

HRMA

Housing Requirements and Market Analysis

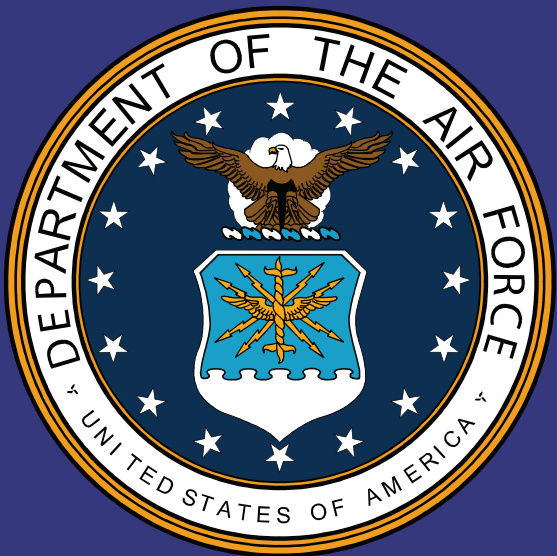
United States Air Force



EIELSON

AIR FORCE BASE

ALASKA



2009 - 2014

JULY 2009

HOUSING REQUIREMENTS AND MARKET ANALYSIS

**Eielson Air Force Base
2009 – 2014**

Prepared for:

Air Force Center for Engineering and the Environment
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Eielson Air Force Base

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HOUSING REQUIREMENTS AND MARKET ANALYSIS

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EXECUTIVE SUMMARY

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This Housing Requirements and Market Analysis (HRMA) for Eielson Air Force Base (AFB), Alaska, assesses the ability of the private sector housing market to meet the needs of military families. The Eielson AFB Total Military Family Housing Requirement is:

Total Military Family Housing Requirement	974
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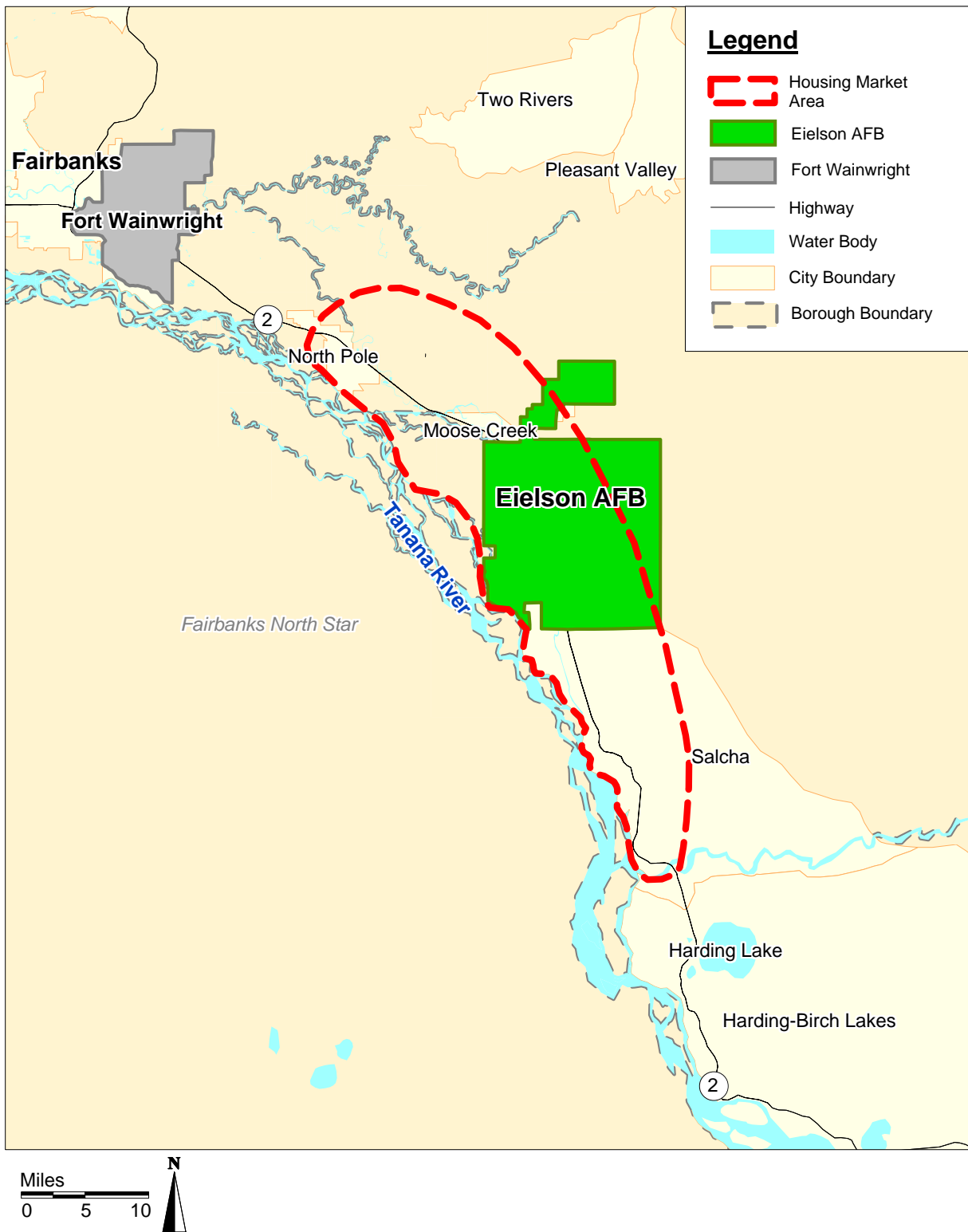
The Total Military Family Housing Requirement is based on a five-year planning period ending in 2014. In 2014, the installation is projected to support 2,192 personnel who are authorized housing, including 1,264 military families (Table ES-1).

**Table ES-1. Total Military Family Housing Requirement Summary
Planning Period 2009 - 2014**

	Total
AUTHORIZED MANPOWER	2,192
MILITARY FAMILIES	1,264
Minimum Housing Requirement	148
Private Sector Shortfall	826
TOTAL MILITARY FAMILY HOUSING REQUIREMENT	974

Eielson AFB is located in Fairbanks North Star Borough, Alaska, and is approximately 25 miles southeast of the City of Fairbanks (Figure ES-1). For the purposes of this HRMA, only housing within the Eielson AFB Housing Market Area can be considered suitable for authorized military personnel. The rental market has been relatively soft recently primarily due to the deployment of Fort Wainwright personnel. Rental price increases have averaged 3.9 percent annually and the rental supply has increased at 0.3 percent annually since 2005.

Figure ES-1. Eielson AFB Housing Market Area, 2009



CHANGES IN THE TOTAL HOUSING REQUIREMENTS

HRMA results for an installation can vary as market and manpower change over time. A comparison to the previous HRMA analysis conducted for Eielson AFB is presented in Table ES-2.

Table ES-2. Total Military Family Housing Requirements History

Planning Year of HRMA Results	2005 Eielson AFB HRMA	2009 Eielson AFB HRMA	Total Change	Percent Change
PLANNED MANPOWER	2,407	2,192	(215)	(8.9%)
MILITARY FAMILIES	1,582	1,264	(318)	(20.1%)
Minimum Housing Requirement	191	148	(43)	(22.5%)
Military Family Homeowners	150	58	(92)	(61.3%)
Military Family Renters	1,241	1,058	(183)	(14.7%)
Private Sector Shortfall	891	826	(65)	(7.3%)
TOTAL MILITARY FAMILY HOUSING REQUIREMENT	1,082	974	(108)	(10%)

COMPONENTS OF CHANGE

Changes at the installation and within the housing market impact the Total Housing Requirements (Table ES-3).

Table ES-3. Components of Change from the 2005 Eielson AFB HRMA

MILITARY	HOUSING MARKET
➤ Manpower Authorized personnel for the projected year decreased by 215 service members.	➤ Rental Supply Market growth projected at 0.3% compared to 1.4% in the 2005 HRMA.
➤ Military Families decreased by 318	➤ Vacancy Rate Increased from 3.1% to 7.1%
➤ Families Rental Requirement decreased by 183	
➤ Unaccompanied Personnel decreased by 69	➤ Purchasing Power Increases in BAH rates exceeded changes in rental costs.
➤ Unaccompanied Rental Requirement increased by 230	

POLICY AND ASSUMPTIONS

In addition to changes in the HRMA parameters, changes in policy or analytical assumptions resulted in significant impacts on the Total Housing Requirements. These changes include:

1. **Purchasing Power** - Since 2005, rental costs in the market have grown 16.6 percent and MAHC for military families has increased between 22.9 percent and 36.6 percent, depending on pay grade. This change in purchasing power contributed to the decrease in the private sector shortfall compared to the 2005 Eielson AFB HRMA.

TOTAL REQUIREMENTS SUMMARY

Table ES-4. Eielson AFB Total Military Family Housing Requirement

Pay Grade	Military Families	Military Community	Key & Essential	Historic Housing	Minimum Housing Requirement	Private Sector Shortfall	Total Military Housing Requirement
O7+	1	-	1	-	1	-	1
O6	6	1	5	-	5	-	5
O5	29	3	14	-	14	8	22
O4	42	4	7	-	7	20	27
O3	66	7	-	-	7	47	54
O2	5	1	-	-	1	3	4
O1	4	-	-	-	-	4	4
Officers	153	16	27	-	35	82	117
E9	17	2	1	-	2	6	8
E8	36	4	5	-	5	20	25
E7	182	18	5	-	18	107	125
E6	270	27	-	-	27	192	219
E5	355	36	-	-	36	243	279
E4	153	15	-	-	15	108	123
E3	81	8	-	-	8	57	65
E2	9	1	-	-	1	6	7
E1	8	1	-	-	1	5	6
Enlisted	1,111	112	11	-	113	744	857
Total	1,264	128	38	-	148	826	974

HRMA

Housing Requirements and Market Analysis



United States Air Force

2009 - 2014

EIELSON AIR FORCE BASE
ALASKA

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ACRONYMS AND ABBREVIATIONS

AFB	Air Force Base
AFCEE	Air Force Center for Engineering and the Environment
AF/A7CAH	Air Force Housing Division
AHRN	Automated Housing Referral Network
BAH	Basic Allowance for Housing
BAS	Basic Allowance for Subsistence
BRAC	Base Realignment and Closure
COLA	Cost of Living Adjustment
CONUS	Continental United States
DoD	U.S. Department of Defense
FMR	Fair Market Rent
FY	Fiscal Year
HQ	Headquarters
HRMA	Housing Requirements and Market Analysis
HUD	U.S. Department of Housing and Urban Development
IMRD	Integrated Manpower Requirements Document
K&E	Key and Essential
MAJCOM	Major Command
MAHC	Maximum Allowable Housing Cost
MFH	Military Family Housing
MHA	Military Housing Area
MSA	Metropolitan Statistical Area
OFHEO	Office of Federal Housing Enterprise Oversight
OSD	Office of the Secretary of Defense
PACAF	Pacific Air Forces
PCS	Permanent Change of Station

GLOSSARY OF TERMS

Accompanied Personnel – Military members who are eligible to receive With Dependents housing allowances.

Authorized Civilian Households – Civilian households which are authorized military housing at an installation.

Basic Allowance for Housing (BAH) – The housing allowance paid to eligible members at an installation.

Effective Rental Housing – Rental housing units that are affordable and suitable to the military households and meet their bedroom entitlements.

Floor Housing Requirement – The minimum military housing assets for military families and/or unaccompanied personnel required by an installation by policy determination. Also defined as the Military Family Minimum Housing Requirement for military families and the Unaccompanied Personnel Minimum Housing Requirement for unaccompanied personnel.

Historic Housing – On-base housing units listed on or eligible for the National Register of Historic Places under the National Historic Preservation Act.

Housing Market Area – The geographic area defined by the Air Force for the purposes of determining the Total Military Family Housing Requirement for an installation.

Key and Essential Housing Requirement (K&E) – A criterion for the Minimum Housing Requirement in which provides housing for all Key and Essential military and civilian personnel required to live in military housing.

Market Segment – A portion of the rental housing market defined monthly rental costs and the number of bedrooms.

Maximum Allowable Housing Cost (MAHC) – The highest rental cost by Air Force policy that determines the affordability of private sector rental housing for military personnel.

Military Community Housing Requirement – A criterion of the Minimum Housing Requirement whereby ten percent of the military family housing requirement by pay grade is determined to represent a viable military community.

Military Families – Those authorized personnel who are eligible for military family housing at an installation.

Military Family Housing (MFH) Supply – All housing controlled by the U.S. Government for use by military family members at an installation including military owned housing, housing under lease to the Air Force, housing privatized by the Air Force and housing provided overseas by the host country.

Military Family Minimum Housing Requirement – The minimum number of military family housing assets for the installation as defined by policy. Also referred to as the Military Family Floor Housing Requirement.

Military Housing – Government owned or leased family housing and unaccompanied dormitory units available for use by military members.

Military Housing Area – The geographic area that defines the Basic Allowance for Housing for the installation.

Military Households Requiring Housing – Military personnel including accompanied and unaccompanied personnel that an installation has the responsibility to house, either in military housing or in private sector housing.

Military Market Share – The number of rental housing units that are allocated to military households requiring rental housing based on their proportion of the total demand.

Planning Period – The five-year planning horizon incorporated into the HRMA covering, from the initial year to the final year of the analysis.

Private Sector Housing – Housing in the local community that is not owned or leased by a governmental organization.

Private Sector Shortfall – The difference between those military members requiring private sector rental housing and the military market share.

Privatized Housing – Housing units constructed and maintained by the private sector through agreements or partnerships with the U.S. Air Force for primary occupancy by military personnel at the installation.

Restricted Rental Housing – Rental housing units which are generally not available to military personnel due to restrictive requirements such as age and income limits on the rental units.

Service – A military branch of the armed forces of the United States of America.

Student Requirement – Military students required to reside in military housing.

Total Military Family Housing Requirement – The number of family housing units that the U.S. Government must provide in addition to housing available in the private sector to adequately house military families at an installation. The requirement is determined as the sum of the Minimum Housing Requirement plus any shortfall of housing in the private sector on a pay grade basis.

Total Military Housing Requirement – The sum of the minimum housing requirement and the number of military households unsuitably housed in the private sector for the accompaniment status.

Unaccompanied Personnel – Military personnel who have no dependents and who are not married.

Unaccompanied Personnel Minimum Housing Requirement – The minimum unaccompanied housing assets for the installation as defined by policy. Also defined as the Unaccompanied Personnel Floor Housing Requirement.

Vacancy Rate – The number of rental units that are vacant divided by the total rental housing supply.

Voluntary Separations – Military members who are voluntarily separated geographically from family members. Also known as Voluntary Family Separations.

1.0 INTRODUCTION

The Housing Requirements and Market Analysis (HRMA) is a detailed study to determine the quantity and bedroom configuration of military housing the U.S. Government must provide to ensure that all military families that Eielson Air Force Base (AFB), Alaska has the responsibility to house, have access to acceptable housing.

This report, and the analysis upon which the results are based, follows Air Force guidance implementing the HRMA process as advocated by the Office of the Secretary of Defense (OSD). Adherence to this guidance ensures a consistent determination of housing requirements across military services in support of the planning and programming processes.

This section describes the following:

- Methodology
- Policy and Assumptions
- Report Organization

1.1 METHODOLOGY

The HRMA follows OSD guidance which specifies that military services must rely first on the private sector to meet its housing needs prior to considering military housing. Policy allows for each service to establish a minimum requirement. The Total Military Family Housing Requirement is determined in part by the number of authorized families and others for whom the installation has the responsibility to house at the end of the five-year planning period. For military families not accommodated in the minimum housing requirement, the HRMA determines whether there is sufficient affordable, suitable private sector housing to meet their needs. The Minimum Family Housing Requirement plus any shortfall of private sector housing within the Housing Market Area determines the installation's Total Military Family Housing Requirement (Figure 1-1).

The minimum housing requirement for unaccompanied personnel is defined by policy by pay grade and length of service of the personnel required to reside in unaccompanied government quarters. The minimum housing requirement for military families is based on three criteria evaluated for the final year of the analysis:

- The need for a military community;
- Housing for personnel in key and essential positions; and,
- Preservation of historic housing.

Figure 1-1. Housing Requirements and Market Analysis Process Summary

- Determine the housing market area based on the greater of a 60-minute commute or 20 miles from the installation's headquarters building or major work centers.
- Apply the *Integrated Manpower and Requirements Document* (IMRD) for determining the military families and unaccompanied personnel requiring housing for the final year of the planning period.
- Determine the Military Family Minimum Housing Requirement:
 - Military Community
 - Key and Essential
 - Historic Housing
- Determine the Unaccompanied Personnel Minimum Housing Requirement.
- Determine the potential private sector requirement as the number of military families and unaccompanied personnel households in excess of their minimum housing requirements in the fifth year of the planning period.
- Determine the competing demand actively seeking available suitable rental housing.
- Determine the effective rental supply for the last year of the planning period.
- Compute the military market allocation for each military segment:

$$\text{Military Market Share} = \frac{\text{Competing Military Demand}}{\text{Total Competing Demand}} \times \text{Suitable Supply}$$

- Compare the military market allocation to the military family rental requirement to determine a Private Sector Shortfall, if any, for the projected year.
- Establish the Total Military Family Housing Requirement as the sum of the Minimum Housing Requirement and any Private Sector Shortfall.

Private sector rental housing is assessed separately from owner-occupied housing. Military members who own their home are considered suitably housed. The homeowner market is otherwise not addressed if it is viable and responsive.

The sufficiency of the rental housing market is determined by comparing the military market share of suitable housing to the number of families and unaccompanied personnel requiring housing. An allocation process is used in which military families, unaccompanied personnel, and civilians who are in the rental market in the final year of the five-year planning period each receive a proportional market share of the affordable, suitable rental housing.

In making its determination of market sufficiency, the analysis distinguishes between the total rental housing supply and rental housing that is affordable and suitable for military personnel. Affordable, suitable rental housing is located

within the housing market area and is adequate for military members based on health and safety considerations, acceptable unit type, and military housing allowances. The analysis divides the rental market into market segments by rental cost (rent, utility costs, and renter's insurance) and number of bedroom categories. The suitable housing allocated to the military (family or unaccompanied) within each market segment is the proportion of affordable, suitable housing in that segment equal to the proportion of the military (family or unaccompanied) to the total competing housing demand within the market segment. This allocation becomes the market share for military families and unaccompanied personnel.

To determine if there is sufficient private sector housing, the market share for military families is compared to their respective private sector rental housing requirement in each market segment. A private sector rental requirement in excess of allocated suitable rentals in a market segment constitutes a shortfall for that market segment. The sum of the shortfalls for each market segment is the Private Sector Shortfall.

The final step of the HRMA methodology is determining the Total Military Family Housing Requirement. The Total Military Family Housing Requirement is the sum of the Military Family Minimum Housing Requirement, and the Private Sector Shortfall, if any, in the final year of the planning period.

1.2 POLICY AND ASSUMPTIONS

The following critical policies and assumptions are used in this HRMA.

1.2.1 METHODOLOGY

This HRMA applies a methodology that determines a proportional market share for military households based on the suitable housing available for rent and the number of civilian and military households seeking rental housing.

1.2.2 HOUSING SUPPLY

Only housing within the Housing Market Area is considered in the analysis. The Housing Market Area is based on the greater of either a 60-minute commute or 20 miles from the installation's headquarters building or major work centers.

The number of rental housing units and the distribution of housing by number of bedrooms and rent categories are based on the 2000 U.S. Census, residential construction permits, and other data. Rental housing includes only units on less than ten acres of land for which cash rent is paid and excludes seasonal rental housing.

1.2.3 HOUSING SUITABILITY

Only housing within the housing market area is considered suitable for military personnel. Additionally, suitable housing must be located in areas suitable for military members based on health and safety considerations, of an acceptable unit type, and above a minimum quality. Discussions with Eielson AFB housing personnel, interviews with local property managers and realtors, surveys of the local community, and other published data were utilized in the housing suitability determination process.

All homeowner-occupied housing, with the exception of mobile homes, is considered suitable housing for military personnel.

1.2.4 HOUSING DEMAND

Civilian demand estimates are based on population and economic projections for the region, census information, residential construction permit data, and other factors.

Military family housing requirements are manpower authorizations projected for the final year of the planning period.

The methodology assumes that in the final year of the planning period, military families will occupy government-provided housing or privatized housing that fulfills the Minimum Housing Requirement. Military families in excess of the Minimum Housing Requirement would require private sector housing for the purpose of the HRMA analysis.

1.2.5 RENTAL RATES

Rental costs are assumed to remain constant for the duration of the five-year planning period based on the assumption that the Basic Allowance for Housing (BAH) rates will appropriately track rental housing costs.

1.2.6 MILITARY HOUSING AFFORDABILITY

The Maximum Allowable Housing Cost (MAHC), the upper limit of affordability for housing for each pay grade, is set to the local median housing cost for that pay grade (BAH) as determined by the Per Diem, Travel and Transportation Allowance Committee. For the purposes of this analysis, MAHC and BAH are held constant over the five-year planning period.

1.2.7 MILITARY HOUSING SUPPLY

As provided by Eielson AFB, currently there are 1,176 MFH units with the inventory in 2014 to reach an end-state at 1,082 units.

1.2.8 MILITARY HOUSING REQUIREMENTS

Military family housing requirements are the number of families that the installation has the responsibility to house. The number of families in the final year of the planning period is drawn from the *2008 Integrated Manpower and Requirements Document (IMRD)*.

Bedroom entitlements are based on family characteristics of personnel currently assigned to the installation with each dependent child having a bedroom and a minimum bedroom entitlement based on military member's rank. For unaccompanied personnel, those in grades E4 (three or more years of service) and above require private sector housing.

Military personnel currently residing in government-owned or leased housing or privatized housing are assumed to become renters if required to live in the private sector.

1.3 REPORT ORGANIZATION

This HRMA for Eielson AFB is presented in the following chapters:

- Chapter 2. The Housing Market
- Chapter 3. Military Housing Requirements
- Chapter 4. Minimum Military Housing Requirements
- Chapter 5. Competing Demand
- Chapter 6. Effective Rental Housing Supply
- Chapter 7. Private Sector Shortfall
- Chapter 8. Total Military Housing Requirement
- Chapter 9. References

2.0 THE HOUSING MARKET

The Housing Market Area sets the geographic limits of the HRMA analysis. Only the housing within the Housing Market Area is considered in determining the Total Military Family Housing Requirement for Eielson AFB. This chapter describes the Housing Market Area and the current housing market conditions and regional factors that impact the future housing supply available to military households in the following sections:

- The Housing Market Area
- Housing Market Conditions
 - Market Trends
 - Homeowner Market
 - Rental Market
- Military Housing

2.1 THE HOUSING MARKET AREA

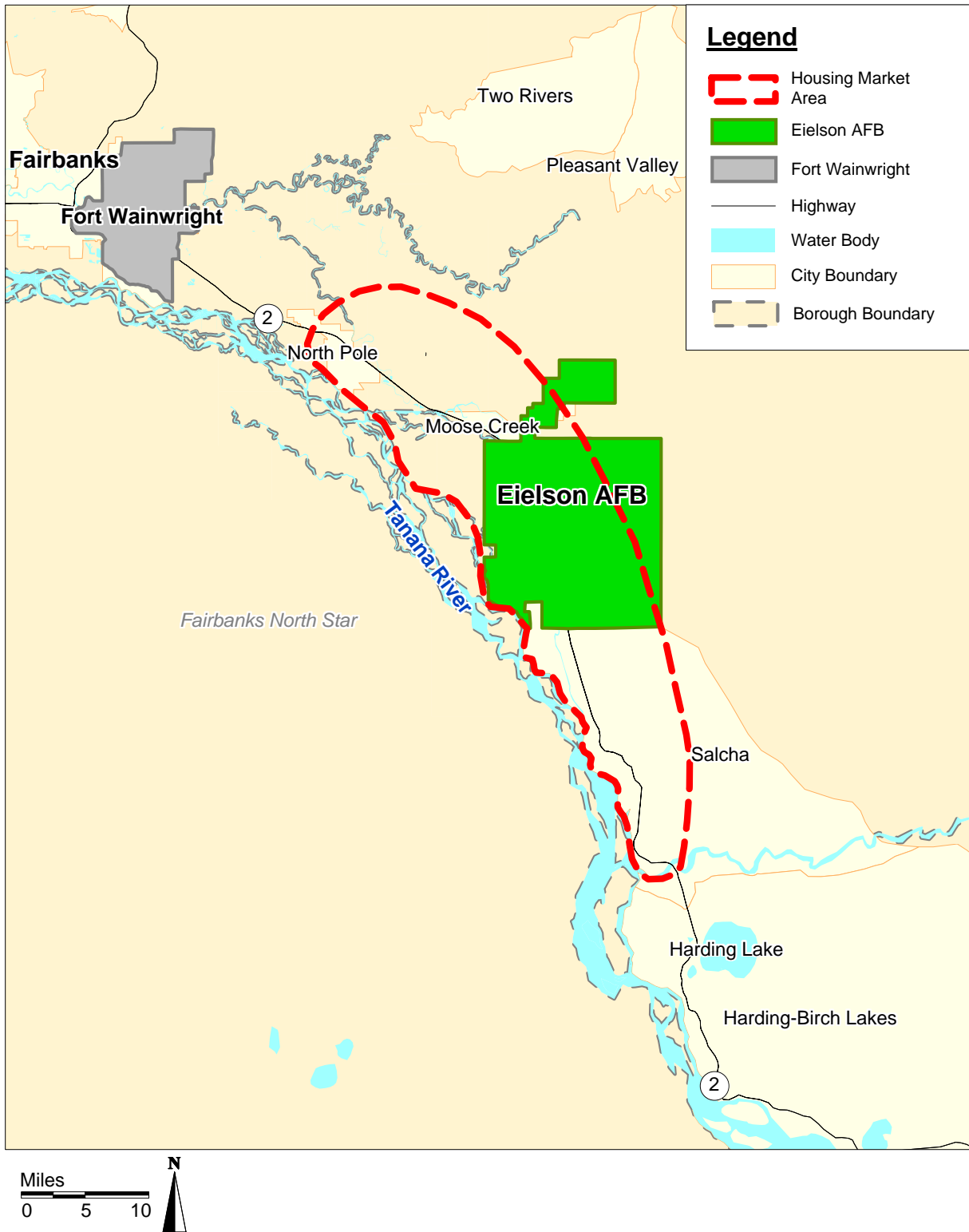
The Housing Market Area for Eielson AFB is defined by the greater of either a one-hour commute or twenty miles distance originating from the installation's headquarters building during peak traffic in privately owned vehicles assuming normal weather conditions. For Eielson AFB, the Housing Market Area has been reduced at the direction of an A7CAH waiver to reflect the poor driving conditions caused by darkness and severe weather during the fall, winter and spring months.

Eielson AFB is located in Fairbanks North Star Borough, Alaska, of which the City of Fairbanks is the largest metropolitan area.

The Eielson AFB Housing Market Area is defined as follows:

- Encompasses the cities of North Pole, Moose Creek, and a small portion of Salcha.
- Highway 2, also known as Richardson Highway is the major Highway running through the Housing Market Area.
- The eastern boundary follows the Tanana River.
- The northern boundary includes the City of North Pole stopping south of the City of Fairbanks and Fort Wainwright.

Figure 2-1. Eielson AFB Housing Market Area, 2009



2.2 HOUSING MARKET CONDITIONS

Private sector housing includes both homeowner housing as well as rental housing within the Housing Market Area. In 2009, there are an estimated 5,653 private sector housing units in the Housing Market Area (Table 2-1). The current private sector housing inventory includes 4,044 homeowner units and 1,609 rental units.

Table 2-1. Private Sector Housing in the Housing Market Area, 2009

Housing Ownership	2009
Homeowner Housing	4,044
Rental Housing	1,609
Vacant Units	109
Total	5,653

Some of the major factors in the housing market have been deployments of personnel from Fort Wainwright, the national economy, and the economy's effect on employment and income.

2.2.1 MARKET TRENDS

The housing market is characterized by trends in housing supply growth which directly affect trends in rental prices and the availability of rental units (Table 2-2).

Table 2-2. Housing Market Trends, 2000-2009

Data Element	Average Annual Growth
Homeowner Supply	0.8%
Homeowner Price	6.5%
Rental Supply	0.6%
Rental Price	4.5%

Population and employment changes affect the rental market. The net migration is an important component of housing demand. Migration into the area is driven by employment opportunities.

The population of the Fairbanks North Star Borough grew at an average of 1.3 percent between 2000 and 2007 (Table 2-3). Over the same period, employment has grown at an average annual rate of 1.4 percent (Table 2-4). The relatively strong job growth from 2002 to 2004 led to the population growth over that same period. Military personnel make up about 19.5 percent of the total population of the Fairbanks North Star Borough. They have a strong effect on the demand for housing.

Table 2-3. Population and Components of Change, Fairbanks North Star Borough, 2000-2007

	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
Population	83,261	84,749	82,160	85,453	87,704	87,766	90,963
Population Change	534	1,488	-2,589	3,293	2,251	62	3,197
Percent Change	0.6%	1.8%	-3.2%	3.9%	2.6%	0.1%	3.5%
Natural Increase	1,186	1,176	1,245	1,209	1,206	1,182	1,244
Total Net Migrants	-652	312	-3,834	2,084	1,045	-1,120	1,953

Source: Alaska Department of Labor and Workforce Development, 2008

Table 2-4. Employment Statistics, Fairbanks North Star Borough, 2000-2008

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Labor Force	40,952	41,442	42,089	43,236	44,608	45,386	45,379	45,542	45,687
Percent Change	-	1.2%	1.6%	2.7%	3.2%	1.7%	-0.0%	0.4%	0.3%
Employment	38,509	39,035	39,392	40,258	41,755	42,741	42,824	43,176	42,914
Percent Change	-	1.4%	0.9%	2.2%	3.7%	2.4%	0.2%	0.8%	-0.6%
Unemployment	2,443	2,407	2,697	2,978	2,853	2,645	2,555	2,366	2,773
Unemployment Rate	6.0%	5.8%	6.4%	6.9%	6.4%	5.8%	5.6%	5.2%	6.1%

Source: Bureau of Labor Statistics, 2009

The largest sectors of employment for the Fairbanks North Star Borough are government, trade, transportation, and utilities, and educational and health services. The government sector includes military, public school, and University of Alaska-Fairbanks employees. Together they total 63.0 percent of all employment in the borough and generate 63.3 percent of total income. The government sector alone has the largest employment accounting for 31.3 percent of the employment and 34.5 percent of all income (Table 2-5).

Table 2-5. Employment and Income, Fairbanks North Star Borough, 2001-2008

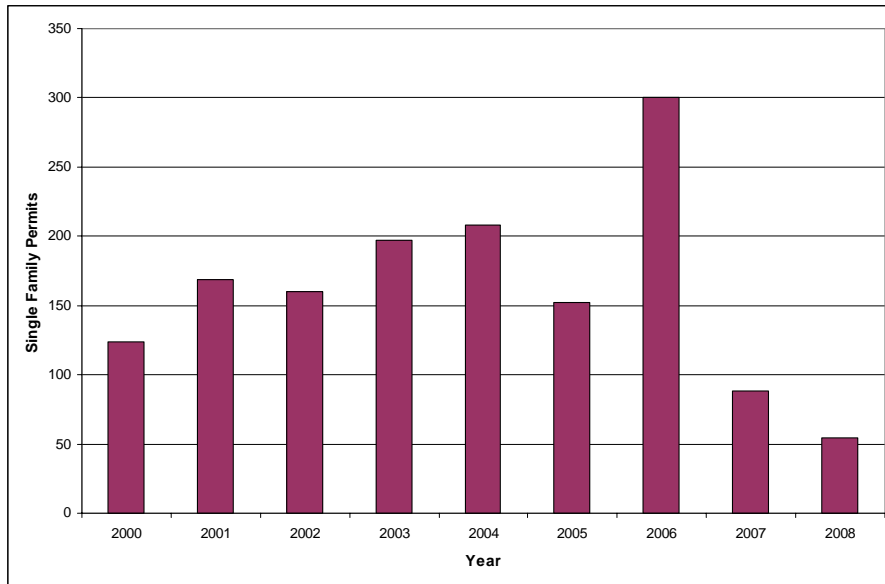
	Employment			2008 Income		Percent Total
	2001	2008	Annual Change	Total	Average	
Total	34,700	38,400	1.5%	\$412,095,582	\$42,192	100.0%
Nat. Resources & Mining	950	1,100	2.1%	\$18,950,181	\$72,031	4.6%
Construction	2,000	2,700	4.4%	\$47,720,854	\$64,971	11.6%
Manufacturing	550	600	1.3%	\$7,503,189	\$44,997	1.8%
Trade/Transport/Utilities	7,050	7,800	1.5%	\$72,935,913	\$37,138	17.7%
Information	600	600	0.0%	\$7,648,938	\$50,599	1.9%
Financial Activities	1,300	1,500	2.1%	\$15,742,671	\$40,802	3.8%
Prof. & Business Svcs	2,100	2,300	1.3%	\$26,484,446	\$42,313	6.4%
Edu. & Health Services	3,400	4,400	3.8%	\$45,951,771	\$42,158	11.2%
Leisure & Hospitality	3,700	4,200	1.8%	\$18,299,169	\$16,418	4.4%
Other Services	1,950	1,200	-6.7%	\$8,433,089	\$27,138	2.0%
Government	11,150	12,000	1.1%	\$142,079,531	\$48,133	34.5%

Source: Alaska Department of Labor and Workforce Development, 2009

2.2.1.1 Homeowner Market

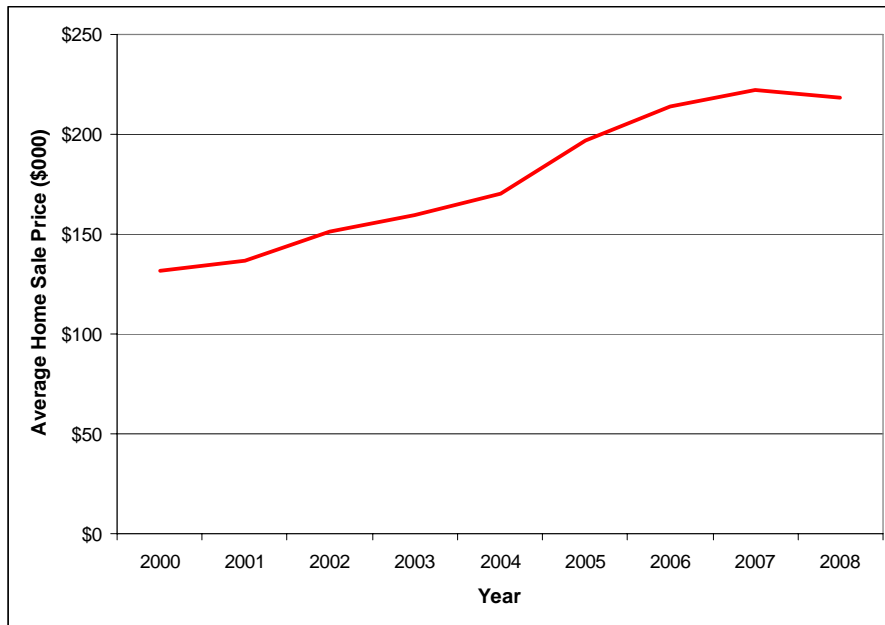
Building permit data from the Department of Housing and Urban Development (HUD) indicate that the single-family housing stock has grown at an average rate of approximately 0.8 percent annually since 2000 (Figure 2-2). During the same period housing prices increased at an average rate of 6.5 percent annually (Figure 2-3). The decreasing number of permits in 2007 and 2008 follow the largest number of permits in 2006. This indicates that homeowner housing was overbuilt. In addition, the deployment of Fort Wainwright troops overseas has impacted the demand for homes. Since 2000, 2008 is the only year of declining home prices, which is due to decreased lending and excess homes.

Figure 2-2. Single-Family Building Permits in Fairbanks North Star Borough, 2000-2008



Source: HUD SOCDs, 2009

Figure 2-3. Homeowner Price Growth for Fairbanks North Star Borough, 2000-2008



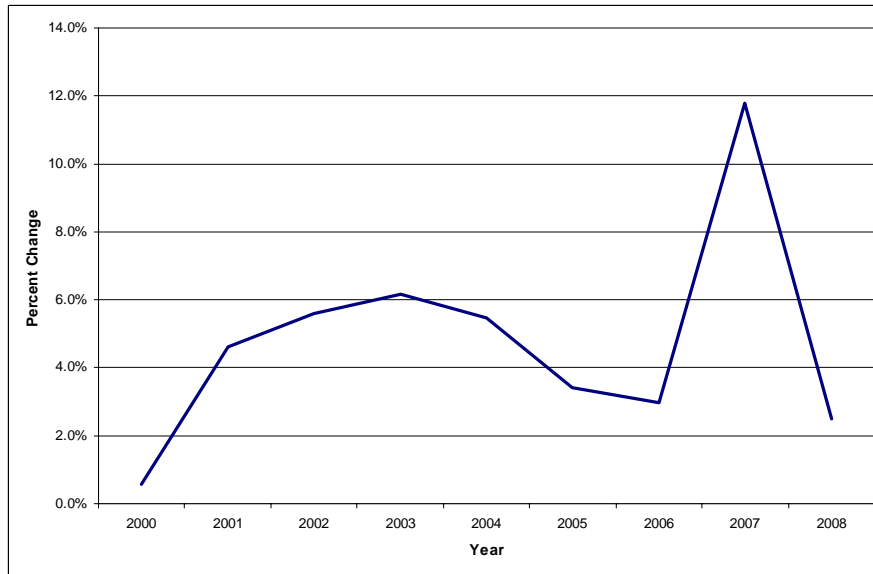
Source: Fairbanks Community Research Quarterly, 2008

2.2.1.2 Rental Market

From 2000 to 2008, annual rental prices have increased between 0.6 and 11.8 percent (Figure 2-4). In 2007, rental price growth peaked due to a strong economy with low unemployment within the Fairbanks North Star Borough and the buildup of troops at Fort Wainwright. The 2007 deployments of Fort

Wainwright troops reduced the amount of demand for rentals, and reduced the rate of price change for 2008.

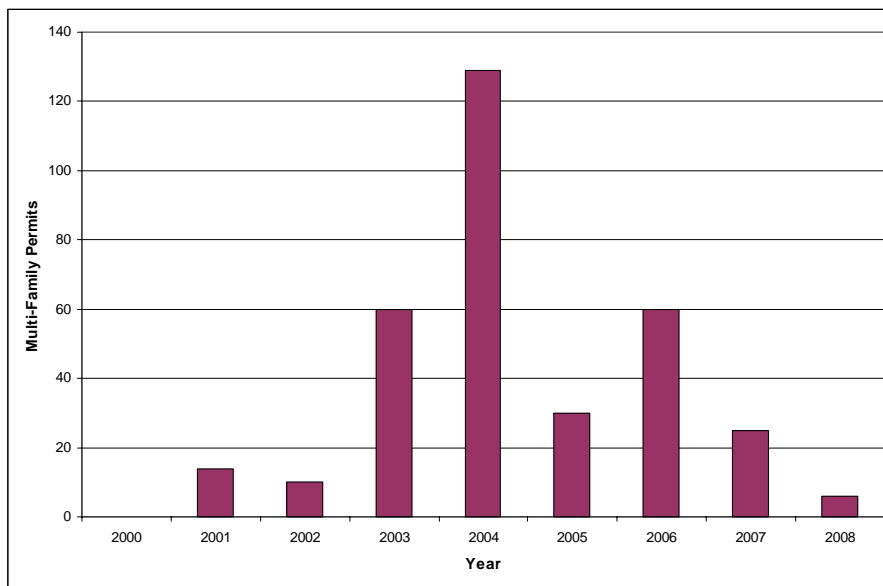
Figure 2-4. Rental Price Growth for Fairbanks North Star Borough, 2000-2008



Source: Fairbanks Community Research Quarterly, 2009

In 2008 there were very few multifamily housing units permitted (Figure 2-5). Fort Wainwright has a construction program to build new housing for its troops and is releasing its old houses into the market. The 400 units at Birchwood Estates were released to the market in 2007 with the 150 units at Walden’s Estates to be released in 2009. The decreasing building activity in the multi-family market indicates the market’s attempt to absorb these units.

Figure 2-5. Multi-Family Building Permits in Fairbanks North Star Borough, 2000-2008



Source: HUD SOCDS, 2009

2.2.2 HOMEOWNER HOUSING SUPPLY

All owner-occupied housing is considered suitable for military personnel with the exception of mobile homes. There are no impediments to the continued growth of owner-occupied housing. As such, this HRMA does not explicitly address the sufficiency of the homeowner market.

2.2.3 RENTAL HOUSING SUPPLY

The total rental supply is based on the trends in supply growth and price changes from the 2000 Census baseline data. For the purposes of the HRMA, the rental supply consists only of specified housing units - those rental units for which cash rent is paid and are located on less than ten acres.

The total 2009 rental housing in the Housing Market Area is estimated at 1,609 units. Two-bedroom and smaller units make up 68.6 percent of rental housing supply. Three-bedroom units make up 23.6 percent of rental housing and the remaining 7.8 percent have four or more bedrooms (Table 2-3).

The total rental supply includes housing the military members are generally not able to obtain, such as rental units restricted by income or age requirements. For low income housing, even if the military member is eligible, waiting time for the housing effectively makes the housing unavailable to the member. There are no rental units in the Housing Market Area that target a subset of the rental demand through eligibility restrictions (i.e., income and age restricted housing) that are included in rental housing supply for military households for the purposes of the HRMA.

Table 2-6. Total Rental Housing, 2009

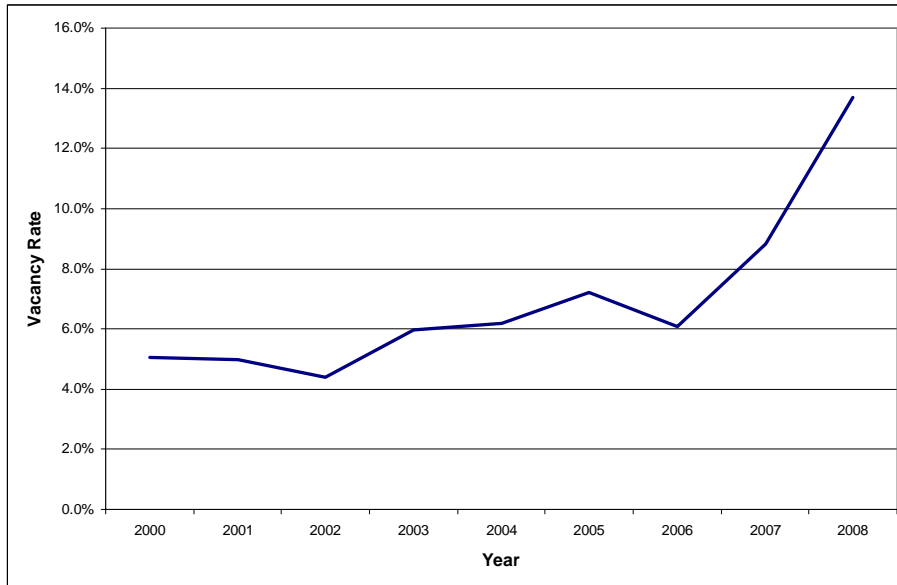
Rental Cost ¹	Number of Bedrooms					Total
	None	One	Two	Three	Four+	
\$2,000 & Above	-	4	10	36	13	63
\$1,900 - \$1,999	-	1	3	9	4	17
\$1,800 - \$1,899	-	4	10	33	11	58
\$1,700 - \$1,799	-	5	12	42	14	73
\$1,600 - \$1,699	-	4	12	42	14	72
\$1,500 - \$1,599	-	5	13	42	14	74
\$1,400 - \$1,499	1	11	61	29	9	111
\$1,300 - \$1,399	1	13	69	33	10	126
\$1,200 - \$1,299	1	14	76	37	12	140
\$1,100 - \$1,199	1	29	98	32	10	170
\$1,000 - \$1,099	2	62	114	17	5	200
Below \$1,000	34	211	223	27	10	505
Total	40	363	701	379	126	1,609

¹ Includes rent, utility costs, and renter's insurance

2.2.3.1 Rental Housing Vacancies

Rental vacancy rates in the market are important in assessing the availability of rental housing for military personnel. According to the *Fairbanks Community Research Quarterly*, vacancies are currently at 13.7 percent in the Fairbanks North Star Borough. The higher than average vacancies are caused by the Fort Wainwright deployments abroad.

Figure 2-6. Rental Vacancies for Fairbanks North Star Borough, 2000-2008



Source: Fairbanks Community Research Quarterly, 2009

There are currently an estimated 109 vacant rental units in the Housing Market Area with an estimated vacancy rate at 6.8 percent (Table 2-7). The Housing Market Area does not include the City of Fairbanks which currently has a much higher vacancy rate.

Table 2-7. Vacant Rental Housing, 2009

Rental Cost ¹	Number of Bedrooms					Total
	None	One	Two	Three	Four+	
\$2,000 & Above	-	-	-	2	1	3
\$1,900 - \$1,999	-	-	-	1	-	1
\$1,800 - \$1,899	-	-	1	2	1	4
\$1,700 - \$1,799	-	-	1	3	1	5
\$1,600 - \$1,699	-	-	1	3	1	5
\$1,500 - \$1,599	-	-	1	3	1	5
\$1,400 - \$1,499	-	1	4	2	-	7
\$1,300 - \$1,399	-	1	5	3	-	9
\$1,200 - \$1,299	-	1	5	3	1	10
\$1,100 - \$1,199	-	2	7	2	1	12
\$1,000 - \$1,099	-	4	8	1	-	13
Below \$1,000	2	15	16	2	-	35
Total	2	24	49	27	7	109

2.3 MILITARY HOUSING

The total housing supply at Eielson AFB currently consists of 1,176 MFH units (Table 2-8). Privatized housing units are constructed and maintained by the private sector for primary occupancy by military personnel at the installation. Eielson AFB currently does not have any privatized housing units.

Table 2-8. Military Housing Supply, 2009

Inventory	Total
Military Owned or Leased	1,176
Privatized Housing Supply	-

¹ Includes rent, utility costs, and renter's insurance

3.0 MILITARY HOUSING REQUIREMENTS

This chapter reports the number of military families and unaccompanied personnel requiring housing at Eielson AFB in the following sections:

- Authorized Manpower
- Military Family Housing Requirements
- Unaccompanied Personnel Housing Requirements

3.1 AUTHORIZED MANPOWER

Authorized manpower includes all personnel that the housing office has the responsibility to house. Authorized manpower is 2,181 in 2009 including 235 Air National Guard (ANG) personnel and 2,192 personnel in 2014 including 246 ANG personnel (Table 3-1). Current manpower authorizations are based on PACAF and Eielson AFB data. Projected manpower and pay grade distribution are from the AF/A7CAH 2008 IMRD.

Table 3-1. Eielson AFB Manpower Authorizations, 2009 & 2014

Pay Grade	Current	Projected
	Year, 2009	Year, 2014
	Total	Total
O7+	1	1
O6	8	8
O5	36	36
O4	51	52
O3	98	99
O2	14	14
O1	9	9
Officers	217	219
E9	20	20
E8	46	47
E7	219	222
E6	342	345
E5	542	544
E4	364	364
E3	357	357
E2	40	40
E1	34	34
Enlisted	1,964	1,973
Total	2,181	2,192

Military family housing requirements are based on the number of military families (Table 3-2). The IMRD provides estimates of the number of military families and unaccompanied personnel. These estimates are based on historical average demographics for Eielson AFB and incorporate military married to military households, single personnel with dependents, and personnel voluntarily separated from their dependents.

**Table 3-2. Eielson AFB
Manpower Demographics, 2009 & 2014**

	Current Year, 2009	Projected Year, 2014
Total Authorized	2,181	2,192
Military Families	1,253	1,264
Unaccompanied Personnel	821	823

3.2 MILITARY FAMILY HOUSING REQUIREMENTS

Military family housing requirements are the number of military families that the installation has the responsibility to house. Military family housing requirements are based on the grade, family size, and composition of household. Bedroom requirements are based on one bedroom per dependent child and a minimum bedroom requirement by rank. Junior enlisted families require a minimum of a two-bedroom unit, while families of field grade officers require a minimum of a three-bedroom unit and senior officers require a minimum of a four-bedroom unit. The family size is estimated from the composition of the personnel currently assigned to the installation.

In 2009, there are 1,253 military families that require housing. There are 1,264 military families projected to require housing for 2014 (Table 3-3). Approximately 44.8 percent of the families are entitled to two-bedroom housing while 36.3 percent have a three-bedroom requirement and 18.9 percent have a four or more bedroom requirement.

Table 3-3. Military Family Housing Requirements, 2014

Pay Grade	Number of Bedrooms			Total
	Two	Three	Four+	
O7+	-	-	1	1
O6	-	-	6	6
O5	-	18	11	29
O4	-	33	9	42
O3	30	15	21	66
O2	4	1	-	5
O1	3	-	1	4
Officers	37	67	49	153
E9	-	11	6	17
E8	-	29	7	36
E7	-	138	44	182
E6	106	86	78	270
E5	206	102	47	355
E4	126	19	8	153
E3	74	7	-	81
E2	9	-	-	9
E1	8	-	-	8
Enlisted	529	392	190	1,111
Total	566	459	239	1,264

3.3 UNACCOMPANIED PERSONNEL HOUSING REQUIREMENTS

Unaccompanied personnel housing requirements are the number of unaccompanied households that the installation has the responsibility to house. Bedroom requirements for unaccompanied personnel requiring housing in the private sector vary from one to three bedrooms based on OSD standards. Grade E5 and below have a one-bedroom requirement, while grades E6 to O3 have a two-bedroom requirement. Grade O4 and above have a three-bedroom requirement.

There are a total of 821 unaccompanied service members for whom Eielson AFB has the responsibility to house in 2009. In 2014, there are projected to be a total of 823 unaccompanied service members (Table 3-4).

Table 3-4. Unaccompanied Personnel Housing Requirements, 2014

Pay Grade	Number of Bedrooms			Total
	One	Two	Three	
O7+	-	-	-	-
O6	-	-	2	2
O5	-	-	5	5
O4	-	-	9	9
O3	-	33	-	33
O2	-	9	-	9
O1	-	6	-	6
Officers	-	48	16	64
E9	-	1	-	1
E8	-	7	-	7
E7	-	29	-	29
E6	-	57	-	57
E5	152	-	-	152
E4	192	-	-	192
E3	266	-	-	266
E2	30	-	-	30
E1	25	-	-	25
Enlisted	665	94	-	759
Total	665	142	16	823

4.0 MINIMUM MILITARY HOUSING REQUIREMENTS

Air Force policy establishes minimum housing requirements for military families and unaccompanied personnel. The Minimum Housing Requirement for military families is based on the greatest of three specific criteria on the basis of pay grade. For unaccompanied personnel, current Air Force policy requires personnel in grade E3 and below and grade E4 with less than three years of service to reside in government quarters. This chapter reports the minimum military housing requirements at Eielson AFB in the following sections:

- Military Family Minimum Housing Requirement
- Unaccompanied Personnel Minimum Housing Requirement

4.1 MILITARY FAMILY MINIMUM HOUSING REQUIREMENT

In the projected year of the analysis, the installation is assumed to house only its Military Family Minimum Housing Requirement. As a result, all military rental demand in excess of the Military Family Minimum Housing Requirement requires private sector housing in 2014. The Military Family Minimum Housing Requirement is determined by the greatest of the following three criteria on the basis of pay grade:

- **Military Community** – Housing for ten percent of the military families by pay grade is established in recognition the value of the cohesive attributes of a military community to the morale of its members.

In 2014, there is a military community housing requirement of 128 housing units based on 1,264 military families (Table 4-1).

- **Key and Essential** – Housing for all key and essential military and civilian personnel.

Currently, there are 38 key and essential positions at Eielson AFB. These positions are expected to remain unchanged in the projected year of the analysis (Table 4-2).

- **Historic Housing** – On-base housing units listed on or eligible for the National Register of Historic Places under the National Historic Preservation Act.

At Eielson AFB, there are currently no housing units designated as historic housing (Table 4-3).

The Military Family Minimum Housing Requirement is the greatest of the Military Community, Key and Essential, and Historic Housing Requirements on the basis of pay grade. The Military Family Minimum Housing Requirement or Military Family Floor Housing Requirement for Eielson AFB is 148 housing units in 2014 (Table 4-4). The bedroom requirements for each pay grade are set by the bedroom requirements of the criterion on which the minimum is based for that pay grade.

Table 4-1. Military Community Housing Requirement, 2014

Pay Grade	Number of Bedrooms			Total
	Two	Three	Four+	
O7+	-	-	-	-
O6	-	-	1	1
O5	-	2	1	3
O4	-	3	1	4
O3	3	2	2	7
O2	1	-	-	1
O1	-	-	-	-
Officers	4	7	5	16
E9	-	1	1	2
E8	-	3	1	4
E7	-	14	4	18
E6	11	8	8	27
E5	21	10	5	36
E4	12	2	1	15
E3	7	1	-	8
E2	1	-	-	1
E1	1	-	-	1
Enlisted	53	39	20	112
Total	57	46	25	128

Table 4-2. Key and Essential Housing Requirement, 2014

Pay Grade	Number of Bedrooms			Total
	Two	Three	Four+	
O7+	-	-	1	1
O6	-	-	5	5
O5	-	9	5	14
O4	-	5	2	7
O3	-	-	-	-
O2	-	-	-	-
O1	-	-	-	-
Officers	-	14	13	27
E9	-	-	1	1
E8	-	4	1	5
E7	-	4	1	5
E6	-	-	-	-
E5	-	-	-	-
E4	-	-	-	-
E3	-	-	-	-
E2	-	-	-	-
E1	-	-	-	-
Enlisted	-	8	3	11
Total	-	22	16	38

Table 4-3. Historic Housing Requirement, 2014

Pay Grade	Number of Bedrooms			Total
	Two	Three	Four+	
O7+	-	-	-	-
O6	-	-	-	-
O5	-	-	-	-
O4	-	-	-	-
O3	-	-	-	-
O2	-	-	-	-
O1	-	-	-	-
Officers	-	-	-	-
E9	-	-	-	-
E8	-	-	-	-
E7	-	-	-	-
E6	-	-	-	-
E5	-	-	-	-
E4	-	-	-	-
E3	-	-	-	-
E2	-	-	-	-
E1	-	-	-	-
Enlisted	-	-	-	-
Total	-	-	-	-

Table 4-4. Military Family Minimum Housing Requirement, 2014

Pay Grade	Number of Bedrooms			Total
	Two	Three	Four+	
O7+	-	-	1	1
O6	-	-	5	5
O5	-	9	5	14
O4	-	5	2	7
O3	3	2	2	7
O2	1	-	-	1
O1	-	-	-	-
Officers	4	16	15	35
E9	-	1	1	2
E8	-	4	1	5
E7	-	14	4	18
E6	11	8	8	27
E5	21	10	5	36
E4	12	2	1	15
E3	7	1	-	8
E2	1	-	-	1
E1	1	-	-	1
Enlisted	53	40	20	113
Total	57	56	35	148

4.2 UNACCOMPANIED PERSONNEL MINIMUM HOUSING REQUIREMENT

The Unaccompanied Personnel Minimum Housing Requirement is established by Air Force policy which requires that unaccompanied personnel in grade E4 with less than three years of service and grade E3 and below reside in government-furnished quarters. In 2014, the projected year of the analysis, 369 unaccompanied personnel will require government quarters (Table 4-5).

Table 4-5. Unaccompanied Personnel Minimum Housing Requirement, 2014

Pay Grade	Unaccompanied Personnel	Minimum Housing Requirement
E4	192	48
E3	266	266
E2	30	30
E1	25	25
Enlisted	513	369
Total	513	369

5.0 COMPETING DEMAND

In the final year of the planning period, military families in excess of the Military Family Minimum Housing Requirement will require housing in the private sector. The military family and unaccompanied personnel shares of the suitable rental housing supply are determined by the housing competition in each market segment. With military homeowners assumed to be suitably housed, military family and unaccompanied personnel who require rental housing compete with the civilian household demand for shares of the effective rental housing supply in each market segment. The competing demand for private sector rental housing is described in the following sections:

- Military Families Requiring Rental Housing
- Unaccompanied Personnel Requiring Rental Housing
- Civilian Rental Demand

5.1 MILITARY FAMILIES REQUIRING RENTAL HOUSING

In 2014, the final year of the planning period, an estimated 1,116 military families will be living in the private sector (Table 5-1). Their requirements by bedroom (Table 5-2) are based on the current distribution.

Table 5-1. Military Families Requiring Housing, 2014

	2014
Military Families	1,264
Minimum Housing Requirement	148
In Private Sector	1,116

Table 5-2. Military Families Requiring Private Sector Housing, 2014

Pay Grade	Number of Bedrooms			Total
	Two	Three	Four+	
O7+	-	-	-	-
O6	-	-	1	1
O5	-	9	6	15
O4	-	28	7	35
O3	27	13	19	59
O2	3	1	-	4
O1	3	-	1	4
Officers	33	51	34	118
E9	-	10	5	15
E8	-	25	6	31
E7	-	124	40	164
E6	95	78	70	243
E5	185	92	42	319
E4	114	17	7	138
E3	67	6	-	73
E2	8	-	-	8
E1	7	-	-	7
Enlisted	476	352	170	998
Total	509	403	204	1,116

In the private sector, military families will either become homeowners or require rental housing. Ownership rates are used to estimate owner-occupied demand for military families. Ownership can be expected to vary with income, allowances, mortgage interest rates, and the general price level of the real estate market. Military households currently occupying government-controlled or privatized units are assumed to become renters of private sector housing if government-controlled or privatized housing are no longer available.

Homeownership and rental rates applied in this study are based on the 1997 Voluntary Housing Allowance (VHA) survey for Eielson AFB (Table 5-3). The 2009 Air Force Housing Survey had an insufficient number of responses to be applied in this analysis. Military family homeownership rates are based on all accompanied personnel within their respective pay grade and are assumed to remain at their 2009 levels over the study period.

Table 5-3. Homeownership Rates for Military Families

Pay Grade	Percentage Homeowners	Percentage Renters
O7+	100.0%	-
O6	100.0%	-
O5	100.0%	-
O4	86.0%	14.0%
O3	71.0%	29.0%
O2	43.0%	57.0%
O1	33.0%	67.0%
E9	80.0%	20.0%
E8	72.0%	28.0%
E7	60.0%	40.0%
E6	53.0%	47.0%
E5	29.0%	71.0%
E4	11.0%	89.0%
E3	9.0%	91.0%
E2	-	100.0%
E1	-	100.0%

For the projected year of the analysis, 58 families are estimated to require homeowner housing and the remaining 1,058 families are expected to require rental housing (Tables 5-4 and 5-5). Approximately 48.0 percent of the rental requirements will be in the two-bedroom category, while three- and four-bedroom rental requirements will respectively account for 33.6 and 18.4 percent of the total rental demand.

Table 5-4. Military Family Homeowner Requirement, 2014

Pay Grade	Total
O7+	-
O6	1
O5	7
O4	11
O3	2
O2	-
O1	-
Officers	21
E9	9
E8	5
E7	22
E6	-
E5	-
E4	1
E3	-
E2	-
E1	-
Enlisted	37
Total	58

Table 5-5. Military Family Rental Requirement, 2014

Pay Grade	Number of Bedrooms			Total
	Two	Three	Four+	
O7+	-	-	-	-
O6	-	-	-	-
O5	-	3	5	8
O4	-	17	7	24
O3	27	13	17	57
O2	3	1	-	4
O1	3	-	1	4
Officers	33	34	30	97
E9	-	1	5	6
E8	-	21	5	26
E7	-	107	35	142
E6	95	78	70	243
E5	185	92	42	319
E4	113	17	7	137
E3	67	6	-	73
E2	8	-	-	8
E1	7	-	-	7
Enlisted	475	322	164	961
Total	508	356	194	1,058

There are many external factors that affect housing choices. However, the objective of an HRMA is to assess if there is sufficient affordable private sector housing of acceptable quality. For the purposes of this analysis, in order to determine the military households' market share of suitable housing, military families requiring rental housing are allocated to rental market segments within a spending band for their pay grade and bedroom entitlement. While the MAHC defines the highest affordable cost, a minimum suitable rental cost by bedroom is established to represent the minimum cost for suitable rental units setting the lower limits of spending bands for each pay grade (Table 5-6).

Table 5-6. MAHC With Dependents and Minimum Housing Cost, 2009

Pay Grade	MAHC/BAH	Minimum Housing Cost by Number of Bedrooms ¹		
		Two	Three	Four+
O7+	\$2,399	-	-	\$1,986
O6	\$2,371	-	-	\$1,986
O5	\$2,352	-	\$1,518	\$1,986
O4	\$2,254	-	\$1,518	\$1,986
O3	\$2,113	\$1,291	\$1,518	\$1,986
O2	\$2,004	\$1,291	\$1,518	\$1,986
O1	\$1,955	\$1,291	\$1,518	\$1,986
E9	\$2,153	\$1,291	\$1,518	\$1,986
E8	\$2,088	\$1,291	\$1,518	\$1,986
E7	\$2,045	\$1,291	\$1,518	\$1,986
E6	\$2,006	\$1,291	\$1,518	\$1,986
E5	\$1,948	\$1,291	\$1,518	\$1,986
E4	\$1,533	\$1,291	\$1,518	\$1,986
E3	\$1,533	\$1,291	\$1,518	\$1,986
E2	\$1,533	\$1,291	\$1,518	\$1,986
E1	\$1,533	\$1,291	\$1,518	\$1,986

Service members are allocated to market segments between the minimum cost and their MAHC (Table 5-7). Military households with an MAHC insufficient to meet the minimum cost are assumed to become a private sector shortfall. The analysis assumes that rental costs are constant over the study period.

¹ Includes rent, utility costs, and renter's insurance

Table 5-7. Military Family Rental Requirement by Price Category, 2014

Rental Cost ¹	Number of Bedrooms			Total
	Two	Three	Four+	
\$2,000 & Above	-	1	144	145
\$1,900 - \$1,999	3	14	1	18
\$1,800 - \$1,899	16	70	9	95
\$1,700 - \$1,799	19	88	10	117
\$1,600 - \$1,699	19	86	11	116
\$1,500 - \$1,599	23	97	12	132
\$1,400 - \$1,499	193	-	3	196
\$1,300 - \$1,399	217	-	2	219
\$1,200 - \$1,299	18	-	2	20
\$1,100 - \$1,199	-	-	-	-
\$1,000 - \$1,099	-	-	-	-
Below \$1,000	-	-	-	-
Total	508	356	194	1,058

5.2 UNACCOMPANIED PERSONNEL REQUIRING RENTAL HOUSING

Unaccompanied personnel requiring private sector housing are all personnel not required to live in military quarters per their respective service policy (Table 5-8).

Table 5-8. Unaccompanied Personnel Requiring Housing, 2014

	2014
Unaccompanied Personnel	823
In Government Quarters	369
In Private Sector	454

For the projected year of the analysis, there are 454 unaccompanied personnel who are not required to reside in military quarters and compete against civilian and military families seeking private sector housing (Table 5-9).

¹ Includes rent, utility costs, and renter's insurance

Table 5-9. Unaccompanied Personnel Private Sector Housing Requirement, 2014

Pay Grade	Number of Bedrooms			Total
	One	Two	Three	
O7+	-	-	-	-
O6	-	-	2	2
O5	-	-	5	5
O4	-	-	9	9
O3	-	33	-	33
O2	-	9	-	9
O1	-	6	-	6
Officers	-	48	16	64
E9	-	1	-	1
E8	-	7	-	7
E7	-	29	-	29
E6	-	57	-	57
E5	152	-	-	152
E4	144	-	-	144
E3	-	-	-	-
E2	-	-	-	-
E1	-	-	-	-
Enlisted	296	94	-	390
Total	296	142	16	454

Unaccompanied personnel who elect to purchase homes are considered suitably housed and do not compete in the rental housing market. The proportion of unaccompanied personnel who seek rental housing in the private sector is estimated from homeownership rates derived from the 1997 VHA survey for Eielson AFB (Table 5-10).

Table 5-10. Homeownership Rates for Unaccompanied Personnel

Pay Grade	Percentage Homeowners	Percentage Renters
O7+	100.0%	-
O6	100.0%	-
O5	67.0%	33.0%
O4	86.0%	14.0%
O3	41.0%	59.0%
O2	23.0%	77.0%
O1	-	100.0%
E9	100.0%	-
E8	33.0%	67.0%
E7	24.0%	76.0%
E6	23.0%	77.0%
E5	6.0%	94.0%
E4	1.0%	99.0%
E3	-	100.0%
E2	-	100.0%
E1	-	100.0%

An estimated 62 unaccompanied service members will require homeowner housing (Table 5-11), and 392 unaccompanied service members will require rental housing (Table 5-12).

Table 5-11. Unaccompanied Personnel Homeowner Requirement, 2014

Pay Grade	Total
O7+	-
O6	2
O5	3
O4	8
O3	14
O2	2
O1	-
Officers	29
E9	1
E8	2
E7	7
E6	13
E5	9
E4	1
E3	-
E2	-
E1	-
Enlisted	33
Total	62

Table 5-12. Unaccompanied Personnel Rental Requirement, 2014

Pay Grade	Number of Bedrooms			Total
	One	Two	Three	
O7+	-	-	-	-
O6	-	-	-	-
O5	-	-	2	2
O4	-	-	1	1
O3	-	19	-	19
O2	-	7	-	7
O1	-	6	-	6
Officers	-	32	3	35
E9	-	-	-	-
E8	-	5	-	5
E7	-	22	-	22
E6	-	44	-	44
E5	143	-	-	143
E4	143	-	-	143
E3	-	-	-	-
E2	-	-	-	-
E1	-	-	-	-
Enlisted	286	71	-	357
Total	286	103	3	392

MAHC sets the upper limit of affordable housing for unaccompanied personnel (Table 5-13). Unaccompanied personnel are allocated to the rental housing market segments based on their assumed expenditures estimates by the personnel within each pay grade (Table 5-14). The analysis assumes that rental costs are constant over the study period.

Table 5-13. MAHC Without Dependents and Minimum Housing Cost, 2009

Pay Grade	MAHC/BAH	Minimum Housing Cost by Number of Bedrooms ¹		
		One	Two	Three
O7+	\$2,157	-	-	\$1,518
O6	\$2,115	-	-	\$1,518
O5	\$2,054	-	\$1,291	\$1,518
O4	\$2,014	-	\$1,291	\$1,518
O3	\$1,799	\$1,111	\$1,291	\$1,518
O2	\$1,503	\$1,111	\$1,291	\$1,518
O1	\$1,466	\$1,111	\$1,291	\$1,518
E9	\$1,744	\$1,111	\$1,291	\$1,518
E8	\$1,614	\$1,111	\$1,291	\$1,518
E7	\$1,534	\$1,111	\$1,291	\$1,518
E6	\$1,505	\$1,111	\$1,291	\$1,518
E5	\$1,461	\$1,111	\$1,291	\$1,518
E4	\$1,150	\$1,111	\$1,291	\$1,518
E3	\$1,150	\$1,111	\$1,291	\$1,518
E2	\$1,150	\$1,111	\$1,291	\$1,518
E1	\$1,150	\$1,111	\$1,291	\$1,518

Table 5-14. Unaccompanied Personnel Rental Requirement by Price Category, 2014

Rental Cost ¹	Number of Bedrooms			Total
	One	Two	Three	
\$2,000 & Above	-	-	-	-
\$1,900 - \$1,999	-	-	-	-
\$1,800 - \$1,899	-	-	-	-
\$1,700 - \$1,799	-	1	2	3
\$1,600 - \$1,699	-	1	1	2
\$1,500 - \$1,599	-	2	-	2
\$1,400 - \$1,499	10	44	-	54
\$1,300 - \$1,399	33	51	-	84
\$1,200 - \$1,299	36	4	-	40
\$1,100 - \$1,199	207	-	-	207
\$1,000 - \$1,099	-	-	-	-
Below \$1,000	-	-	-	-
Total	286	103	3	392

¹ Includes rent, utility costs, and renter's insurance

5.3 CIVILIAN RENTAL DEMAND

Civilian housing demand is comprised of the housing demand by civilian households residing within the housing market area and any military personnel residing in the area who are not a housing responsibility of the installation. Housing demand by these households is determined by their housing decisions based on factors such as income, location, and personal preferences. The civilian rental housing demand projected for 2014 is 890 (Table 5-15).

Table 5-15. Civilian Rental Demand, 2014

Rental Cost ¹	Number of Bedrooms					Total
	None	One	Two	Three	Four+	
\$2,000 & Above	-	4	10	28	2	44
\$1,900 - \$1,999	-	1	3	6	1	11
\$1,800 - \$1,899	-	3	8	22	5	38
\$1,700 - \$1,799	-	4	10	28	8	50
\$1,600 - \$1,699	-	4	10	28	8	50
\$1,500 - \$1,599	-	4	10	28	8	50
\$1,400 - \$1,499	1	9	19	25	8	62
\$1,300 - \$1,399	1	11	21	29	9	71
\$1,200 - \$1,299	1	12	24	31	9	77
\$1,100 - \$1,199	1	10	38	25	8	82
\$1,000 - \$1,099	2	12	61	15	5	95
Below \$1,000	32	39	159	20	10	260
Total	38	113	373	285	81	890

¹ Includes rent, utility costs, and renter's insurance

6.0 EFFECTIVE RENTAL HOUSING SUPPLY

In this analysis, the Total Military Family Housing Requirement is based on the manpower and housing supply in 2014, the final year of the five-year planning period. This chapter describes the housing supply available to military households in 2014. While homeowner occupied housing is presented, military homeowners are assumed to be suitably housed for the purposes of the analysis.

The focus of the analysis is the effective rental supply including only those rental units which are affordable and suitable for the military costing no more than their housing allowance and meeting their bedroom requirements. The effective rental housing supply is derived from estimates of the total rental supply and suitable housing in the following sections:

- Private Sector Housing
- Homeowner Housing Supply
- Effective Rental Housing Supply

6.1 PRIVATE SECTOR HOUSING

Private sector housing includes both homeowner housing as well as rental housing within the Housing Market Area. The private sector housing inventory that is competitive for military households is estimated to increase by 0.6 percent annually through 2014 to a total of 5,837 units, including 4,204 homeowner units and 1,633 rental units (Table 6-1). The effective rental market includes only those rental units which military households are eligible to rent and are affordable and suitable with a rental cost not exceeding their housing allowances while meeting their bedroom requirements.

Table 6-1. Private Sector Housing in the Housing Market Area, 2014

Housing Ownership	2014
Homeowner Housing	4,204
Rental Housing	1,633
Effective Supply	402
Percent of Total Rental Supply	25
Total	5,837

6.2 HOMEOWNER HOUSING SUPPLY

Homeowner housing is estimated to grow at 0.8 percent annually, reaching 4,204 units by 2014. All owner-occupied housing, with the exception of mobile homes, is considered suitable for military personnel.

6.3 EFFECTIVE RENTAL HOUSING SUPPLY

The effective rental supply is comprised of the rental housing units that are affordable and suitable to the military households. The effective supply does not include housing that is more costly than the highest BAH rates for the installation nor below the cost of a minimally acceptable housing unit. The effective rental supply also does not include any efficiency units as they would not satisfy the bedroom entitlement of military families or unaccompanied personnel.

The determination of the effective rental supply starts with the total rental supply. Restricted rental units, for which the military households are not eligible, are first removed from the total supply. The effective rentals are further reduced by the removal of unsuitable units. Suitability is address from the perspective of

- Housing Type,
- Unsuitable Housing Areas,
- Housing Condition.

Finally, suitability is further limited in terms of cost by the housing allowance and the bedroom entitlement of the military members requiring private sector housing.

6.3.1 TOTAL RENTAL HOUSING SUPPLY

The total rental supply in the Housing Market Area by 2014 is estimated at 1,633 units. Two-bedroom and smaller units make up 68.5 percent of rental housing supply (Table 6-2). Three-bedroom units make up 23.7 percent of rental housing and the remaining 7.8 percent have four or more bedrooms.

Table 6-2. Rental Housing Supply, 2014

Rental Cost ¹	Number of Bedrooms					Total
	None	One	Two	Three	Four+	
\$2,000 & Above	-	4	10	36	13	63
\$1,900 - \$1,999	-	1	3	9	4	17
\$1,800 - \$1,899	-	4	10	34	11	59
\$1,700 - \$1,799	-	5	12	43	14	74
\$1,600 - \$1,699	-	4	12	43	14	73
\$1,500 - \$1,599	-	5	13	43	14	75
\$1,400 - \$1,499	1	11	63	30	9	114
\$1,300 - \$1,399	1	13	71	34	11	130
\$1,200 - \$1,299	1	14	78	38	12	143
\$1,100 - \$1,199	1	29	103	33	10	176
\$1,000 - \$1,099	2	64	116	17	5	204
Below \$1,000	34	211	223	27	10	505
Total	40	365	714	387	127	1,633

¹ Includes rent, utility costs, and renter's insurance

6.3.2 RESTRICTED RENTAL HOUSING

Income and age restrictions are the most common limiting factors for units that have eligibility restrictions. In general, military households do not meet these requirements or when they do, the waiting lists are excessively long in relation to the member's tour of duty at a location so that such housing is not an option for the eligible military household. As such these rental units are assumed not to be available to military households.

6.3.3 SUITABLE RENTAL HOUSING

The effective rental supply only includes housing that is determined to be affordable and suitable for military personnel. In general, suitability is a function of location (i.e., within the Housing Market Area), health and safety concerns, and level of quality. From the individual military household perspective, the housing must be affordable in that it does not exceed the member's housing allowance and must meet the household's bedroom requirement.

Determinations of rental housing suitability within the Eielson AFB Housing Market Area is based on discussions with the installation housing office personnel, interviews with local property managers and realtors, surveys of the local community, and other published data. Housing must meet the general suitability factors, have enough bedrooms to meet the minimum bedroom entitlement, and not exceed the maximum BAH rates for each bedroom category.

Location and cost are two important criteria used in determining suitability. The HRMA process does not permit extensive surveying or inspection of the individual housing units. Housing may have similar conditions based on their location. Common age and type of construction, transportation, level of crime, health and safety factors, coupled with close proximity, may permit classifying housing suitability by a geographic area. Rental cost may serve as a proxy for housing condition. Other things being equal, lower cost housing will generally have fewer amenities and reduced qualities than more expensive housing. A rental cost that represents the lowest cost for a minimally acceptable housing unit is used to set the lower limit of rental housing suitability.

6.3.3.1 Air Force General Suitability Factors

Air Force standards for judging suitability of private sector housing are based on DoD 4165.63-M (U.S. Department of Defense, 1993) as interpreted by the Air Force (Figure 6-1). Housing must be within the Housing Market Area for the installation and not in an area designated by the base commander as unacceptable for health or safety reasons. Housing must be no more expensive than the Basic Allowance for Housing for each pay grade as determined by DoD based upon the local median housing cost.

Figure 6-1. Air Force General Suitability Factors

- Housing must be well maintained and structurally sound.
- Housing must not pose a health or safety hazard.
- Housing must be a complete unit with private entrance, bathroom, and kitchen for the sole use of its occupants.
- Rooms must be arranged so that the kitchen, a bathroom, the living room, and bedrooms can be entered without passing through bedrooms.
- Units must have air conditioning or a similar cooling system and a permanently-installed, adequately-vented heating system if the installation is located in a climate where these are to be included in U.S. Government construction by DoD standards.
- Housing must have adequate electrical service with washer/dryer connections or accessible laundry facilities on the premises.
- Unit must have hot and cold running potable water and sufficient sanitary and sewage disposal facilities.
- Mobile homes, even if owner-occupied, are not considered suitable housing for military personnel.

Source: DoD 4165.63-M U.S. Department of Defense, 1993

6.3.3.2 Unsuitable Housing Types

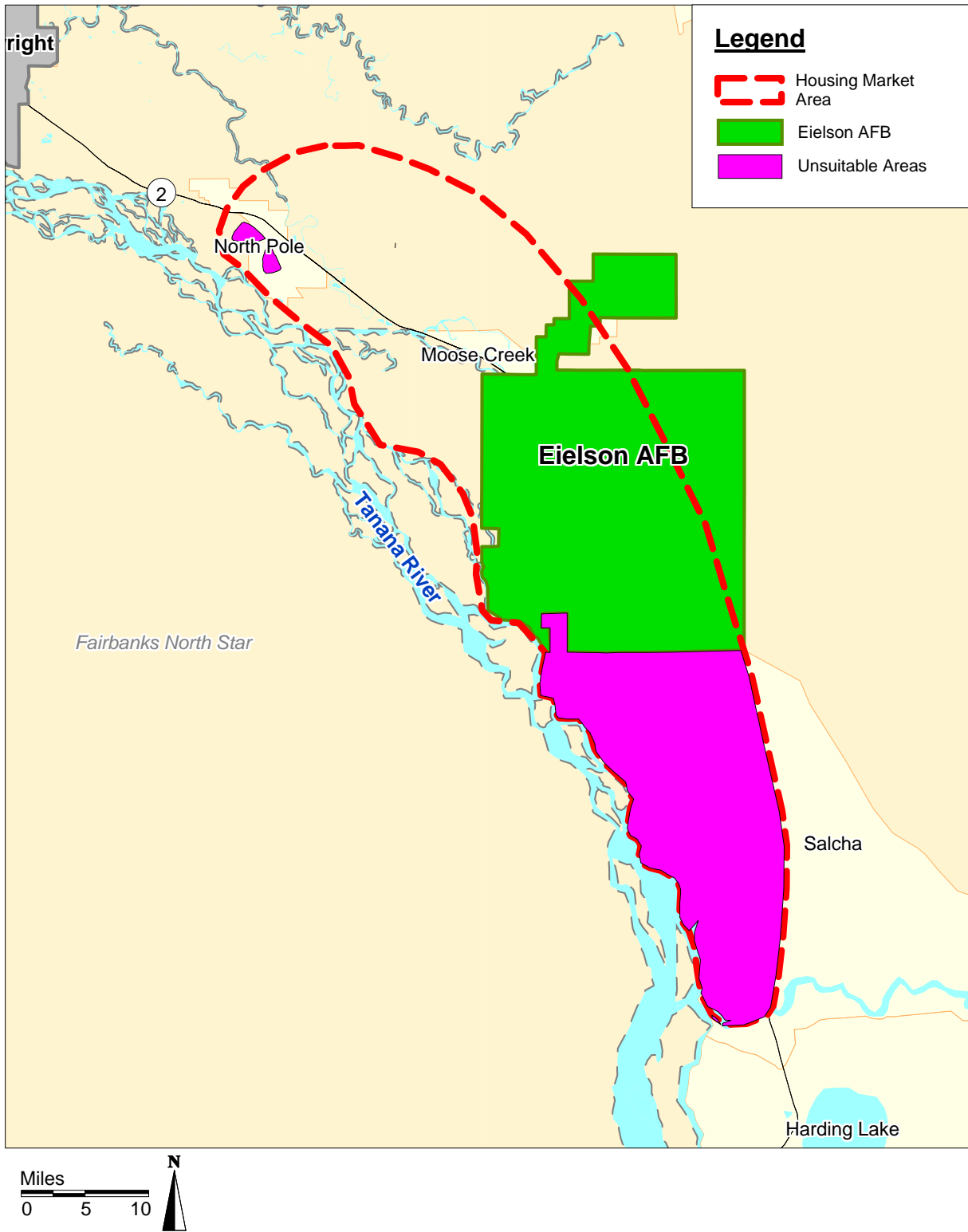
By policy, mobile home units are considered unsuitable housing for military personnel. 2000 U.S. Census data provides estimates of rental mobile home totals and price bedroom composition.

6.3.3.3 Unsuitable Housing Areas

For the purposes of this analysis, rental housing within the Housing Market Area is considered unsuitable for military households if it falls within a geographical area that is characteristic of conditions that would present health and safety concerns (Figure 6-2). Some of these conditions include a high rate of violent crime against persons or property, an industrial area and/or high commercial density, and extreme decay in neighborhood condition. According to the *American Housing Survey*, neighborhood conditions that could signify problems include long-term problems with trash accumulation, major street repairs, bared windows, broken windows, vandalized property, and boarded/abandoned properties.

Unsuitable areas were estimated for this analysis by considering data provided by Eielson AFB housing office. Applied unsuitable areas are defined for analytical purposes only.

Figure 6-2. Applied Unsuitable Areas



6.3.3.4 Unsuitable Housing Condition

Housing units that are unsuitable for military households are not limited to unsuitable areas or of an unsuitable housing type. As a house by house survey for suitability is beyond the scope of this HRMA, housing cost is applied as a proxy for suitability. In a competitive market, rental costs reflect the housing quality other things being equal. The rental costs by number of bedroom categories are estimated to establish the minimum costs per month in order for a military member to secure housing of a minimum acceptable quality (Table 6-3). As such, any private sector rental units below the defined minimum limits are considered unsuitable for military members.

Table 6-3. Minimum Acceptable Costs by Bedroom, 2014

Number of Bedrooms	Minimum Rent ¹	Total Average Utility Costs ²	Rental Insurance	Minimum Costs
One	\$700	\$403	\$8	\$1,111
Two	\$800	\$481	\$10	\$1,291
Three	\$950	\$557	\$11	\$1,518
Four+	\$1,300	\$671	\$15	\$1,986

6.3.4 EFFECTIVE RENTAL SUPPLY

The effective rental housing supply in the Housing Market Area is estimated at 402 units in 2014 (Table 6-4). These are the affordable, suitable rental housing units for the military households, both families and unaccompanied personnel. Only rental housing costing less than the highest BAH rate for each bedroom category is included.

Table 6-4. Effective Rental Housing Supply, 2014

Rental Cost ³	Number of Bedrooms				Total
	One	Two	Three	Four+	
\$2,000 & Above	-	-	1	1	2
\$1,900 - \$1,999	-	3	8	-	11
\$1,800 - \$1,899	-	10	33	-	43
\$1,700 - \$1,799	-	11	41	-	52
\$1,600 - \$1,699	-	11	41	-	52
\$1,500 - \$1,599	-	12	34	-	46
\$1,400 - \$1,499	7	62	-	-	69
\$1,300 - \$1,399	13	69	-	-	82
\$1,200 - \$1,299	14	6	-	-	20
\$1,100 - \$1,199	25	-	-	-	25
\$1,000 - \$1,099	-	-	-	-	-
Below \$1,000	-	-	-	-	-
Total	59	184	158	1	402

¹ Minimum rent estimates are based on Eielson AFB provided AHRN listings from February 2, 2009.

² Average cost estimates are based on 2008 HUD Allowances for Tenant Furnished Utilities for Fairbanks, Alaska.

³ Includes rent, utility costs, and renter's insurance

7.0 PRIVATE SECTOR SHORTFALL

This section summarizes the private sector rental housing market analysis in order to determine if there is sufficient private sector rental housing to meet the needs of military households that require private sector housing. For the purpose of the HRMA analysis, the Minimum Housing Requirement is the only military-controlled or privatized housing assumed to be occupied. Military households in excess of the Minimum Housing Requirement for their accompaniment status are assumed to require private sector rental housing. Military households that own their housing are assumed to be suitably housed.

For military households requiring rental housing, the sufficiency of the market to meet their requirements is determined through an allocation process which determines the military's share of the suitable rental housing for each accompaniment status. The allocation of the available, suitable supply for the military is based on a competitive market share concept. In each market segment, the military households compete against the civilian and other households who may also require rental housing in the market area. Each competing group is allocated their proportionate share of the suitable rental units.

The Private Sector Shortfall is determined as the difference between the military households requiring rental housing and the share of rental housing allocated to military households.

7.1 SUITABLE MARKET SUPPLY ALLOCATED TO THE MILITARY

The allocation of suitable rental housing to the military households requiring rental housing is shown in Table 7-1. The analysis indicates that 232 military families would be successful in obtaining suitable rental units. There is still an additional requirement, or shortfall, of 826 suitable community rentals for Eielson AFB in excess of its Military Family Minimum Housing Requirement in 2014.

Table 7-1. Market Allocation of Suitable Rental Housing

Military Families	1,058
Allocated Suitable Housing	232
Private Sector Shortfall	826

7.2 PRIVATE SECTOR HOUSING SHORTFALL

As determined by the allocation analysis, the Private Sector Shortfall of 826 units for military families is presented in Table 7-2.

Table 7-2. Private Sector Shortfall for Military Families

Rental Cost ¹	Number of Bedrooms			Total
	Two	Three	Four+	
\$2,000 & Above	-	-	143	143
\$1,900 - \$1,999	1	9	1	11
\$1,800 - \$1,899	10	46	9	65
\$1,700 - \$1,799	13	60	10	83
\$1,600 - \$1,699	13	58	11	82
\$1,500 - \$1,599	16	72	12	100
\$1,400 - \$1,499	149	-	3	152
\$1,300 - \$1,399	169	-	2	171
\$1,200 - \$1,299	17	-	2	19
\$1,100 - \$1,199	-	-	-	-
\$1,000 - \$1,099	-	-	-	-
Below \$1,000	-	-	-	-
Total	388	245	193	826

¹ Includes rent, utility costs, and renter's insurance

8.0 TOTAL MILITARY HOUSING REQUIREMENT

This chapter summarizes the HRMA results and determination of the Total Military Family Housing Requirement for Eielson AFB (Table 8-1). The Private Sector Shortfall of 826 units coupled with the 148 unit Military Family Minimum Housing Requirement results in a Total Military Family Housing Requirement of 974 units.

Table 8-1. Military Family Housing Requirement Summary

Total Military Housing Requirement	Military Families
Military Family Households	1,264
Minimum Housing Requirement	148
Private Sector Shortfall	826
Total Military Housing Requirement	974

8.1 TOTAL MILITARY FAMILY HOUSING REQUIREMENT

The Military Family Minimum Housing Requirement is comprised of the Community Housing Requirement, the Key and Essential Housing Requirement, and the Historic Housing Requirement (Table 8-2). About 81.6 percent of the 826 unit Private Sector Shortfall is in two and three bedroom units with the remaining 18.4 percent in four bedrooms units (Table 8-3). The Total Military Family Housing Requirement by bedroom category is the sum of the Military Family Minimum Housing Requirement and the Private Sector Shortfall (Table 8-4).

Table 8-2. Total Military Family Housing Requirement Summary

Pay Grade	Military Families	Military Community	Key & Essential	Historic Housing	Minimum Housing Requirement	Private Sector Shortfall	Total Military Housing Requirement
O7+	1	-	1	-	1	-	1
O6	6	1	5	-	5	-	5
O5	29	3	14	-	14	8	22
O4	42	4	7	-	7	20	27
O3	66	7	-	-	7	47	54
O2	5	1	-	-	1	3	4
O1	4	-	-	-	-	4	4
Officers	153	16	27	-	35	82	117
E9	17	2	1	-	2	6	8
E8	36	4	5	-	5	20	25
E7	182	18	5	-	18	107	125
E6	270	27	-	-	27	192	219
E5	355	36	-	-	36	243	279
E4	153	15	-	-	15	108	123
E3	81	8	-	-	8	57	65
E2	9	1	-	-	1	6	7
E1	8	1	-	-	1	5	6
Enlisted	1,111	112	11	-	113	744	857
Total	1,264	128	38	-	148	826	974

Table 8-3. Military Family Private Sector Shortfall

Pay Grade	Number of Bedrooms			
	Two	Three	Four+	Total
O7+	-	-	-	-
O6	-	-	-	-
O5	-	3	5	8
O4	-	13	7	20
O3	21	9	17	47
O2	2	1	-	3
O1	3	-	1	4
Officers	26	26	30	82
E9	-	1	5	6
E8	-	15	5	20
E7	-	72	35	107
E6	71	52	69	192
E5	139	62	42	243
E4	88	13	7	108
E3	53	4	-	57
E2	6	-	-	6
E1	5	-	-	5
Enlisted	362	219	163	744
Total	388	245	193	826

Table 8-4. Total Military Family Housing Requirement

Pay Grade	Number of Bedrooms			
	Two	Three	Four+	Total
O7+	-	-	1	1
O6	-	-	5	5
O5	-	12	10	22
O4	-	18	9	27
O3	24	11	19	54
O2	3	1	-	4
O1	3	-	1	4
Officers	30	42	45	117
E9	-	2	6	8
E8	-	19	6	25
E7	-	86	39	125
E6	82	60	77	219
E5	160	72	47	279
E4	100	15	8	123
E3	60	5	-	65
E2	7	-	-	7
E1	6	-	-	6
Enlisted	415	259	183	857
Total	445	301	228	974

8.2 SUMMARY

HOUSING MARKET AREA

Eielson AFB is located in Fairbanks North Star Borough, Alaska, of which the City of Fairbanks is the largest metropolitan area. Fairbanks has been excluded from the Housing Market Area due to poor weather conditions in the fall, winter and spring.

HOUSING SUPPLY

There is a total private housing stock of 5,653 units, including 4,044 homeowner units and 1,609 rental units. At an estimated annual growth rate of 0.6 percent, the housing market would increase to 5,837 units in 2014.

Eielson AFB currently has 1,176 total military family housing units and is expected to reach an end-state of 1,082 units by 2014.

MILITARY HOUSING DEMAND

The Eielson AFB housing office is currently responsible for supporting 2,181 military personnel including tenant personnel. This number is expected to remain at 2,192 authorizations in 2014.

There are projected to be 1,264 military families and 823 unaccompanied personnel, of which 1,116 military families and 454 unaccompanied personnel will require private sector housing.

MILITARY FAMILY MINIMUM HOUSING REQUIREMENT

The Military Family Minimum Housing Requirement, based on the greater of each of its components by pay grade, totals 148 military housing units. The individual components are:

Military Community Housing Requirement

The on-base community criterion requires military housing for 10 percent of all military families by pay grade. This requirement is projected to total 128 housing units.

Key and Essential Housing Requirement

There are projected to be 38 key and essential positions at Eielson AFB.

Historic Housing Requirement

There are no historic housing units at Eielson AFB.

PRIVATE SECTOR SHORTFALL FOR MILITARY FAMILIES

There is a projected shortfall of 826 suitable private sector rental units for military families.

TOTAL MILITARY FAMILY HOUSING REQUIREMENT

The Total Military Family Housing Requirement based on the sum of the Military Family Minimum Housing Requirement and the Private Sector Shortfall by pay grade totals 974 military housing units.

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