA also requires that the government provide the public with an opportunity to review and provide input on the proposal and the potential environmental consequences prior to the government decision regarding a proposed action and alternatives.

The Air Force published a public notice in the *Fairbanks Daily Newsminer* on 3 April 2011, inviting the public to review and comment on the EA (located at the Noel Wien Library – Main Branch in Fairbanks). A copy of the public notice is provided in Appendix A. The Air Force also provided copies of the EA to the Alaska Department of Environmental Conservation for review and comment. The public comment and agency review period ended on 2 May 2011. No comments were received by the public or regulatory agencies.

1.5.2 Environmental Permitting/Coordination Requirements

Demolition activities under the Proposed Action are anticipated to disturb over 1 acre of land and would require an Alaska Pollutant Discharge Elimination System Permit for Construction Activities from the Alaska Department of Environmental Conservation (ADEC).

1.6 ORGANIZATION OF THE DOCUMENT

This EA follows the requirements established by CEQ regulations (40 CFR 1500–1508). This document consists of the following chapters:

1. Purpose and Need for Action
2. Description of Proposed Action and Alternatives
3. Affected Environment
4. Environmental Consequences
5. Cumulative Impact
6. Persons and Agencies Contacted
7. List of Preparers
8. References

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2. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

2.1 INTRODUCTION

This chapter describes the process used by the Air Force to formulate alternatives for implementing the Proposed Action, the alternatives that the Air Force considered but did not carry forward, and the No Action Alternative. The potential environmental impacts of the Proposed Action and alternatives are summarized at the end of this chapter.

2.2 PROPOSED ACTION

The Proposed Action consists of activities associated with the overall proposal for the Air Force to implement the MHPI program at Eielson AFB. The Eielson AFB HRMA determined that the installation requires 1,082 MFH units by Calendar Year 2010 (U.S. Air Force, 2005). MHPI project concepts are based on the “Smart Scope” concept, which lowers the actual requirement to 80 percent of the HRMA recommendation. As a result, Eielson AFB requires 866 housing units.

Currently, the Air Force is replacing existing housing through several MILCON projects that involve demolition of existing housing and construction of new units. At the conclusion of the MILCON projects, 974 units would exist at Eielson AFB, distributed throughout seven housing areas, resulting in a surplus of 108 units. The Proposed Action is to convey up to 974 units, as well as existing playgrounds, recreational facilities, carports, garages, sheds, fences, bus shelters, gazebos, refuse collection areas, and parking areas located within the housing, “as is” to a private developer who would own and operate the housing units and associated infrastructure. The Air Force proposes to lease the land area under the housing neighborhoods (up to 279 acres) to the developer for a period of up to 50 years. The alternatives for implementing the Proposed Action involve eliminating the surplus by reducing the number of end-state units through developer demolition of housing units and/or Air Force conversion of existing housing units to new TLFs. The existing Rainbow Court housing area and associated units are not included as part of the Proposed Action; disposition of this housing area and its units has yet to be determined and may be subject to separate NEPA review and analysis, depending on the scope of future actions at Rainbow Court.

Table 2-1 summarizes the activities associated with the Proposed Action. Figure 2-1 shows the locations of housing activities associated with the Proposed Action and alternatives.

Table 2-1. Eielson AFB MHPI Proposed Action Housing Details

Existing Housing Area	Estimated Size of Lease (Acres)	Length of Lease (Years)	Number of Units Conveyed
French Creek	50	50	215
Moose Lake	47		151
Century Park North	25		216
Century Park South	47		144
Galaxy Heights	68		124
Broadway	23		95
Ravens Wood	19		29
Total	279	N/A	974

N/A = not applicable

2.3 FORMULATION OF ALTERNATIVES FOR IMPLEMENTING THE PROPOSED ACTION

Alternatives for implementing the MHPI program at Eielson AFB were developed with consideration of the ongoing military construction (MILCON) activities associated with existing housing. Since the majority of housing will be constructed via MILCON and then conveyed to the developer, alternatives were developed to address the need for updated TLFs and units remaining that would potentially be surplus.

2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED

Since nearly all of the housing units that would be owned and operated under privatization will be either newly constructed or renovated through ongoing MILCON projects, alternatives associated with developing new housing areas were not considered as part of the MHPI. Instead, this EA addresses alternatives associated with the disposition of housing units that would not be affected by ongoing MILCON activities.

2.5 ALTERNATIVES CARRIED FORWARD FOR ANALYSIS

Based on the facility and location requirements described previously, the Air Force has identified the following alternatives for implementing the Proposed Action. Figure 2-1 shows the locations of each alternative.

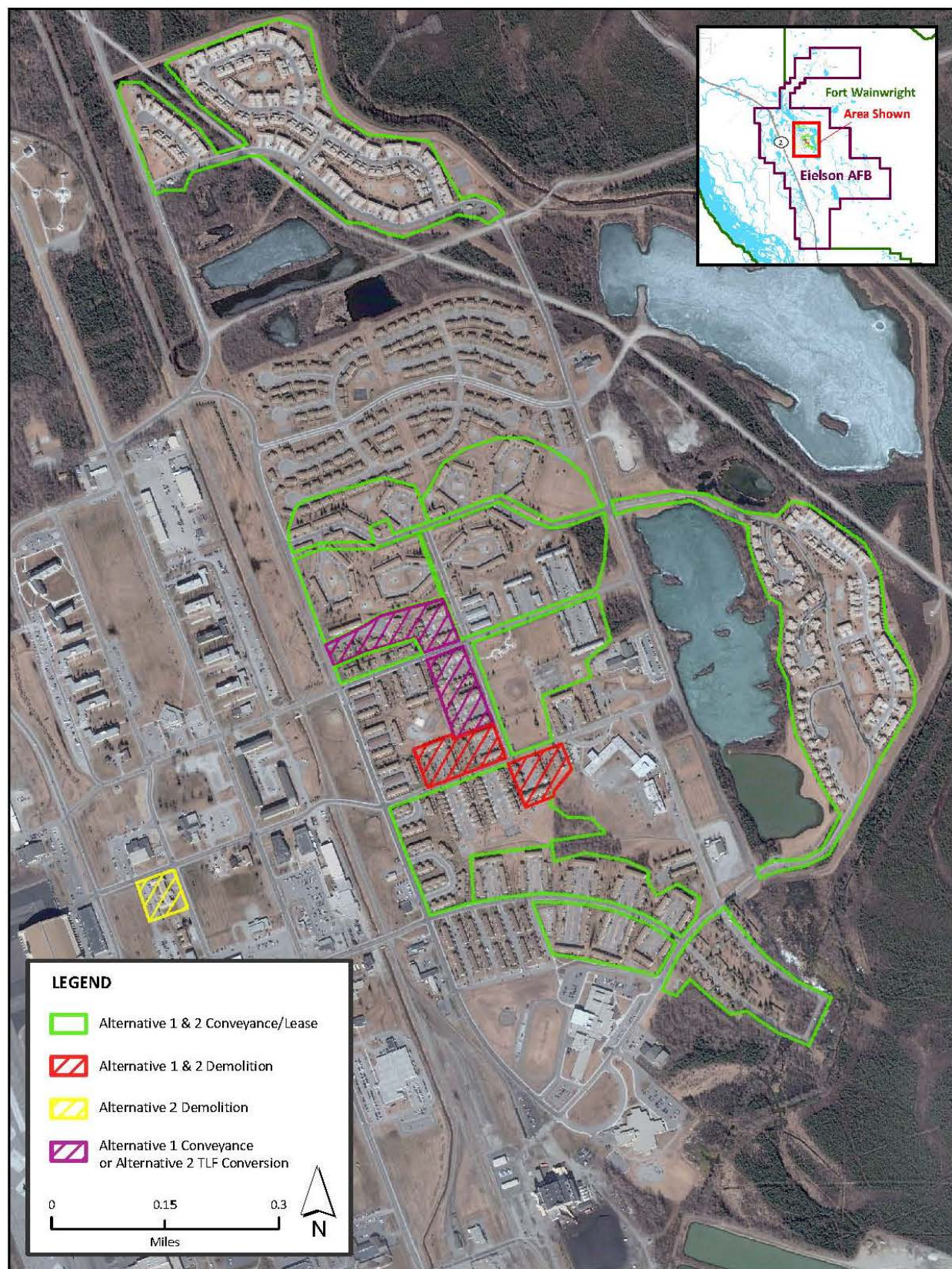


Figure 2-1. Project Activities Associated with MHPI at Eielson AFB, Alaska

2.5.1 Alternative 1: Status Quo

Alternative 1 for implementing the Proposed Action involves conveyance of 974 housing units to the developer and developer demolition of 36 housing units located in the Century Park South housing area. The units proposed for demolition total approximately 124,338 square feet. Since it is unknown exactly how much additional impervious surface area (patios, driveways, sidewalks, etc.) may be demolished along with these units, the Air Force assumes that the average additional impervious surface area associated with each unit at approximately 1,275 square feet. Using these estimates for purposes of analysis, approximately 170,238 square feet of demolition would occur. No new construction would occur under Alternative 1.

2.5.2 Alternative 2: TLF Conversion

This alternative would be the same as Alternative 1, except that the Air Force would not convey 40 housing units but would lease associated land areas at portions of Century Park South and Galaxy Heights to the developer, who would convert these units to TLFs. Therefore, these land areas and associated housing units would not be included in the MHPI, and the Air Force would then convey only 934 units and lease 265 acres.

2.5.3 No Action Alternative

Under the No Action Alternative, the Air Force would not implement the MHPI at Eielson AFB and would manage and maintain existing and newly constructed housing in accordance with existing Air Force policy. New housing construction via ongoing MILCON activities would continue until completed. Ongoing MILCON for replacement housing was previously assessed and approved through the NEPA process. Since the Air Force needs to remove 36 units, it is reasonable to assume that these units would be demolished in the near future. Therefore, the demolition of these units (approximately 170,238 square feet as described under Alternative 1 and Alternative 2) is addressed under the No Action Alternative.

2.6 ALTERNATIVE SUMMARY

Table 2-2. Alternative Summary

Alternative	Estimated Size of Leased Area (Acres)	Length of Lease (Years)	Units Conveyed "as is"	Year Built	Max Housing Units/Facilities Potentially Demolished		Total End-State Units
					Quantity	Estimated Square Footage**	
Proposed Action							
French Creek	45	50 Years	215	1995	N/A	974	
Moose Lake	40		151	1995			
Century Park North	25		216	2010			
Century Park South	47		144	1992-2001 24 units - 1953			
Galaxy Heights	68		124	4 units - 1964 16 units - 1998 104 units - 2010			
Broadway	23		95	1953-1964			
Ravens Wood	19		29	2010			
Total	267		974	N/A			
Alternative 1	279		974	N/A			36
Alternative 2	265*	934*	36		170,238	898	
No Action	0	0	0	N/A	36	170,238	938

N/A = not applicable; TLF = temporary lodging facility

Notes:

* Under Alternative 2, 40 units distributed between Century Park South and Galaxy Heights would not be conveyed but would be converted to TLFs instead. This also results in a reduction of 14 acres of leased land area.

** Includes total of 124,338 square feet for all units and estimated 1,275 square feet of additional impervious surface area per unit.

Table 2-3. Alternative Impact Summary and Comparison

Resource / Issue Area	Alternatives		
	Alternative 1 (Status Quo)	Alternative 2 (TLF Conversion)	No Action
Air Quality	Demolition emissions would be negligible for all pollutants. Particulate matter emissions from all demolition activities are expected to cause a temporary increase of about 0.79 tons during project activities. No adverse impacts to regional air quality would occur from demolition activities under any of the alternatives.		
Water Resources	The Air Force has not identified any significant adverse impacts to water resources under any of the alternatives. All alternatives involve the demolition of approximately 170,238 square feet. These demolition activities would require an Alaska Pollutant Discharge Elimination System Permit for Construction Activities from the Alaska Department of Environmental Conservation. No project activities would occur within or adjacent to surface waters, wetlands, or floodplains, and there would be no new construction under any alternative.		
Soils	The Air Force has not identified any significant adverse impacts to soil resources under any of the alternatives. The lease of housing areas and conveyance of housing units would have no impact on soil resources. As with water resources, demolition activities would require an Alaska Pollutant Discharge Elimination System Permit for Construction Activities from the Alaska Department of Environmental Conservation, which would identify mitigations and BMPs that would be required to minimize any potential erosion or stormwater impacts.		
Hazardous Materials & Waste	The Air Force has not identified any significant adverse impacts associated with hazardous materials and waste under any of the alternatives. While there are no designated ERP sites within or near the project areas, there is an area of contamination located adjacent to the French Creek housing area that is currently under investigation by Eielson AFB. The results of the testing are expected in late June 2011; however, there would be no ground disturbance associated with any of the alternatives, and no significant impacts are anticipated from any potential groundwater contamination.		
Solid Waste	Demolition activities would generate approximately 11,000 tons of solid waste, equating to approximately 10 percent of the annual throughput of the South Cushman Landfill. Application of waste recycling practices would reduce the quantity of waste generated. The quantity of waste generated would not significantly affect the management capability or the overall life expectancy of the South Cushman Landfill.		

BMP = best management practice; ERP = Environmental Restoration Program; TLF = temporary lodging facility

3. AFFECTED ENVIRONMENT

3.1 AIR QUALITY

Air quality is determined by the type and amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. The levels of pollutants are generally expressed on a concentration basis in units of parts per million or micrograms per cubic meter.

The baseline standards for pollutant concentrations are the National Ambient Air Quality Standards and state air quality standards. These standards represent the maximum allowable atmospheric concentration that may occur and still protect public health and welfare.

3.1.1 Affected Environment

Eielson AFB is located on the outskirts of Fairbanks, Alaska, in the Fairbanks North Star Borough. The Fairbanks North Star Borough was initially designated as an attainment area for all criteria pollutants except for PM_{2.5} (particulate matter with a diameter of less than or equal to 2.5 microns) (U.S. Environmental Protection Agency [USEPA], 2010). However, based on recommendations of ADEC and the Eielson AFB Commander, USEPA revised the PM_{2.5} boundary in a December 22, 2008, letter to Governor Sarah Palin. The modified boundary of the nonattainment area does not include Eielson AFB. Thus, Eielson AFB is designated as an attainment area for all criteria pollutants.

Table 3-1 lists Fairbanks North Star Borough emissions per USEPA's 2002 National Emissions Inventory (NEI). The borough data include emissions from point sources, area sources, and mobile sources. *Point sources* are stationary sources that can be identified by name and location. *Area sources* are point sources of emissions too small to track individually, such as a home or small office building or a diffuse stationary source, such as wildfires or agricultural tilling. *Mobile sources* are any kind of vehicle or equipment with gasoline or diesel engine, an airplane, or a ship. Two types of mobile sources are considered: on-road and nonroad. On-road consists of vehicles such as cars, light trucks, heavy trucks, buses, engines, and motorcycles. Nonroad sources are aircraft, locomotives, diesel and gasoline boats and ships, personal watercraft, lawn and garden equipment, agricultural and construction equipment, and recreational vehicles (USEPA, 2009).

Table 3-1. Baseline Emissions Inventory for Fairbanks North Star Borough

Source Type	Emissions (tons/year)					
	CO	NO _x	PM ₁₀	PM _{2.5}	SO ₂	VOCs
Area source	8,044	916	28,554	3,491	1,015	1,506
Nonroad mobile	7,220	468	91	83	57	1,711
On-road mobile	9,935	1,227	30	23	26	557
Point source	2,611.56	6,336.64	5,633.57	1,380.61	4,611.89	73.51
Total	27,810	8,948	34,308	4,977	5,709	3,848

Source: USEPA, 2002

CO = carbon monoxide; NO_x = nitrogen oxides; PM₁₀ and PM_{2.5} = particulate matter with a diameter of less than or equal to 10 microns and 2.5 microns, respectively; SO₂ = sulfur dioxide; VOC = volatile organic compound

3.2 WATER RESOURCES

Water resources analyzed in this section include surface water and groundwater quantity and quality. Surface water resources include lakes, rivers, and streams and are important for a variety of reasons, including economic, ecological, recreational, and human health. Groundwater resources include subsurface hydrologic resources of the physical environment and are an essential resource in some regions. Groundwater properties are often described in terms of depth to aquifer or water table, water quality, and surrounding geologic composition.

Other issues relevant to water resources include the downstream water and watershed areas affected by existing and potential runoff as well as hazards associated with 100-year floodplains. Floodplains are defined by EO 11988, *Floodplain Management*, as “the lowland and relatively flat areas adjoining inland and coastal waters including flood-prone areas of offshore islands, including at a minimum, the area subject to a one percent or greater chance of flooding in any given year” (that area inundated by a 100-year flood). Floodplain values include natural attenuation of floods, water quality maintenance, groundwater recharge, and habitat for many plant and animal species.

Section 404 of the Clean Water Act established a program to regulate the discharge of dredged and fill material into waters of the United States, including wetlands. Activities in waters of the United States that are regulated under this program include fills for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and conversion of wetlands to uplands for farming and forestry. EO 11990, *Wetlands Management*, requires all federal agencies to avoid negatively impacting wetlands whenever possible.

The region of influence (ROI) for water resources in this EA is the boundaries of Eielson AFB and surface water resources immediately adjacent to the base.

3.2.1 Affected Environment

3.2.1.1 Surface Water

Water bodies within Eielson AFB boundaries include streams, wetlands, and lakes. There are approximately 28 miles of streams, 10,133 acres of wetlands, 12 lakes (Lilly Lake is the only natural lake), 80 ponds (10 naturally occurring and 70 man-made) totaling 560 acres, and 6,770 acres of floodplains on the main base. The man-made lakes and ponds were created during the excavation of gravel deposits for use as fill material for construction projects on the developed area of the installation and surrounding satellite facilities on base. Surface drainage on Eielson generally flows in a north-northwest direction and parallel to the Tanana River. Five streams flow through the base and discharge into the Tanana River via Piledriver Slough. Piledriver and Garrison Sloughs are the two largest streams in the vicinity of the airfield. Piledriver Slough, which discharges into the Tanana River, is located along the western edge of Eielson and approximately 4,000 feet west of the airfield and parallel to the runways. Garrison Slough crosses the developed area of the base in a somewhat channelized form. Approximately 12 miles of Piledriver Slough cross Eielson. The slough receives no runoff from the urban developed area of the base and has good water quality.

Figure 3-1 shows surface water resources associated with the project areas. No ground-disturbing activities are proposed adjacent to surface water resources.

3.2.1.2 Groundwater

Eielson AFB is located over a shallow, unconfined aquifer. The aquifer is greater than 250 feet thick, extends to the underlying bedrock, and has a regional gradient of about 5 feet per mile flowing to the north-northwest. The water table varies from the surface in adjacent wetlands to 10 feet below ground level in developed areas. The base uses the local aquifer for drinking water and monitors groundwater quality in a number of locations as part of its ERP. Localized contamination of the aquifer has been identified in the industrial area of the base, but the overall quality of groundwater at Eielson is good.

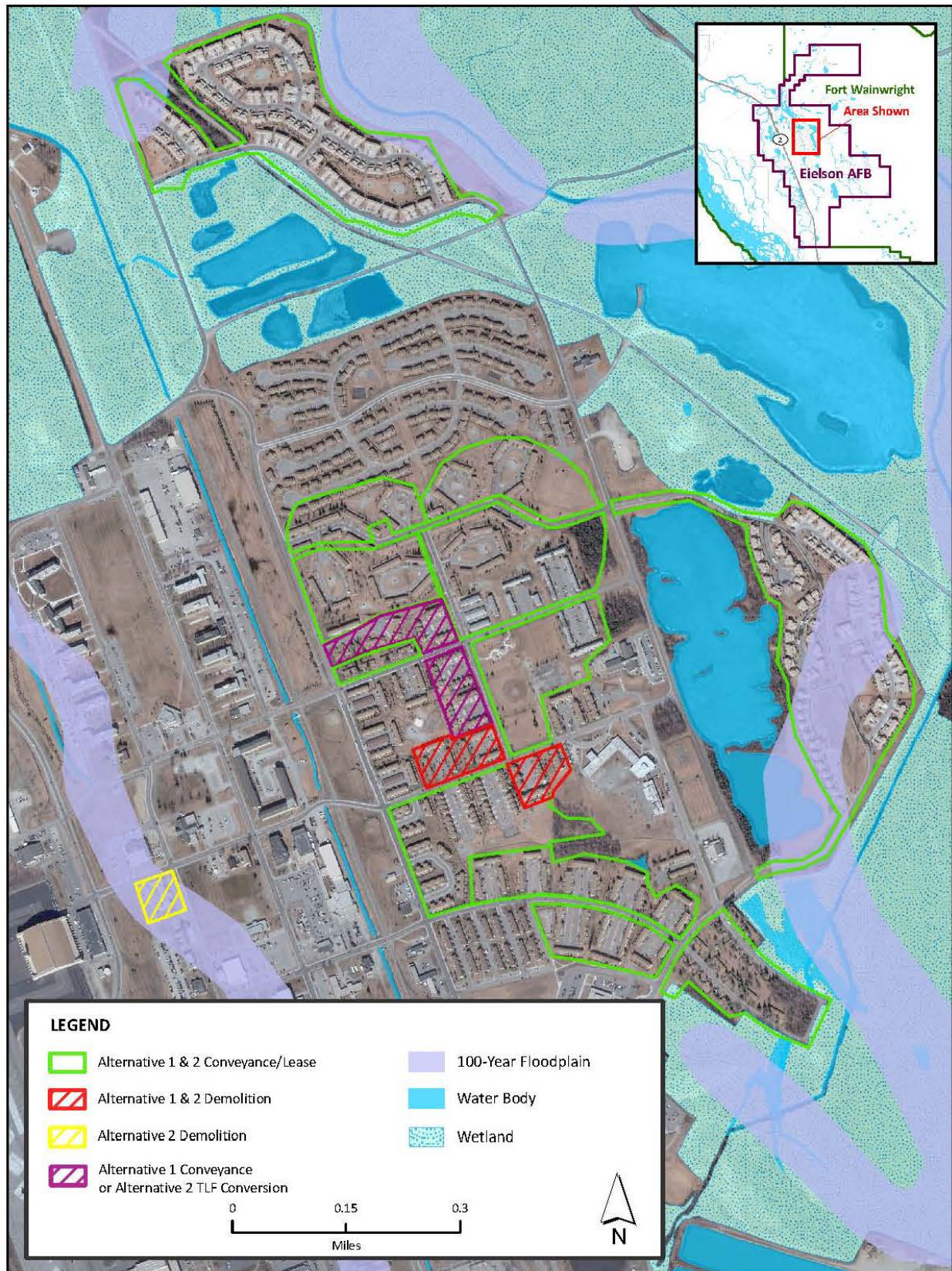


Figure 3-1. Water Resources at Eielson AFB

3.2.1.3 Floodplains and Wetlands

Approximately 51 percent, or 10,133 acres, of Eielson base property is classified as wetlands, with 9,391 acres being vegetated wetlands and the remainder being lakes, ponds, and streams. Figure 3-1 depicts the wetlands and surface waters of Eielson AFB. Wetlands and low-gradient alluvial streams compose most of the surface water resources on Eielson, with wetlands dominating the low-lying areas within and surrounding the installation. Most wetland areas were created as a result of surface waters becoming trapped in the thawed layer over the permanently frozen subsurface (permafrost). Flood periods tend to occur during spring snowmelt and during the middle to late summer, when heavy rains or warm air quickly brings glacier fed mountain streams to flood capacity. Several lakes and extensive wetlands surround the airfield. Among these are Bear, Polaris, Moose, Hidden, Pike, Rainbow, Scout, Grayling, and Tar Kettle Lakes. Creeks in the vicinity of the airfield include French and Moose Creeks.

While there are 100-year floodplains within the MFH areas, no ground-disturbing activities are proposed within or adjacent to wetlands or floodplains as a result of the MHPI. However, EO 11988, *Floodplain Management*, Section 3(d) requires that “when property in floodplains is proposed for lease, easement, right-of-way, or disposal to non-Federal public or private parties, the Federal agency shall (1) reference in the conveyance those uses that are restricted under identified Federal, State or local floodplain regulations; and (2) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successors, except where prohibited by law; or (3) withhold such properties from conveyance.” As a result, the contract between the Air Force and the MHPI developer would be required to include identification of floodplain areas and any associated land use restrictions.

3.3 SOILS

The term “soil” refers to unconsolidated materials overlying bedrock or other parent material. Soils play a critical role in both the natural and human environment. Soil structure, elasticity, strength, shrink-swell potential, and erodibility all determine the ability of the ground to support man-made structures and facilities, to provide a landscaped environment, and to control the transport of eroded soils into nearby drainages. In undeveloped areas, the quality and productivity of soil are a critical

component of agricultural production. The ROI for soil resources includes the MHPI portion of Eielson AFB where demolition activities could potentially occur (Figure 3-1).

3.3.1 Affected Environment

Soils in the Tanana River Valley consist of unconsolidated silty sands and gravels, organic and sandy silts, and clays. Floodplain soils nearest the active channels are sandy with a thin silt loam layer on the surface. On higher terraces, the soils become predominately silt from the Salchaket series. Along older river terraces, silt loam soils, which contain significant organic components, often dominate. These soils tend to be cold and wet and are generally underlain by permafrost. Approximately two-thirds of Eielson is covered with soils containing discontinuous permafrost. This preponderance of permafrost soils contributes to the large percentage of vegetated wetlands occurring on undeveloped base lands.

Figure 3-2 shows the soil resources associated with the installation and project area. The developed area of the base is composed of fill material deposited atop reclaimed wetlands. Much of this area is over 40 years old. This artificial substrate is composed of quarried Tanana floodplain gravels, cobble, and soil material built up as poorly sorted material to a thickness of between 3 and 8 feet and providing a firm platform for base construction that is devoid of wetlands, above the 100-year floodplain, and insulated from the permafrost layer. A levee system maintains a flood safety margin for housing areas. As a result, the developed area of the base rests much like an artificial island above the surrounding forested wetlands and sloughs.

3.4 HAZARDOUS MATERIALS AND WASTE

This section describes the affected environment associated with hazardous materials and hazardous wastes, asbestos, lead-based paint, and ERP sites at Eielson AFB.

The terms *hazardous materials* and *hazardous waste* refer to substances defined as hazardous by the Comprehensive Environmental Response, Compensation and Liability Act and the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA).

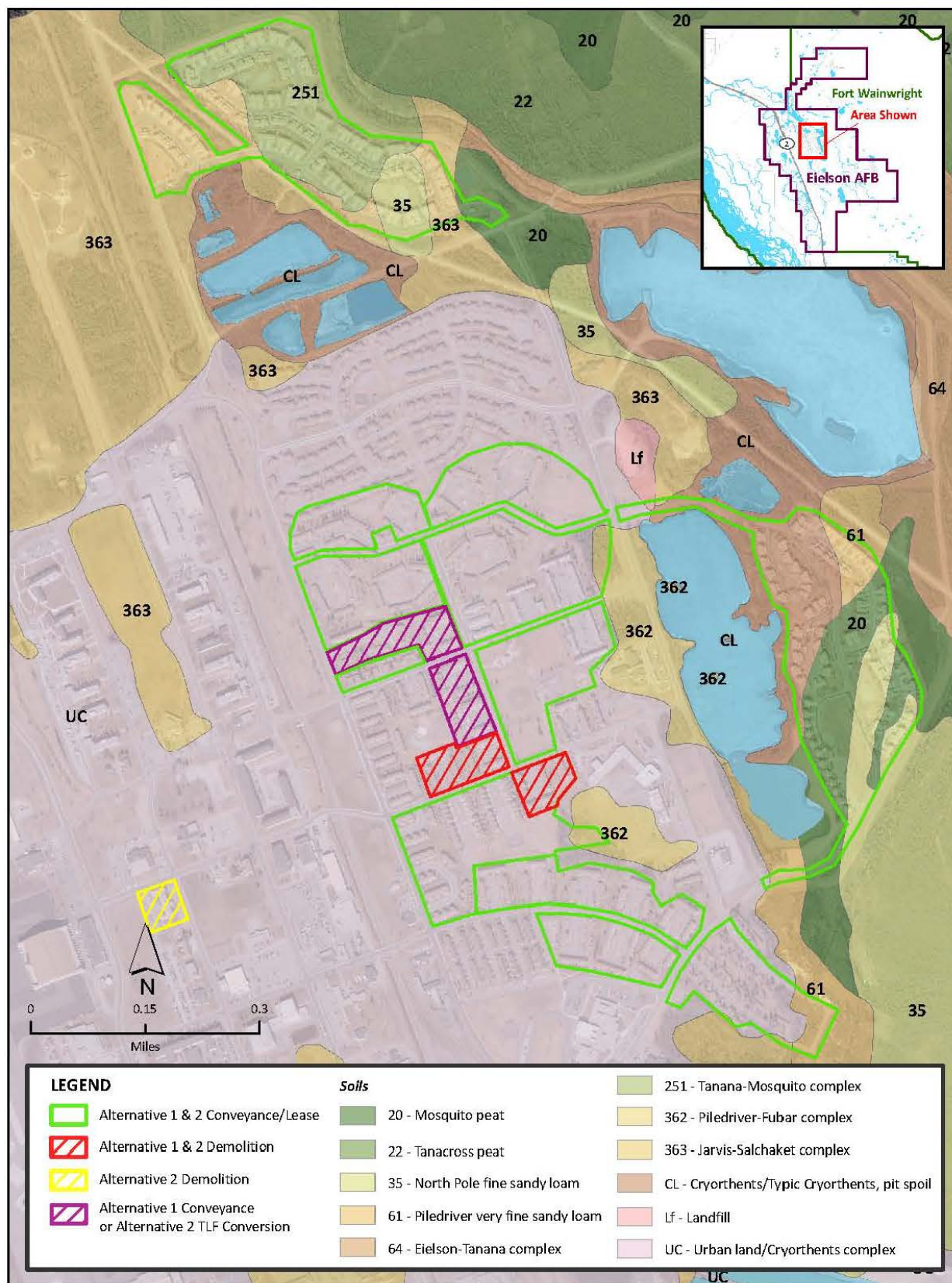


Figure 3-2. Soil Resources at Eielson AFB

In general, hazardous materials include substances that, because of their quantity, concentration, or physical, chemical, or infectious characteristics, may present substantial danger to public health or the environment when released into the environment. Hazardous wastes regulated under RCRA are defined as any solid, liquid, contained gaseous, or semisolid waste, or any combination of wastes that either exhibit one or more of the hazardous characteristics of ignitability, corrosivity, toxicity, or reactivity or are listed as a hazardous waste under 40 CFR Part 261.

The affected resources include the potential presence of asbestos in structures. Asbestos is a naturally occurring mineral that is a very effective heat and sound insulator. Consequently, it has been used in many buildings as a fire and noise retardant. However, asbestos has been linked to several diseases, including lung cancer, and has not been used in construction materials since 1987. Friable (brittle) asbestos becomes hazardous when fibers become airborne and are inhaled.

The affected resources also include the potential presence of lead-based paint (LBP) in structures. Lead was used as an additive and pigment in paints for many years prior to 1978; therefore, older structures on the base that have multiple layers of older paint are potential sources of lead. Lead has been associated with central nervous system disorders, particularly among children and other sensitive populations. Exposure to lead is usually through inhalation during renovation and demolition activities or through ingestion of paint chips or lead-contaminated drinking water.

Affected resources also include ERP sites. The ERP is used by the Air Force to identify, characterize, clean up, and restore sites contaminated with toxic and hazardous substances, low-level radioactive materials, petroleum, oils, lubricants, or other pollutants and contaminants. The ERP has established a process to evaluate past disposal sites, control the migration of contaminants, identify potential hazards to human health and the environment, and remediate the sites.

The ROI for hazardous materials and waste is defined as the boundary of MFH areas. It encompasses areas that could be exposed to an accidental release of hazardous substances from demolition activities and areas where hazardous materials would be utilized and hazardous wastes generated under the Proposed Action.

The affected resources do not include radon in structures. Air Force policy requires the implementation of a mitigation program to prevent exposure at indoor radon levels above 4 picocuries per liter (pCi/L). A radon survey conducted at all Eielson AFB base housing units found that none of the samples exceeded the 4-pCi/L threshold limit. The highest level recorded was 2.4 pCi/L in a single basement. Based

on the results, radon was not identified as an issue at the installation that required mitigation (U.S. Air Force, 1992).

The affected resources also do not include petroleum storage tanks. No aboveground or underground storage tanks are associated with MFH areas.

3.4.1 Affected Environment

3.4.1.1 Hazardous Materials and Hazardous Waste

MFH areas contain no industrial facilities; however, residents may purchase cleaning supplies and other chemicals for personal use that contain constituents classified as hazardous materials. These products are typical of those found in a household and include gasoline, motor oils, paints and thinners, small volumes of pesticides, cleaning solvents, and janitorial supplies. The use of these chemicals is not tracked by the installation, and the quantity stored of these materials is unknown.

Routine household hazardous wastes are generated in MFH areas. Procedures for managing these wastes are included in the Eielson AFB Family Housing Brochure, which is provided to all housing residents (U.S. Air Force, 2004). Oils, antifreeze, fuels, and other hazardous material generated by those living in base housing may be turned in at the Hazardous Waste Facility (HWF) in Building 4385 or the Fairbanks North Star Borough Landfill.

Oils and antifreeze from base housing residents may also be taken to the Auto Hobby Shop during business hours. Products must be transported in separate containers that are in good condition and not leaking. Used car/all-terrain vehicle batteries may be taken to the base service station for proper disposal. Hazardous wastes generated at Eielson AFB are temporarily stored at the HWF until these wastes can be disposed by permitted contractors (U.S. Air Force, 2007).

The base also has established procedures for managing wastes from construction or demolition activities. These activities are coordinated with the installation's Environmental Office. Established procedures include removing and properly disposing prior to demolition of any items containing polychlorinated biphenyls (PCBs) (such as light ballasts) and mercury-containing devices (such as fluorescent tubes or thermostats). Other suspected hazardous materials encountered during construction or demolition must be brought to the attention of the Contracting Officer's (CO's) representative. Work shall not resume until the CO is satisfied that the materials are not hazardous. Should they be found to be hazardous, the contractor must take steps

to contain the material, so further damage and contamination does not occur (U.S. Air Force, 2010).

3.4.1.2 Asbestos

Eielson AFB manages asbestos-containing material (ACM) in place where possible, removing it only when there is a threat to human health or the environment or when it is in the way of construction or demolition. Eielson's Asbestos Management Plan provides guidance for the identification of ACMs during renovation or remodeling projects and the management of asbestos wastes. An asbestos facility register is maintained by the base Civil Engineer. The design of building alteration projects and requests for self-help projects are reviewed to determine if ACMs are present in the proposed work area. ACM wastes are removed by the contractor and disposed of in accordance with state and federal regulations. All labeled, double-bagged waste containers are disposed of in the ADEC-permitted asbestos landfill (Permit 0231-BA001) located on the installation, in accordance with ADEC permit requirements (U.S. Air Force, 2006b).

3.4.1.3 Lead-Based Paint

Like ACM, Eielson AFB manages LBP in place where possible, removing it only when there is a threat to human health or the environment or when it is in the way of construction or demolition. The Eielson AFB Lead-Based Paint Management Plan provides specific policy and guidance to identify and address LBP hazards and to protect the public from exposure to these hazards. The plan also provides guidance on proper management and disposal of material containing LBP through Eielson AFB's HWF.

3.4.1.4 ERP Sites

The ERP at Eielson AFB has addressed actions for 66 contaminated sites as specified in Record of Decision documents for Operable Units 1 through 6 and the Site-Wide Record of Decision. Contaminant levels remain above regulatory action levels at 21 of the 66 sites for which enforced institutional controls or land use restrictions apply. These sites are primarily associated with locations of historic fuel spills or past use of PCBs. Land use control sites have been delineated and are regulated to prevent human exposure to contamination (U.S. Air Force, 2008). No ERP sites are located within MFH areas, although several ERP sites are located within close

proximity (Figure 3-3). All cleanup activities have been accomplished for these ERP sites and they have received regulatory closure (U.S. Air Force, 2001). None of these sites would be impacted by actions associated with the Proposed Action.

A potential contamination site has been identified near the French Creek subdivision, which may affect several housing units in that area. During a fiber optics cable installation project in June 2005, petroleum hydrocarbon contamination was encountered in soil approximately 250 feet west of the Defense Fuel Supply Pipeline on Manchu Road near the French Creek subdivision. Subsequent environmental sampling in 2006 and 2010 indicated that petroleum hydrocarbon concentrations in groundwater have reached the French Creek subdivision boundary at concentrations that may exceed ADEC cleanup levels of diesel range organics, gasoline range organics, and benzene. The affected area is located between ponds and an utilidor and French Creek Drive on Manchu Road. The area is approximately 600 feet along Manchu Road by 300 feet along the pipeline, covering approximately 4 acres (Golder Associates, 2010).

The soil types encountered in the areas investigated to date generally consisted of silty sand and gravel, and the water table ranged from 4 to 6 feet below ground surface. The contaminant plume in the groundwater (Figure 3-4) is elongated along Manchu Road, which is not consistent with the reported groundwater flow direction toward the northwest. This suggests that the predominant groundwater flow direction may actually be to the northeast, or the contaminant plume migration is locally controlled by preferential flow paths created by underground features such as imported fill for Manchu Road or underground utilities (e.g., utilidor) (Golder Associates, 2010).

Jurisdiction over the site (referred to as the Pipeline Release Site) was transferred to the ADEC contaminated sites program in February 2007 (Golder Associates, 2010).

The responsible party for the Pipeline Release Site is the Defense Energy Support Center (DESC), which is part of the Defense Logistics Agency, a federal agency that provides energy and associated services for the federal government. At a meeting in 2010 between ADEC and DESC, ADEC requested further assessment to evaluate the groundwater flow direction, the extent and magnitude of contamination in the subsurface, and monitoring for natural attenuation of the contaminants. DESC is in the process of preparing a work plan for further assessment to provide data that will be used to support a feasibility study to evaluate cleanup alternatives for the Pipeline Release Site (Golder Associates, 2010).

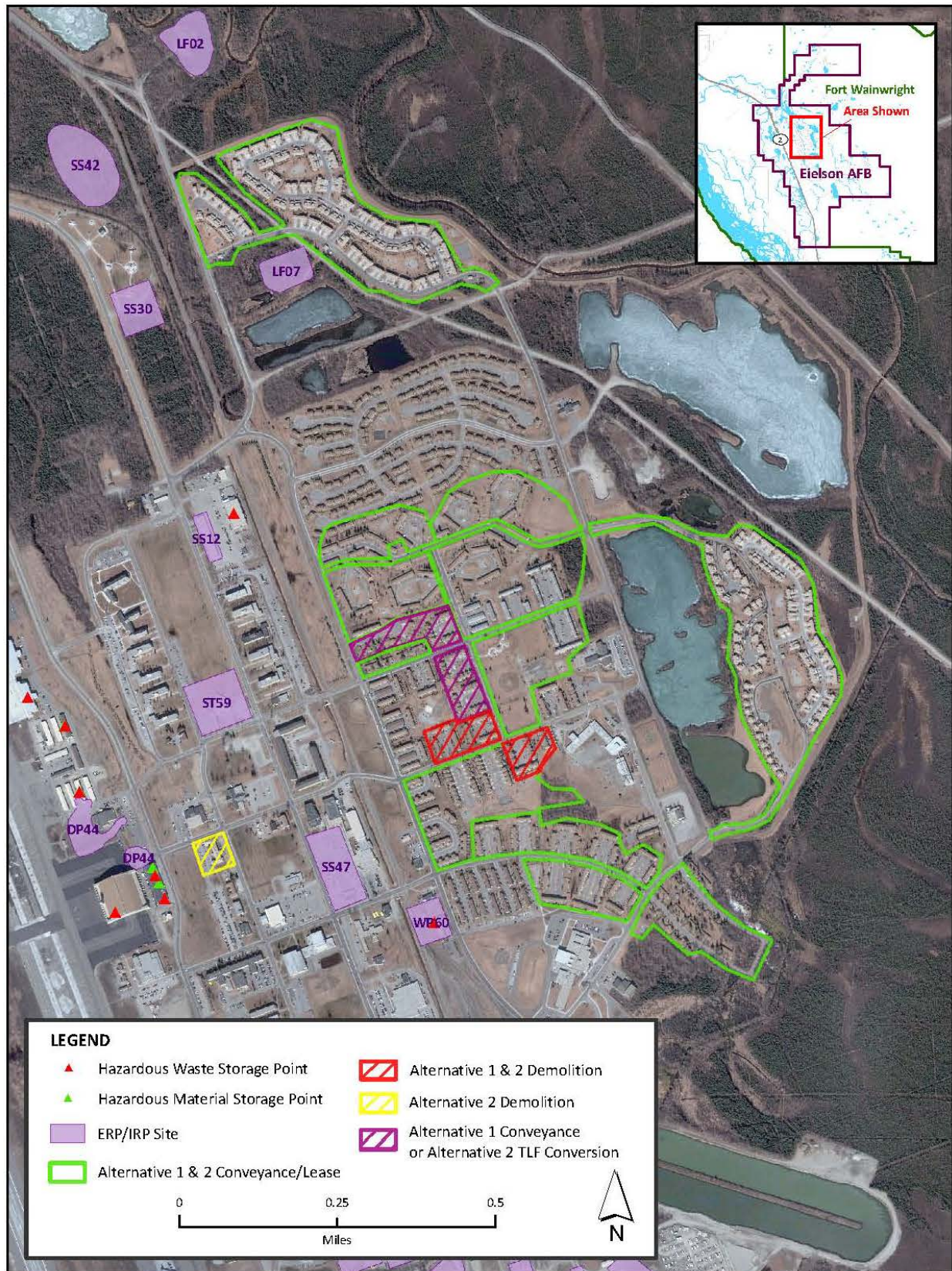


Figure 3-3. ERP Sites On or Near MFH Areas

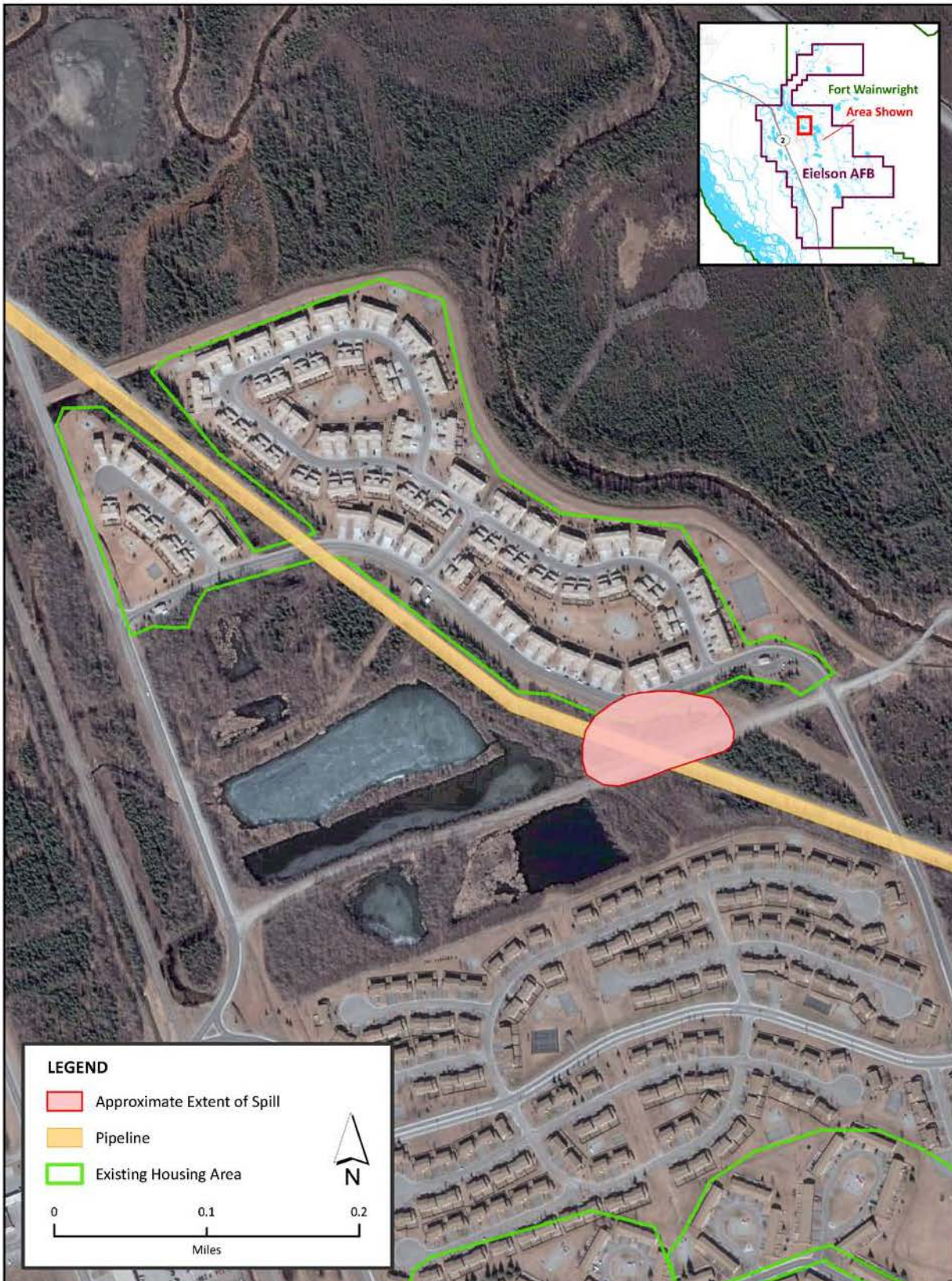


Figure 3-4. Area of Contamination for Pipeline Release Site

An environmental liability exposure assessment of the area was conducted in October 2010. Based on the available data, the assessment concluded that adverse impacts to the French Creek subdivision could not be ruled out, in particular air inhalation risk pathways to future construction workers and current and future residents of the subdivision (i.e., vapor intrusion) (Golder Associates, 2010).

Eielson AFB requested that DESC conduct further testing to determine the potential for vapor intrusion into the housing units closest to the MP23.58 spill site. DESC agreed to conduct additional vapor intrusion investigatory activities and scheduled sampling activities for December 2010 and June 2011.

3.5 SOLID WASTE

“Solid waste” is defined in Alaska Statute 46.03.900 as garbage, refuse, abandoned, or other discarded solid or semi-solid material, regardless of whether subject to decomposition, originating from any source. Alaska solid waste regulations (18 Alaska Administrative Code, Chapter 62) govern the accumulation, storage, and disposal of solid wastes. These regulations specify permit requirements for landfills and the types of waste landfills can accept. Wastes generated or requiring management under this action would be C&D wastes.

Air Force regulatory requirements and management of solid waste are established by Air Force Policy Directive (AFPD) 32-70, *Environmental Quality*. AFPD 32-70 requires compliance with applicable federal, state, and local environmental laws and standards. For solid waste, AFPD 32-70 is implemented by Air Force Instruction (AFI) 32-7042, *Solid and Hazardous Waste*. AFI 32-7042 requires that each installation have a solid waste management program that includes a solid waste management plan that addresses handling, storage, collection, disposal, and reporting of solid waste. AFI 32-7080, *Pollution Prevention Program*, contains the solid waste requirement for preventing pollution through source reduction, resource recovery, and recycling. The 354 CES/CEAN at Eielson AFB manages the solid waste management programs.

The impacted resource associated with the generation of solid waste and subsequent disposal is the available landfill capacity located within the ROI.

3.5.1 Affected Environment

Collection and disposal of solid waste at Eielson AFB is conducted by a private contractor under the direction of the Civil Engineering Squadron Contracting Office. Solid waste generated at Eielson AFB is transported for disposal to the South Cushman Landfill, operated by the Fairbanks North Star Borough. The landfill, which is located approximately 2.5 miles south of downtown Fairbanks, occupies approximately 252 acres of land just north of the Tanana River levee. The facility has been in operation since 1963. In 1999, the landfill area was expanded by opening the first of nine lined landfill cells. These cells are estimated to provide additional area for solid waste disposal until approximately year 2035 (MACTEC, 2005).

The Fairbanks North Star Borough reported that a total of 111,437 tons of solid waste went into the South Cushman Landfill in Fiscal Year 2005 (FY05) (the last year for which detailed data are available). This quantity is representative of the amount of waste disposed in any given year at the landfill. In FY05, solid waste disposed by Eielson AFB at the landfill composed approximately 5 percent (4,260 tons) of the total landfill throughput. Typically, C&D waste makes up approximately 15 percent of the landfill's annual waste stream (MACTEC, 2005).

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4. ENVIRONMENTAL CONSEQUENCES

4.1 AIR QUALITY

4.1.1 Analysis Methodology

Demolition activities are the main issue generated by the proposed action and alternatives and will be the focus of the air analysis. This includes emissions from heavy construction machinery, semi-tractor trailer rigs, dust (particulate matter) from demolition, and vehicle exhaust from personal vehicles of contracted employees. For the purposes of analyzing the Proposed Action, a threshold on an individual pollutant-by-pollutant basis has been established. The individual pollutant emissions from the project would not exceed 10 percent of Fairbanks North Star Borough emissions for each corresponding pollutant as represented in the USEPA 2002 NEI (U.S. Air Force, No Date).

In order to evaluate the air emissions and their impact to the overall ROI, the emissions associated with the project activities were compared with the total emissions on a pollutant-by-pollutant basis as given in the ROI's 2002 NEI data. Potential impacts to air quality are identified as the total emissions of any pollutant that equals 10 percent or more of the ROI's emissions for that specific pollutant. The 10 percent criteria approach is used in the General Conformity Rule as an indicator for impact analysis for nonattainment and maintenance areas. Although Eielson AFB in the Fairbanks North Star Borough is designated as an attainment area, the General Conformity Rule's impact analysis was utilized to provide a consistent approach to evaluating the impact of construction and aircraft emissions. To provide a more conservative evaluation, the impacts screening in this analysis, used more restrictive criteria than required in the General Conformity Rule. Rather than comparing emissions from construction activities with regional inventories (as required in the General Conformity Rule), emissions were compared with those of the individual borough (Fairbanks North Star) potentially impacted, which is a smaller area.

A DoD-developed model, the Air Conformity Applicability Model (ACAM), was utilized to provide a level of consistency with respect to emissions factors and calculations. Air emissions estimated using ACAM were compared with the established 10 percent criterion for Fairbanks North Star Borough as represented in the USEPA 2002 NEI (USEPA, 2002). The air quality analysis focuses only on emissions associated with construction and demolition activities under the Proposed Action. Air

quality issues associated with operational activities at Eielson AFB after the completion of construction are not included in this evaluation.

4.1.2 Alternative 1: Status Quo

Under this alternative, approximately 170,238 square feet of demolition would occur. It was assumed all demolition activities would be completed within one year. The emissions were compared to Fairbanks North Star Borough emissions to determine significance (Table 4-1). Demolition emissions would be negligible for all pollutants. Particulate matter emissions from all demolition activity are expected to cause a temporary increase of 0.79 tons. Therefore, no adverse impacts to regional air quality would occur under Alternative 1.

Table 4-1. Alternative 1 Emissions Compared With Fairbanks North Star Borough

Emission Activities	Emissions (tons/year)					
	CO	NO _x	PM ₁₀	PM _{2.5}	SO ₂	VOCs
Demolition emissions	0.00	0.00	0.79	0.79	0.00	0.00
Fairbanks North Star Borough emissions	27,810.56	8,947.64	34,308.57	4,977.61	5,709.89	3,847.51
Percentage of county emissions	0.00%	0.00%	0.00%	0.02%	0.00%	0.00%

CO = carbon monoxide; NO_x = nitrogen oxides; PM₁₀ and PM_{2.5} = particulate matter with a diameter of less than or equal to 10 microns and 2.5 microns, respectively; SO₂ = sulfur dioxide; VOC = volatile organic compound

4.1.3 Alternative 2: TLF Conversion

This alternative is the same as Alternative 1 with the addition of the TLF conversion and no additional demolition. Thus, the total demolition would be the same as under Alternative 1 and no adverse impacts to regional air quality would result under this alternative.

4.1.4 No Action Alternative

Under the No Action Alternative, demolition would occur as described for Alternative 1. A temporary increase in particulate matter emissions would occur (0.79 ton) during demolition activities. These emissions are negligible and would have no adverse impacts to regional air quality.

4.2 WATER RESOURCES

4.2.1 Analysis Methodology

Evaluation criteria for impacts associated with the Proposed Action on water resources focus on whether the Proposed Action would do one or more of the following:

- Substantially affect water quality adversely
- Endanger public health by creating or worsening adverse health hazard conditions
- Threaten or damage unique hydrologic resources
- Violate established laws or regulations that have been adopted to protect or manage water resources of an area

Impacts of flood hazards related to proposed actions can be significant if such actions are in areas with high probabilities of flooding or in some way alter flood conveyance.

4.2.2 Alternative 1: Status Quo

Since there would be only minimal ground-disturbance activities associated with demolition activities and no increases in impervious surface area, Alternative 1 would not yield any significant adverse impacts to water resources. For purposes of analysis, that approximately 170,238 square feet of demolition are estimated to occur under Alternative 1, and there would be no new construction. Conveyance of housing units and leasing of housing areas would have no impact on water resources. Demolition activities have the potential to cause direct and indirect erosion impacts to adjacent wetlands and surface water bodies. However, no surface water bodies or wetlands are adjacent to the proposed demolition sites (Figure 3-1) and the Air Force has not identified any adverse impacts associated with Alternative 1. Alternative 1 would actually result in a decrease in the amount of impervious surface area on the installation, which would serve to improve stormwater flow on Eielson AFB.

Since demolition activities would result in disturbance of more than 1 acre of land, an Alaska Pollutant Discharge Elimination System Permit for Construction Activities from ADEC would be required. As part of the permitting process, the developer would need to submit an erosion and sedimentation control plan

(Stormwater Pollution Prevention Plan) that incorporates specific conservation and engineering practices or mitigations. While it is unknown at this time what mitigations would be developed through the permitting process, potential mitigations based on typical permit requirements are identified below:

- Installation and maintenance of permanent sediment runoff control measures for heavy storm events
- Inspection and maintenance of sediment runoff control measures after rain events
- Stabilization of disturbed areas as soon as possible
- Timing of activities to minimize impacts from seasonal climate changes and weather events
- Construction of stormwater infiltration/collection measures
- Minimization of soil disturbance and leaving of vegetation in place whenever and wherever possible

After demolition has been completed, all disturbed areas would be stabilized with landscaping, most likely a combination of lawns and annual planting beds, which would minimize erosion and improve infiltration of precipitation.

While there are 100-year floodplains within the MFH areas, no ground-disturbing activities are proposed within or adjacent to wetlands or floodplains as a result of the MHPI. However, EO 11988, *Floodplain Management*, Section 3(d) requires that “when property in floodplains is proposed for lease, easement, right-of-way, or disposal to non-Federal public or private parties, the Federal agency shall (1) reference in the conveyance those uses that are restricted under identified Federal, State or local floodplain regulations; and (2) attach other appropriate restrictions to the uses of properties by the grantee or purchaser and any successors, except where prohibited by law; or (3) withhold such properties from conveyance.” As a result, the contract between the Air Force and the MHPI developer would be required to include identification of floodplain areas and any associated land use restrictions.

4.2.3 Alternative 2: TLF Conversion

Alternative 2 would not have result in any significant adverse impacts to water resources. In addition to Alternative 1 activities, the Air Force would convert

40 housing units located at Rainbow Court to TLFs. This activity would not result in any additional impacts beyond those described for Alternative 1.

Alternative 2 would require an Alaska Pollutant Discharge Elimination System Permit for Construction Activities, with the same permit requirements identified for Alternative 1.

4.2.4 No Action Alternative

Under the No Action Alternative, it is reasonable to assume that older surplus units would be demolished in the near future. The impacts associated with demolition of these units (approximately 170,238 square feet) would be the same as described under Alternative 1 and Alternative 2 and would not result in any significant adverse impacts. An Alaska Pollutant Discharge Elimination System Permit for Construction Activities would be required for this alternative, with the same permit requirements as identified for Alternative 1.

4.3 SOILS

4.3.1 Analysis Methodology

The potential for soil erosion and impacts to soil productivity in relation to potential soil limitations are considered when evaluating impacts to soils. Generally, impacts can be avoided or minimized if proper demolition techniques, erosion control measures, and structural engineering designs are incorporated into project development. Analysis of impacts to soil resources resulting from proposed activities examines the potential erosion impacts at locations for demolition activities. Impacts to soil resources can result from earth disturbance that exposes soil to wind or water erosion.

Proposed demolition activities would occur in previously developed areas at Eielson AFB. Soils in these areas have been disturbed by various construction activities related to the housing areas and the supporting infrastructure such as roads and sidewalks. Therefore, impacts to the productivity of soils were not evaluated.

4.3.2 Alternative 1: Status Quo

Alternative 1 would not cause significant adverse impacts to soil resources. For purposes of analysis, approximately 170,238 square feet of demolition is estimated

under Alternative 1, with no new construction. Conveyance of housing units and leasing of housing areas would have no impact on soil resources. Demolition activities have the potential for resulting in disturbance of soils and erosion impacts. However, requirements associated with the Alaska Pollutant Discharge Elimination System Permit for Construction Activities and resultant Stormwater Pollution Prevention Plan identified in Section 4.2 (Water Resources) would apply and would serve to minimize any potential soil erosion issues. As a result, the Air Force has not identified any significant adverse impacts to soil resources under Alternative 1.

4.3.3 Alternative 2: TLF Conversion

Alternative 2 would not have any significant adverse impacts to soil resources, with impacts and requirements being the same as those identified for Alternative 1. Conversion of housing units to TLFs would not result in any additional impacts. As a result, the Air Force has not identified any significant adverse impacts to soil resources under Alternative 2.

4.3.4 No Action Alternative

Impacts associated with the No Action Alternative would be the same as those described under Alternative 1. Consequently, the Air Force has not identified any significant adverse impacts to soil resources under the No Action Alternative.

4.4 HAZAROUS MATERIALS AND WASTE

4.4.1 Analysis Methodology

The analysis focuses on how and to what degree proposed activities would affect hazardous materials management and hazardous waste generation and management. The analysis includes potential impacts related to hazardous materials and hazardous wastes for the following effects:

- Potential for increased likelihood of a release of hazardous materials (e.g., asbestos or lead from building demolition activities) that could contaminate soil, surface water, groundwater, or air. Analysis of proposed activities determines the potential for these releases and compares the results to the mitigation procedures currently in place. A significant impact would result if implementation of the proposed activities resulted in an uncontrolled release of hazardous materials with a potential to cause environmental damage.

- Potential for adverse impacts to an existing ERP site, such as disturbing the ground in a site identified as having contaminated soil or by causing damage to existing site remediation infrastructures (e.g., pumps and tanks). The evaluation includes the identification and comparison of existing ERP site locations and status regarding the location and scope of proposed activities. In addition, the analysis compares site-specific conditions, such as the existence of land use controls against proposed activities, to assess the extent of impacts that overlap existing ERP sites. A significant impact would result in disturbance of an ERP site that would require remediation measures or regulator involvement.

4.4.2 Alternative 1: Status Quo

Under Alternative 1, common household chemicals would continue to be used and household hazardous wastes generated in MFH areas. The Eielson AFB Family Housing Brochure, which is provided to all housing residents, provides guidance for the storage and disposal of household hazardous waste, as well as information related to reporting any hazardous material/waste spills (U.S. Air Force, 2004). No significant impacts to hazardous materials/wastes are anticipated from implementation of Alternative 1.

Alternative 1 involves the demolition of 36 older housing units in the Century Park South Subdivision. Contractors would follow established procedures for managing wastes from demolition activities, including removing and properly disposing prior to demolition of any items containing PCBs (such as light ballasts) and mercury-containing devices (such as fluorescent tubes or thermostats). Consequently, no significant impacts to hazardous materials/wastes are anticipated.

4.4.2.1 Asbestos

The MFH units in Century Park South were originally built in 1953, when ACM was commonly used. A comprehensive survey of ACM has not been conducted for MFH areas. However, older units that have undergone renovation in recent years may still have the potential to contain ACM. The National Emission Standards for Hazardous Air Pollutants (NESHAP) (40 CFR 61.40–157) requires all suspect material (anything other than wood, glass, plastic, metal) to be assumed to be asbestos unless sampling proves otherwise.

Debris generated as a result of demolition of the 36 housing units would be characterized for the presence of asbestos to determine whether to dispose of it as solid waste or hazardous waste. Proper disposal of asbestos wastes would be conducted as directed by NESHAP. Only those contractors who are licensed to perform asbestos abatement work in Alaska would be allowed to work on the project. Contractor personnel would have to be trained and certified. Transport and disposal documentation records, including signed manifests, would also be required.

Implementation of these management requirements would mitigate any adverse impacts resulting from ACM.

4.4.2.2 Lead-Based Paint

LBP debris may also be generated as a result of the proposed demolition of the 36 housing units. The resulting debris would be characterized for the presence of LBP. Demolition of structures known to contain LBP would be conducted in accordance with applicable regulations. Proper disposal of lead-containing wastes would also be conducted in accordance with state and federal regulations, including the Toxic Substances Control Act and OSHA. Further, these wastes would be accompanied by a waste manifest and disposed of at a state-approved facility. Implementation of these management requirements would mitigate any adverse impacts resulting from LBP.

4.4.2.3 ERP Sites

As stated in Chapter 3, no designated ERP sites are located within or near the project areas. However, there is an area of contamination located adjacent to the French Creek housing area that is currently under investigation (Figure 3-4). In order to assess potential risks and, if necessary, mitigate any issues, Eielson AFB has coordinated with DESC to conduct vapor intrusion investigatory activities on the housing units closest to the MP23.58 spill site. A final determination is not expected until after the last sampling round is collected in June 2011. However, there would be no ground disturbance associated with any of the alternatives, and no significant impacts are anticipated from any potential groundwater contamination.

4.4.3 Alternative 2: TLF Conversion

Regarding hazardous materials hazardous and hazardous wastes, conditions under Alternative 2 would be identical to Alternative 1. Therefore, there are no

potential impacts to hazardous materials or hazardous waste, ACM, LBP, or ERP sites for Alternative 2 not already described under Alternative 1.

4.4.4 No Action Alternative

There are no impacts under the No Action Alternative not previously evaluated under Alternative 1. Therefore, the Air Force expects no significant impacts to hazardous materials or hazardous waste, ACM, LBP, or ERP sites.

4.5 SOLID WASTE

4.5.1 Analysis Methodology

The alternatives evaluated within this EA would result in the generation of C&D debris associated with the demolition, construction, and renovation as identified in Chapter 2. C&D debris includes materials such as construction materials for buildings, concrete, and asphalt rubble. Sampling studies documented in *Estimating Building-Related Construction and Demolition Debris in the United States* (USEPA, 2003) indicate that the solid waste generation rate during residential construction activities is 4.38 pounds per square foot (lb/ft²) of debris. Similarly, the USEPA guidance indicates that the average generation rate associated with the demolition of residential structures within the United States is approximately 115 lb/ft². Generation rates associated with renovation of facilities have not been established; therefore, in order to develop a conservative estimate, the generation rate associated with demolition activities (115 lb/ft²) was used in calculating the mass of debris from renovation activities. Because the Proposed Action and alternatives include housing unit renovation and demolition and desired feature construction related to housing personnel, the generation rates associated with residential construction activities was deemed appropriate for use in this evaluation.

In addition to debris generated from the construction of structures and the demolition and/or renovation of housing units, additional C&D debris would result from the demolition of associated impervious areas (e.g., patios, walkways, driveways, roads) as discussed in Section 2.5.1. For estimating purposes, a depth of concrete and asphalt for impervious surfaces and roads of 6 inches (0.5 feet) was selected. This depth was then multiplied by the total impervious area and multiplied by concrete density (150 lb/ft³) or asphalt (125 lb/ft³) to determine the total weight of debris that would be produced. The number of pounds was then divided by 2,000 to give the weight in tons.

4.5.2 Alternative 1: Status Quo

Municipal solid waste would continue to be generated at MFH areas as under the baseline condition. Housing demolition activities associated with Alternative 1 would result in the generation of C&D wastes, including miscellaneous building debris and concrete and asphalt rubble. Table 4-2 shows the estimated C&D solid waste generated under Alternative 1 based on solid waste generation rates described under the in Section 4.5.1.

Table 4-2. C&D Waste Generated From Implementation of Alternative 1

Scope of Demolition	Demolition Area(square feet)	C&D Weight (lb)	C&D Weight (tons)
36 housing units	124,338	19,732,441	9,866
Additional impervious surface	45,900	2,295,000	1,148
Total	170,238	22,027,441	11,014

As the table indicates, demolition activities would generate approximately 11,000 tons of C&D waste. Assuming that all waste would be generated during the same year, this represents approximately 10 percent of the annual throughput of the South Cushman Landfill. As was previously stated, Eielson AFB has historically contributed approximately 5 percent of the total landfill throughput. Under Eielson AFB's Affirmative Procurement Program, contractors are encouraged to recycle materials that shall be discarded as waste as a result of demolition activities. Application of waste recycling practices would reduce the quantity of C&D waste generated. The quantity of C&D generated under Alternative 1 would not significantly affect the management capability or the overall life expectancy of the South Cushman Landfill.

4.5.3 Alternative 2: TLF Conversion

There would be no additional demolition activities associated with Alternative 2. Therefore, C&D waste generated under Alternative 2 would be the same as that described under Alternative 1. As with Alternative 1, the Air Force expects no significant impacts to solid waste under this alternative.

4.5.4 No Action Alternative

There are no impacts under the No Action Alternative not previously evaluated for Alternative 1, and the Air Force anticipates no significant impacts to solid waste.

5. CUMULATIVE IMPACTS

According to CEQ regulations, cumulative effects analysis should consider the potential environmental impacts resulting from “the incremental impacts of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions” (40 CFR 1508.7). Cumulative effects may occur when there is a relationship between a proposed action or alternative and other actions expected to occur in a similar location or during a similar time period. This relationship may or may not be obvious. The effects may then be incremental (increasing) in nature and result in cumulative impacts.

Actions overlapping with or in close proximity to a proposed action or alternative can reasonably be expected to have more potential for cumulative effects on “shared resources” than actions that may be geographically separated. Similarly, actions that coincide temporally will tend to offer a higher potential for cumulative effects.

Analysis is conducted by first identifying past, present, and reasonably foreseeable actions as related to the ROI for the particular resource. Cumulative impacts are then identified if the combination of proposed MHPI actions and past, present, and reasonably foreseeable actions interact with the resource to the degree that incremental or additive effects occur.

The proposed privatization activities at Eielson AFB are part of a larger privatization effort that includes Edwards AFB, California; Eglin AFB, Florida; Hurlburt Field, Florida; McConnell AFB, Kansas; and Seymour Johnson AFB, North Carolina. All six bases are grouped together as part of a single privatization Request for Proposal. However, environmental and socioeconomic impacts associated with the privatization action are specific to the each installation; therefore, impacts associated with privatization at each installation are analyzed separately for purposes of NEPA documentation. With respect to cumulative impacts, decisions regarding whether to implement the proposed action or alternatives at each installation versus a no action alternative may negatively impact the grouped privatization effort, in which case the Air Force would need to evaluate alternative means for implementing privatization at the other bases.

5.1 PAST, PRESENT, AND REASONABLY FORSEEABLE FUTURE ACTIONS

Past actions relevant to cumulative impact analysis include capital improvement projects undertaken at the installation, including housing improvements already completed via MILCON. With regard to present and future activities, the *Eielson AFB General Plan* (U.S. Air Force, 2008) identifies in Section 4D improvement projects with the most potential to interact with the various resource area ROIs identified in this document. Also included are those activities associated with ongoing and future housing improvements via the MILCON process as described previously in Chapter 2.

5.2 CUMULATIVE IMPACT ANALYSIS

5.2.1 Air Quality

Due to the nature of development activities, it is expected that construction and demolition impacts on air quality would be short-term and limited to localized areas. Extensive, long-term programs such as the housing program could potentially impact regional air quality attainment status given suitable scope and intensity. However, it is unlikely that the combination of the housing project with other projects on- and off-base would cause long-term air quality degradation. The proposed project is not expected to result in significant cumulative impacts to regional air quality.

5.2.2 Water Resources

Previous and ongoing construction of new housing units under the current housing replacement project at Eielson has added to the impervious surface area of the base. The cumulative effects of this construction did not combine to create a major change to stormwater discharged into local surface waters or groundwater recharge.

As noted in Section 4.2, the demolition activities under all of the proposed alternatives would not result in increases in impervious surface areas. In fact, demolition activities associated with the proposed alternatives would result in a decrease in impervious surface area on the installation, which would serve to improve stormwater penetration on Eielson AFB.

In light of past, present, and reasonably foreseeable future actions, the Air Force expects no significant cumulative impacts to surface waters as a result of this project or the overall housing program as currently designed.

5.2.3 Soils

Permanent changes to soil structure and stability can occur by disrupting and reworking soils in areas of demolition if it occurs on undisturbed soils. The activities that would occur under all alternatives would affect only previously disturbed soils, would be limited to small areas, and are insignificant to regional soils resources when considered individually or cumulatively.

To reiterate the discussion in Section 5.2.1, Water Resources, with the addition of the proposed alternatives, stormwater runoff is not expected to increase but decrease. Therefore, changes in soil structure and stability are not expected to occur, nor is soil erosion considered to be at risk of increasing from the past, present, and reasonably foreseeable future actions.

5.2.4 Hazardous Materials and Hazardous Waste

Eielson AFB has developed programs and procedures to comply with all federal, state, and local hazardous materials and hazardous waste management and reporting requirements. No cumulative impacts to hazardous material and hazardous waste management are anticipated.

5.2.5 Solid Waste

Eielson AFB is an active facility that will continue to generate solid waste in the form of municipal solid waste from personnel and C&D wastes from facility upgrades, including construction, renovation, and demolition projects. Although specific projects cannot be quantified at this time, due to the large existing and future capacity at local landfills, no foreseeable cumulative impacts to solid waste resources have been identified.

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6. PERSONS AND AGENCIES CONTACTED

Name	Title/Responsibility	Organization
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8. REFERENCES

- Golder Associates, 2010. *Environmental Liability Exposure Assessment Eielson AFB 801 Housing Project, Eielson Air Force Base, Alaska*. Prepared by Golder Associates Inc., Anchorage, Alaska. October.
- Gunderson, Ronald. 2010a. Personal communication between Ronald Gunderson (354 CES/CEAN) and SAIC regarding natural resource issues within the Eielson AFB, Alaska, housing areas. October.
- Gunderson, Ronald. 2010b. Personal communication between Ronald Gunderson (354 CES/CEAN) and SAIC regarding cultural resource issues within the Eielson AFB, Alaska, housing areas. October.
- MACTEC, 2005. *Recycling Plan and Analysis - Solid Waste Landfill Master Plan Fairbanks North Star Borough*. Prepared by MACTEC, Fairbanks, Alaska. December.
- U.S. Air Force, 1992. *Radon Assessment and Mitigation Program Detailed Assessment Survey One Year Measurement Results for Eielson AFB, Alaska*. Prepared by the 343 MG/SGPB, Eielson AFB, Alaska. July.
- U.S. Air Force, 2001. *Eielson Air Force Base Environmental Restoration Program Management Action Plan*. Eielson AFB, Alaska. November.
- U.S. Air Force, 2002. *Integrated Natural Resources Management Plan (2003-2008) for Eielson AFB, Alaska*.
- U.S. Air Force, 2004. 354 FW Pamphlet 32-2, Base Family Housing Brochure. Prepared by the 354 CES/CEH, Eielson AFB, Alaska. 30 December.
- U.S. Air Force, 2005. *Housing Requirements and Market Analysis for Eielson AFB, AK*. December, 2005.
- U.S. Air Force, 2006a. *Integrated Cultural Resources Management Plan (2006-2011) for Eielson AFB, Alaska*.
- U.S. Air Force, 2006b. *Eielson Air Force Base Part 3 – Operations Plan Asbestos Management and Operations Plan*. Prepared by the 354 CES/CEVQ, Eielson AFB, Alaska. February.

- U.S. Air Force, 2007. *Eielson AFB Hazardous Waste Management Plan*. Prepared by the 354 CES/CEVQ, Eielson AFB, Alaska. May.
- U.S. Air Force, 2008. *Eielson AFB General Plan*. February.
- U.S. Air Force, 2010. Section 01030, Safety, Environmental Protection, Regulations, and Codes. Eielson AFB, Alaska.
- USEPA, 2002. U.S. Environmental Protection Agency 2002 National Emissions Inventory Microsoft Access Database. Accessed December 2010.
- USEPA, 2003. *Estimating Building-Related Construction and Demolition Amounts*. United States Environmental Protection Agency, Washington D.C.
- USEPA, 2009. *Transportation and Air Quality*. Retrieved from <http://www.epa.gov/otaq/>. Last updated 26 January 2009, Accessed February 6, 2009.
- USEPA, 2010. *Currently Designated Nonattainment Areas for All Criteria Pollutants*. Last updated June 15, 2010. Accessed from <http://www.epa.gov/aoqps001/greenbk/ancl.html> on November 17, 2010.

APPENDIX A
PUBLIC INVOLVEMENT

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The Air Force published a public notice in the *Fairbanks Daily Newsminer* on 3 April 2011, inviting the public to review and comment on the EA (located at the Noel Wien Library – Main Branch in Fairbanks). The Air Force also provided copies of the EA to the following Alaska Department of Environmental Conservation divisions for review and comment:

- Office of Project Management and Permitting (OPMP)
- APDES Program
- Division of Air Quality
- DOW Compliance Program
- Department of Fish and Game
- DCO Public Services

The public comment and agency review period ended on 2 May 2011. No comments were received by the public or regulatory agencies.

A4

Fairbanks Daily News-Miner, Sunday, April 3, 2011

USAF ANNOUNCES AN ENVIRONMENTAL ASSESSMENT

In accordance with the National Environmental Policy Act and Air Force regulations, Eielson Air Force Base has completed an environmental assessment (EA) and finding of no significant impact (FONSI) to evaluate the consequences of the following stated proposed action:

The Air Force is considering two action alternatives for implementing the Military Housing Privatization at Eielson Air Force Base, AK. The Air Force has analyzed two alternatives, both of which include the conveyance of up to 974 housing units to a private developer. Alternative 1 would include conveyance of all housing units to the private developer and lease of the underlying land to the developer for a period of 50 years, with developer demolition of 36 units. Alternative 2 would involve the same activities as Alternative 1 except that only 934 housing units would be conveyed, and the Air Force would convert 40 housing units to Temporary Lodging Facilities under a separate project.

To review the draft EA and FONSI, copies are available at the Noel Wien Library in Fairbanks. The public is invited to review these documents and make comments during the 30-day comment period from now until 2 May 2011. To comment or for more information, contact Ruth B. Forrester, Base Environmental Planner, by mail at 354 CES/CEAO, 2310 Central Ave, Suite 100, Eielson AFB, AK 99702 or call at (907)377-3365.

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— Andy Angalak

down the solid
ice tracks.
It wasn't too
cold nor too
hot — just
right.

— Mike McLellan

Brown patches peer out
finally free of winter's coat
soak in noon-day sun

He screamed from the cross,
"Why hast thou forsaken me?"
God said, "Whatever"

Warm, spring afternoon
raspberry tulip bouquet
Leisurely stroll home

Chatting chickadees