

HRMA

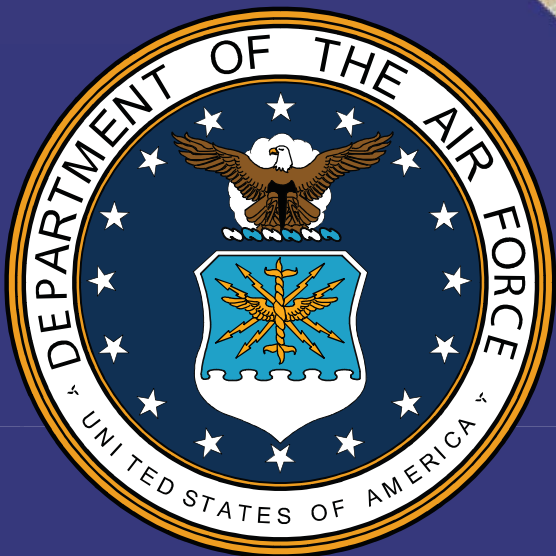
Housing Requirements and Market Analysis

United States Air Force

EDWARDS

AIR FORCE BASE

CALIFORNIA



2009 - 2014

OCTOBER 2009

Edwards AFB, CA

Housing Requirements and Market Analysis (HRMA)

Results

Based on the results of the Draft HRMA, dated 2 October 2009, the projected on-base family housing requirement is

Military Family Minimum ("Floor") Housing Requirement	216
<u>Private Sector Shortfall</u>	<u>306</u>
Total Military Family Housing Requirement	522

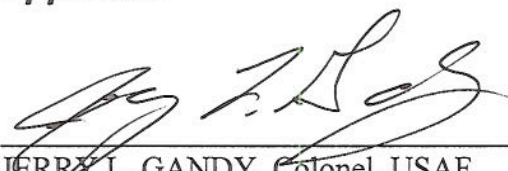
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HOUSING REQUIREMENTS AND MARKET ANALYSIS

Edwards Air Force Base 2009 – 2014

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Air Force Housing Division (AF/A7CAH)

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HOUSING REQUIREMENTS AND MARKET ANALYSIS

**Edwards Air Force Base
2009 – 2014**

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

This Housing Requirements and Market Analysis (HRMA) for Edwards Air Force Base (AFB), California, assesses the ability of the private sector housing market to meet the needs of military families. The Edwards AFB study results are:

Total Military Family Housing Requirement	522
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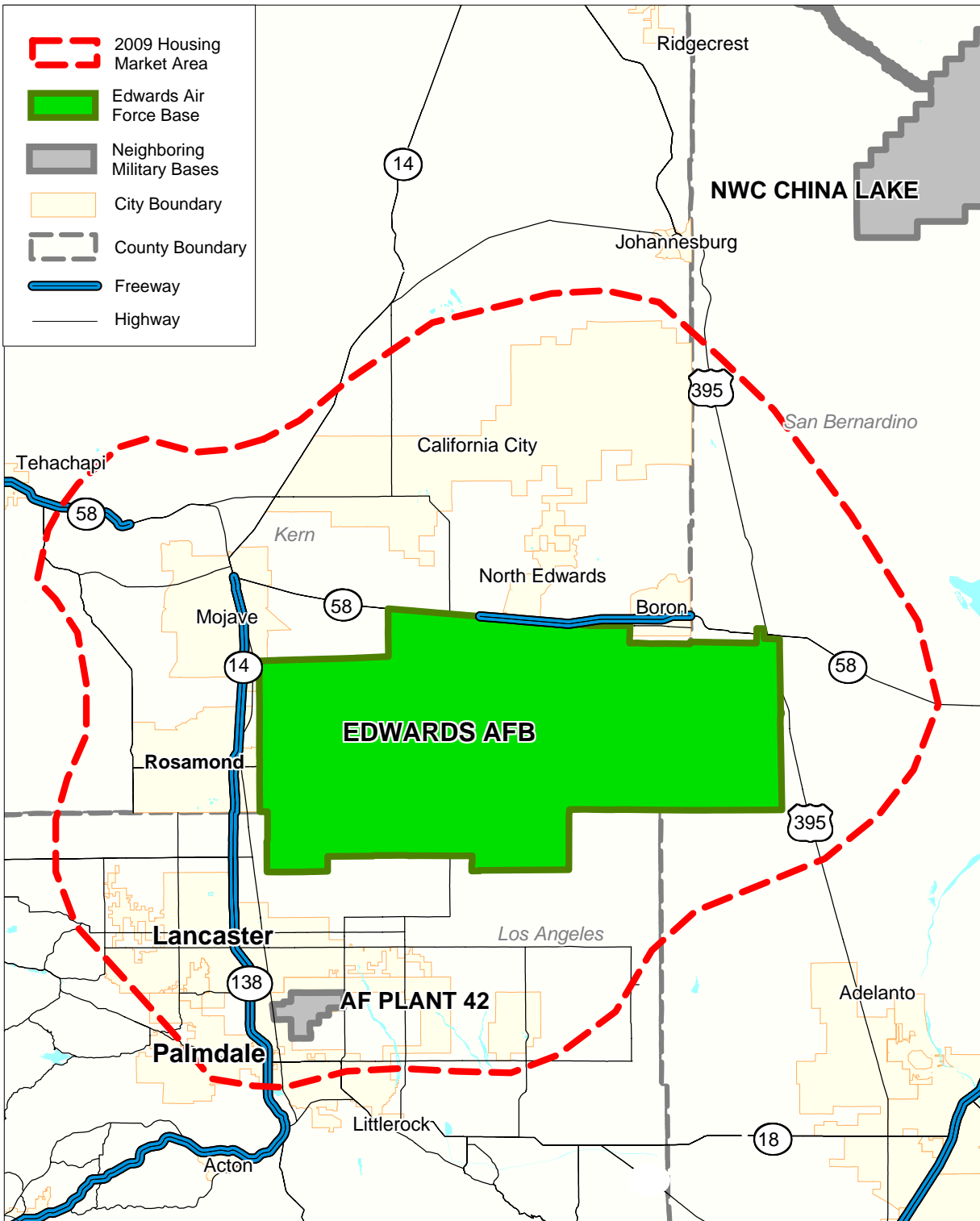
The Total Military Housing Requirement is based on a five-year planning period ending in 2014. In 2014, the installation is projected to support 2,801 personnel who are authorized housing, including 1,632 military families (Table ES-1).

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

	Total
PLANNED MANPOWER	2,801
MILITARY FAMILIES	1,632
Minimum Housing Requirement	216
Private Sector Shortfall	306
TOTAL MILITARY FAMILY HOUSING REQUIREMENT	522

Edwards AFB is located in the southeastern corner of Kern County, California in the Antelope Valley. The base is approximately 30 miles northeast of Lancaster (Figure ES-1), and approximately 100 miles north of central Los Angeles. For the purposes of this HRMA, only housing within the Edwards AFB Housing Market Area can be considered suitable for authorized military personnel. The housing market in the Antelope Valley has seen a substantial decrease in home prices since late 2007 after experiencing rapid price growth in the preceding four years. By June 2009, median home sales prices in Palmdale-Lancaster had retreated to 1989 levels. This has impacted the rental market by creating an influx of new rental supply as speculative investment houses have entered the rental market in large numbers causing increased vacancy rates and flattening rental prices.

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



CHANGES IN THE TOTAL HOUSING REQUIREMENT

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

Table ES-2. Total Military Family Housing Requirement History

Planning Year of HRMA Results	2005 Edwards AFB HRMA	2009 Edwards AFB HRMA	Total Change	Percent Change
PLANNED MANPOWER	2,309	2,801	492	21.3%
MILITARY FAMILIES	1,504	1,632	128	8.5%
Minimum Housing Requirement	205	216	11	5.4%
Military Family Homeowners	202	461	258	127.7%
Military Family Renters	1,097	956	(141)	(12.9%)
Private Sector Shortfall	592	306	(286)	(48.3%)
TOTAL MILITARY FAMILY HOUSING REQUIREMENT	797	522	(275)	(34.5%)

COMPONENTS OF CHANGE

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

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

MILITARY	HOUSING MARKET
➤ Manpower Authorized personnel for the projected year increased by 492 service members	➤ Rental Supply Projected market growth remains at 0.8% as applied in 2005 HRMA
➤ Military Families increased by 128	➤ Vacancy Rate Increased from 2.4% to 7.9% in 2009; projected at 5.4% 2014
➤ Families Rental Requirement decreased by 141	
➤ Unaccompanied Personnel increased by 71	➤ Rental Costs Increased 6.7% since the 2005 HRMA
	➤ Basic Allowance for Housing (BAH) Increased an average of 46.3% since 2007

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. **Methodology** - The 2005 HRMA for Edwards AFB applied the Dynamic Adjustment Model, which bases the housing requirement on a hypothetical transition of military families in government-controlled housing in excess of the Minimum “Floor” Housing Requirement to community housing over a five-year period. Under current Air Force guidance, the OSD Dynamic Adjustment Model is no longer applied.

To determine the housing requirement, this HRMA applies a proportional allocation of military and civilian rental demand to the suitable supply of community rental housing for the projected year of the analysis.

2. **Purchasing Power** – The Basic Allowance for Housing (BAH) for Edwards AFB military families has increased between 39% and 51% since 2005, depending on pay grade, for an average increase of 46.3%. Average rents in the Antelope Valley region have, in comparison, increased only 6.7% over the same period, making rental housing more affordable for the military families.
3. **Homeownership** – Estimated homeownership rates for Edwards AFB military families are greater than those applied in the 2005 HRMA. As a result, there were 141 fewer Military Family Renter requirements.
4. **Summary** – The combined factors of increased purchasing power and fewer military families requiring community rental housing results in a substantial decrease in the Military Family Private Sector Shortfall and the Military Family Housing Requirement.

TOTAL REQUIREMENT SUMMARY TABLES

Table ES-4. Edwards 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	20	2	17	-	17	1	18
O5	97	10	24	-	24	8	32
O4	157	16	7	-	16	23	39
O3	152	15	34	-	34	28	62
O2	11	1	2	-	2	4	6
O1	12	1	-	-	1	1	2
Officers	450	45	85	-	95	65	160
E9	20	2	3	-	3	2	5
E8	53	5	-	-	5	6	11
E7	225	23	5	-	23	22	45
E6	406	41	4	-	41	74	115
E5	308	31	3	-	31	75	106
E4	116	12	-	-	12	44	56
E3	42	4	-	-	4	15	19
E2	7	1	-	-	1	2	3
E1	5	1	-	-	1	1	2
Enlisted	1,182	120	15	-	121	241	362
Total	1,632	165	100	-	216	306	522

Table ES-5. Military Family Private Sector Shortfall

Pay Grade	Number of Bedrooms			Total
	Two	Three	Four+	
O7+	-	-	-	-
O6	-	-	1	1
O5	-	6	2	8
O4	-	15	8	23
O3	118	4	6	28
O2	3	-	1	4
O1	1	-	-	1
Officers	22	25	18	65
E9	-	2	-	2
E8	-	5	1	6
E7	-	16	6	22
E6	38	16	20	74
E5	52	11	12	75
E4	33	2	9	44
E3	13	1	1	15
E2	2	-	-	2
E1	1	-	-	1
Enlisted	139	53	49	241
Total	161	78	67	306

Table ES-6. Total Military Family Housing Requirement

Pay Grade	Number of Bedrooms			Total
	Two	Three	Four+	
O7+	-	-	1	1
O6	-	-	18	18
O5	-	24	8	32
O4	-	27	12	39
O3	36	11	15	62
O2	5	-	1	6
O1	2	-	-	2
Officers	43	62	55	160
E9	-	2	3	5
E8	-	9	2	11
E7	-	34	11	45
E6	55	30	30	115
E5	71	19	16	106
E4	43	3	10	56
E3	17	1	1	19
E2	3	-	-	3
E1	2	-	-	2
Enlisted	191	98	73	362
Total	234	160	128	522

HRMA

Housing Requirements and Market Analysis

United States Air Force



2009 - 2014

EDWARDS AIR FORCE BASE
CALIFORNIA

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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
AFMC	Air Force Materiel Command
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
JSF	Joint Strike Fighter
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
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 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 family households that Edwards Air Force Base (AFB), California 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 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 rental requirement to determine a Private Sector Shortfall, if any, in the final year of the planning period.
- 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. The criteria for affordable, suitable rental housing include location in the housing market area, 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 families within each market segment is the proportion of affordable, suitable housing in that segment equal to the proportion of the military families to the total competing housing demand within the market segment. This allocation becomes the market share for military families.

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 the military families in 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 sixty-minute commute or twenty 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 Edwards 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 based on 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 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/PRIVATIZED HOUSING SUPPLY

Privatized housing units are constructed and maintained by the private sector for primary occupancy by military personnel. As provided by Edwards AFB, currently there are 669 military controlled units with the inventory to reach an end-state at 796 privatized units in 2014.

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 *2009 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.

The number of military family and unaccompanied personnel homeowners is based on the Air Force Housing Survey conducted for Edwards AFB between April and May 2009.

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 Edwards 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. Total Military Housing Requirement
- Chapter 8. Summary
- 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 Housing Requirement for Edwards 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/Privatized Housing

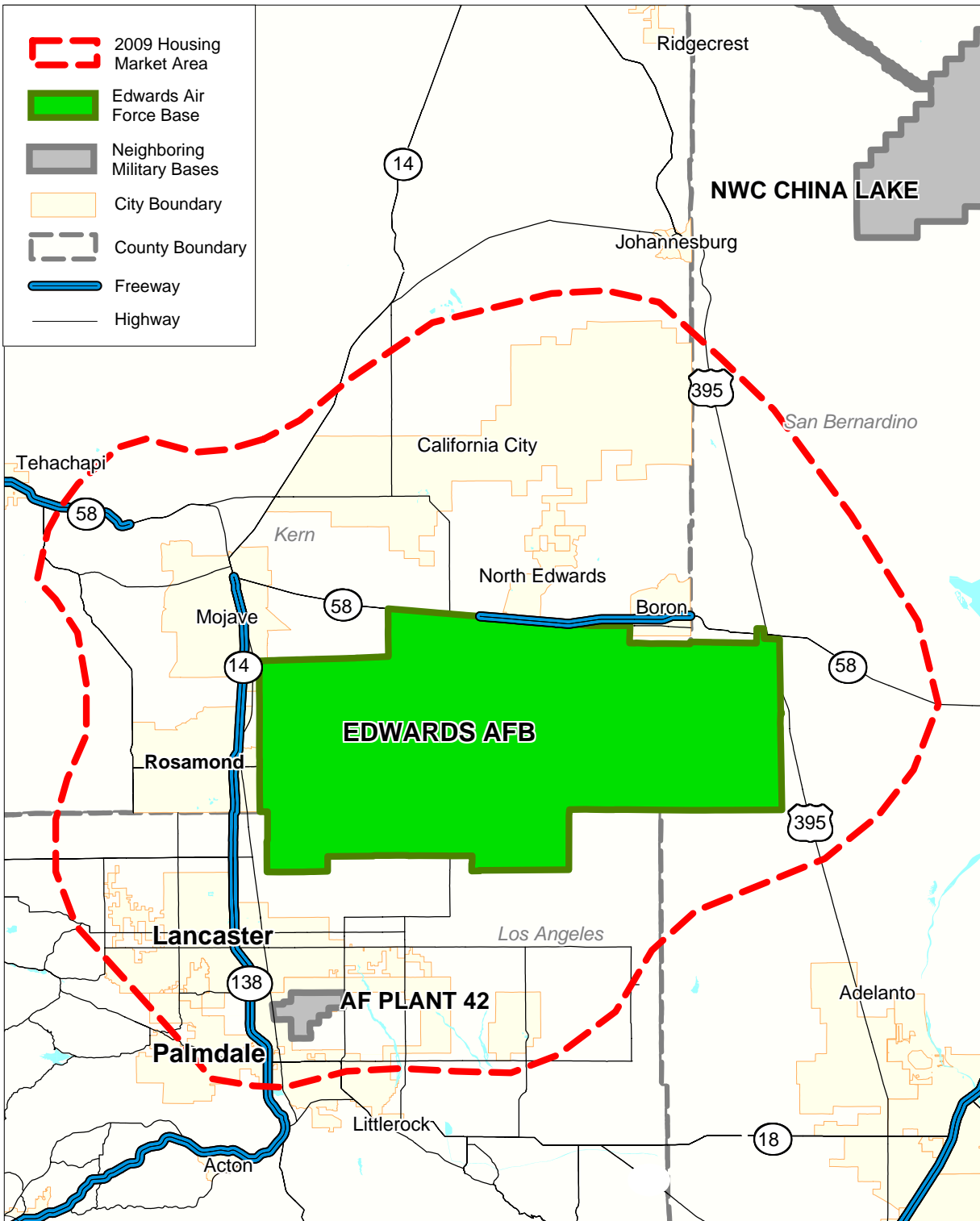
2.1 THE HOUSING MARKET AREA

The Housing Market Area for Edwards AFB is defined by the greater of either a sixty-minute commute or twenty miles distance originating from the installation's headquarters building during peak traffic in privately owned vehicles assuming normal weather conditions.

Edwards AFB is located in the southeastern corner of Kern County, California in the Antelope Valley. The base headquarters is approximately thirty miles northeast of Lancaster and approximately one-hundred miles northeast of central Los Angeles. The Housing Market Area can be described as follows (Figure 2-1):

- Includes parts of Kern, Los Angeles and San Bernardino Counties;
- Extends north along California Highway 14 and U.S. Highway 395 to include the City of California City;
- Extends east along California Highway 58 into rural San Bernardino County, but does not reach the City of Barstow;
- Extends south along California Highway 138 to include most of the City of Palmdale;
- Extends northwest along California Highway 58 to the eastern edge of the Town of Tehachapi.

Figure 2-1. Edwards 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 113,370 private sector housing units in the Housing Market Area (Table 2-1). The current private sector housing inventory includes 77,494 homeowner units and 35,876 rental units.

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

Housing Ownership	2009
Homeowner Housing	77,494
Rental Housing	35,876
Vacant Units	2,746
Total	113,370

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	3.2%
Homeowner Price	-1.9%
Rental Supply	1.1%
Rental Price	5.2%

2.2.1.1 Homeowner Market

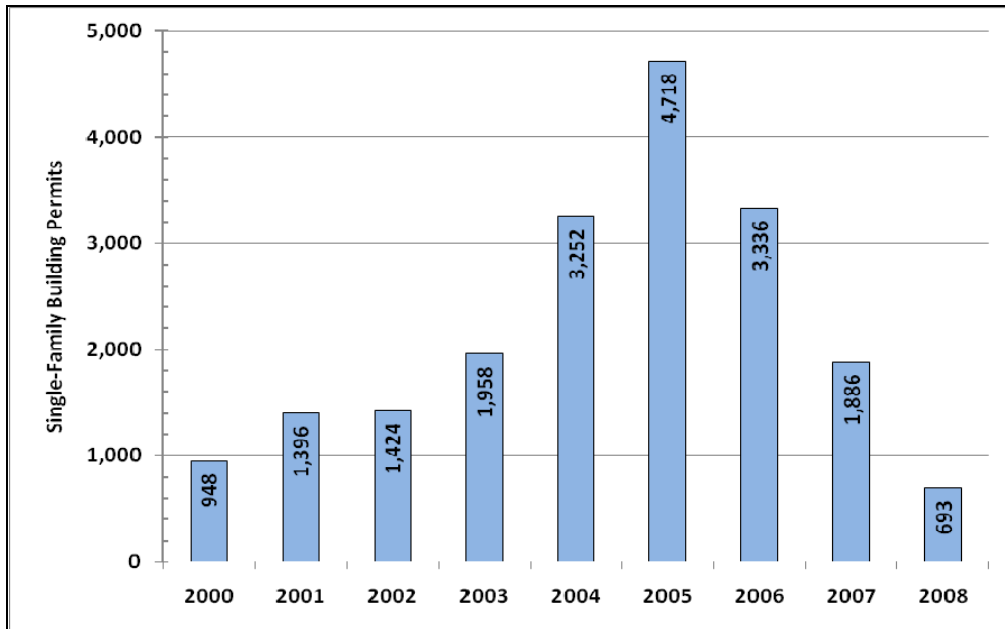
Building permit data from the U.S. Department of Housing and Urban Development-State of the Cities Data System (HUD-SOCDS) for the cities of Palmdale, Lancaster and California City indicate that single-family housing stock has grown at an average annual rate of approximately 3.2 percent since 2000, reaching a peak growth rate of 6.8 percent from 2005 to 2006. Area housing supply growth has come almost to a stop since 2007, with an increase from 2008 to 2009 of less than one percent (Figure 2-2).

The Antelope Valley has been extraordinarily impacted by the bursting of the “housing bubble” and the general economic recession. The cities of Palmdale and Lancaster are located in the most outlying reaches of the Los Angeles exurbs.

These communities grew rapidly from 2003 into 2007 as easy access to credit allowed metropolitan Los Angeles residents to buy larger and newer homes than they could afford closer to the center of the city. As with other exurban communities around the country, prices increased with the new demand, fueled by cheap credit, and developers responded and built heavily in the area. Average median home prices for the Antelope Valley cities of Palmdale, Lancaster, Rosamond and California City increased by 163 percent in the four years from 2002 to 2006, only to then fall by over two-thirds by April 2009 (Figure 2-3). More recent reports indicate that home prices in Lancaster and Palmdale had dropped to 1989 levels by June 2009, as the overbuilt market has continued to deteriorate.

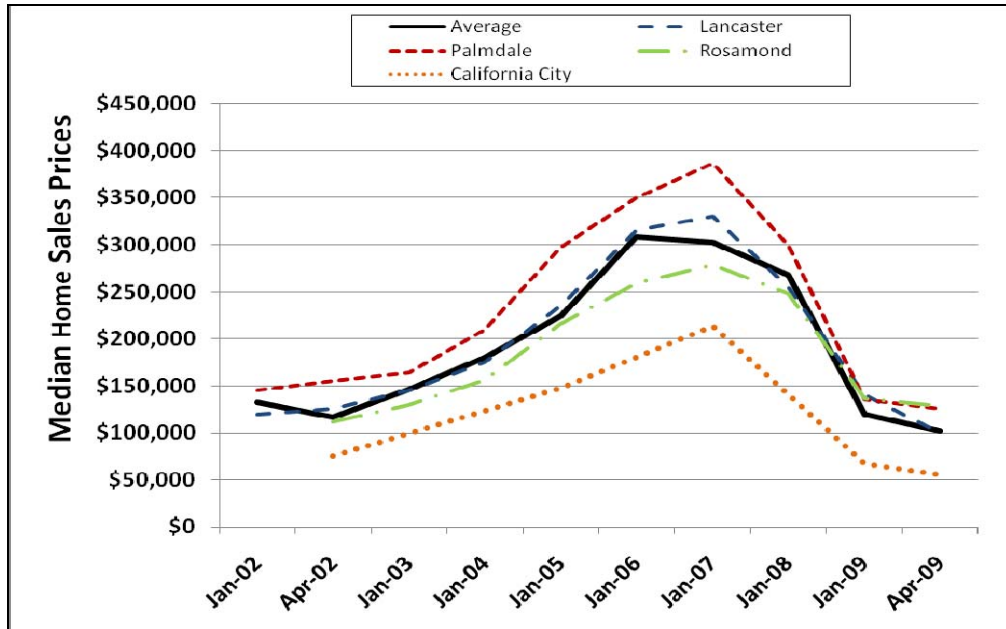
The homeowner housing market is expected to stabilize and perhaps resume a low level of growth in the next few years, as the economy begins to recover from recession and the regional housing market reaches a new equilibrium; however, the overbuilt regional housing market is unlikely to recover to mid-2000's levels in the immediate future.

Figure 2-2. Single-Family Building Permits - Lancaster, Palmdale & California City, California, 2000-2008



Source: HUD SOCDs, 2009

Figure 2-3. Homeowner Median Home Sales Prices for the Antelope Valley, California, 2002-2009

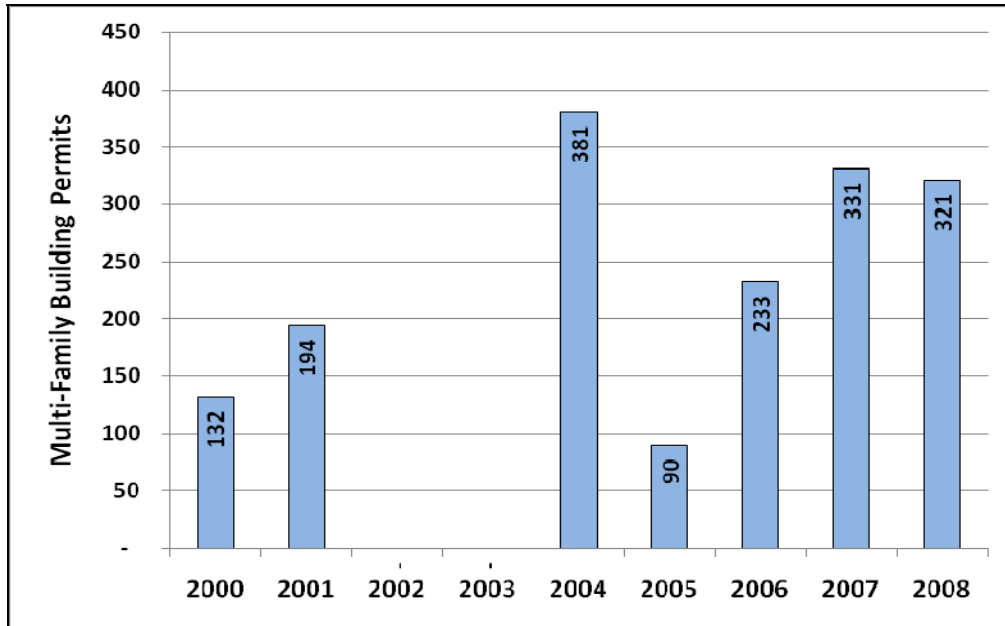


Source: California Association of Realtors, 2009

2.2.1.2 Rental Market

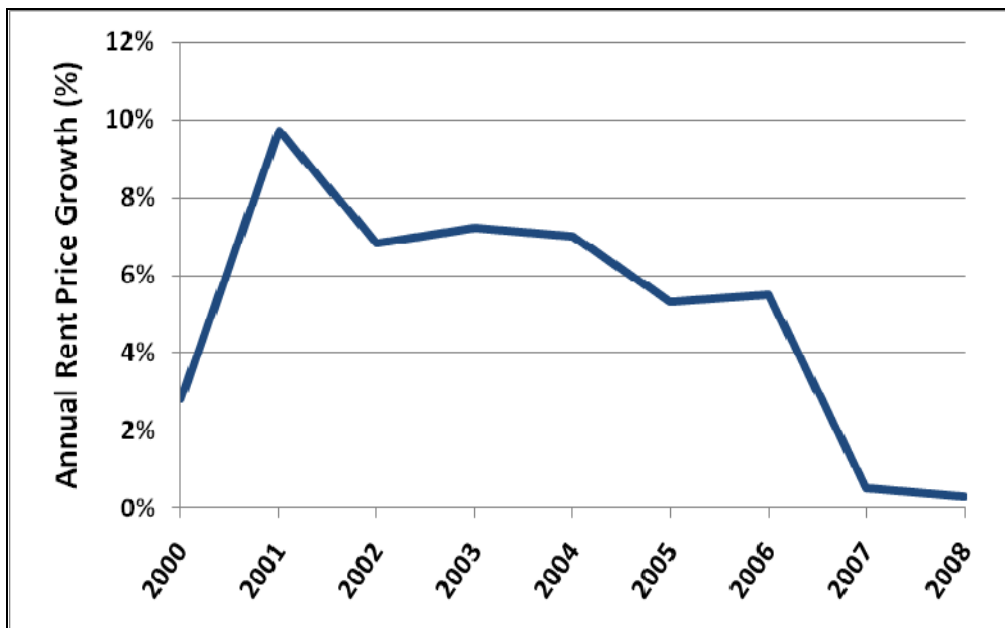
Building permit data from the HUD-SOCDS for the cities of Palmdale, Lancaster and California City indicate that the multi-family housing stock has grown at an average annual rate of approximately 1.1 percent since 2000 (Figure 2-4). Development of multi-family housing is unlikely to increase in the immediate future, as large quantity of low-priced, single-family homes in the area will continue to augment the rental market supply and reduce demand for multi-family units by both renters and prospective landlords. According to data from Reis, Inc., rental prices have increased over 50 percent from 2000 to 2008, an average annual rate of approximately 5.4 percent. Rental prices peaked in 2007 and began to retreat slightly in the last quarter of 2008 (Figure 2-5). The rental housing market is interrelated with the homeowner's market and, as such, is affected by events in the homeowner's market. Rapidly increasing home prices from 2000 to 2008 - combined with relatively low multi-family supply growth - increased demand and placed upward pressure on rental prices. In addition, the increasing costs to investors of purchasing single-family rental properties required higher rents. More recent information indicates that area rental prices have begun to drop significantly in 2009 as landlords/investors are buying up homes at low prices and putting them on the rental market.

Figure 2-4. Multi-Family Building Permits - Lancaster, Palmdale & California City, California, 2000-2008



Source: HUD SOCDs, 2009

Figure 2-5. Rental Price Growth for Palmdale-Lancaster, California, 2000-2008



Source: REIS, Inc., 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 consisted 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 35,876 units. Two-bedroom and smaller units make up 68.5 percent of rental housing supply. Three-bedroom units make up 23.4 percent of rental housing and the remaining 8.1 percent have four or more bedrooms (Table 2-3).

The total rental supply includes housing that the military members are generally not able to obtain, such as rental units restricted by incomes or age requirements. Often for low income housing, if the military member is eligible, long waiting times to access the housing effectively makes the housing unavailable to the member. There are 1,071 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 not considered as part rental housing supply for military households for the purposes of the HRMA.

Table 2-3. Total Rental Housing, 2009

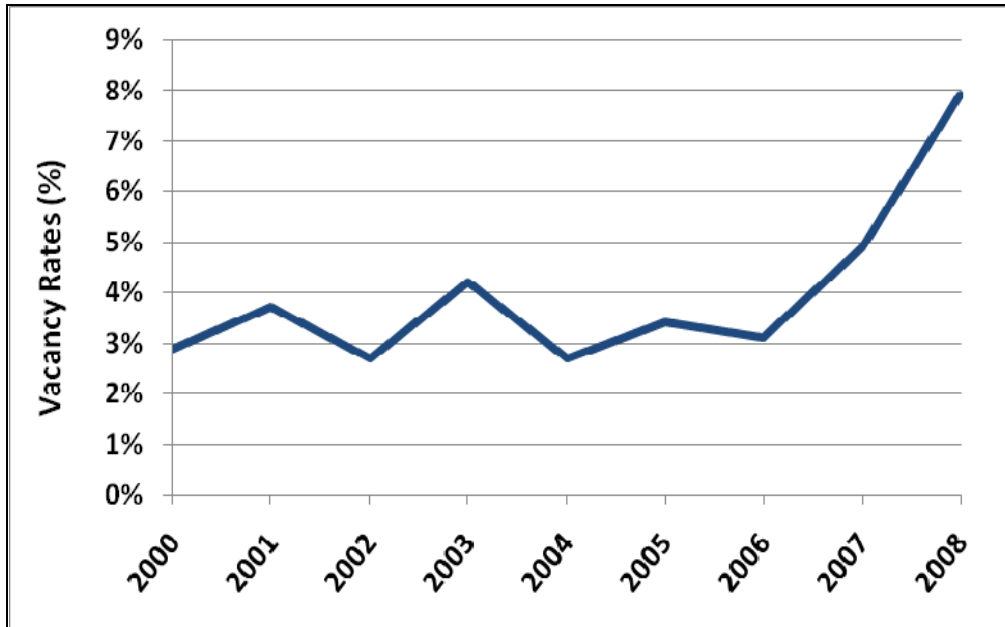
Rental Cost ¹	Number of Bedrooms					Total
	None	One	Two	Three	Four+	
\$2,000 & Above	25	51	75	557	261	969
\$1,500 - \$1,999	90	198	453	1,833	642	3,216
\$1,300 - \$1,499	93	238	751	1,754	628	3,464
\$1,150 - \$1,299	131	597	1,458	1,412	486	4,084
\$1,000 - \$1,149	242	1,409	2,796	947	286	5,680
\$900 - \$999	212	1,130	2,235	745	233	4,555
\$800 - \$899	246	1,137	1,967	512	169	4,031
\$700 - \$799	517	1,336	1,216	196	67	3,332
\$600 - \$699	420	1,078	912	156	55	2,621
\$500 - \$599	248	643	526	91	30	1,538
\$400 - \$499	145	435	258	68	23	929
Below \$400	155	680	458	123	41	1,457
Total	2,524	8,932	13,105	8,394	2,921	35,876

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 REIS, Inc., the rental vacancy rate for the Palmdale-Lancaster rental market was 7.9 percent at the end of 2008. The rental market in the area has averaged a very low 3.6 percent annually since 2000, and is currently at the highest level since the earliest data reported by REIS, Inc. in 1995. The vacancy rate is projected to have leveled off at 5.4 percent in 2013.

Figure 2-6. Rental Vacancies for Palmdale-Lancaster, California, 2000-2008



Source: REIS, Inc., 2009

For 2009, there are an estimated 2,746 vacant rental units in the Housing Market Area with an estimated vacancy rate at 7.9 percent (Table 2-4).

Table 2-4. Vacant Rental Housing, 2009

Rental Cost ¹	Number of Bedrooms					Total
	None	One	Two	Three	Four+	
\$2,000 & Above	2	4	5	44	21	76
\$1,500 - \$1,999	7	16	36	141	49	249
\$1,300 - \$1,499	7	19	58	134	49	267
\$1,150 - \$1,299	10	47	111	108	38	314
\$1,000 - \$1,149	19	109	212	71	23	434
\$900 - \$999	16	86	170	56	18	346
\$800 - \$899	18	87	150	39	13	307
\$700 - \$799	39	103	92	15	5	254
\$600 - \$699	31	82	69	12	4	198
\$500 - \$599	19	49	40	7	3	118
\$400 - \$499	11	33	20	5	1	70
Below \$400	12	52	36	10	3	113
Total	191	687	999	642	227	2,746

2.3 MILITARY/PRIVATIZED HOUSING

Privatized housing units are constructed and maintained by the private sector for primary occupancy by military personnel at the installation. For many installations, privatized housing has replaced government-owned and controlled housing. At Edwards AFB, the military housing program is in the process of privatization. The total housing supply at Edwards AFB is currently 669 government controlled units and is planned to increase to 796 units by the beginning of 2010 (Table 2-5).

Table 2-5. Military/Privatized Housing Supply, 2009

Inventory	Total
Military Owned or Leased	669
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 Edwards 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 2,672 in 2009 and 2,801 personnel by 2014 (Table 3-1). Current manpower authorizations are based on AFMC and Edwards AFB data. Projected manpower and pay grade distribution are from the AF/A7CAH 2009 IMRD and include five civilian Key and Essential positions.

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

Pay Grade	Current	Projected
	Year, 2009	Year, 2014
	Total	Total
O7+	1	1
O6	24	26
O5	124	123
O4	207	222
O3	244	251
O2	24	45
O1	27	50
Officers	651	718
E9	22	23
E8	72	68
E7	263	278
E6	527	534
E5	532	568
E4	351	335
E3	246	214
E2	5	37
E1	3	26
Enlisted	2,021	2,083
Total	2,672	2,801

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 Edwards AFB and incorporate military married to military households, single personnel with dependents, and personnel voluntarily separated from their dependents. At Edwards AFB, the number of military families also includes five civilian Key and Essential positions.

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

	Current Year, 2009	Projected Year, 2014
Total Authorized	2,672	2,801
Military Families	1,572	1,632
Unaccompanied Personnel	723	779

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 and company grade officer families require a minimum of a two-bedroom unit, while families of senior noncommissioned officers and 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 1,572 military families that require housing. There are 1,632 military families projected to require housing for 2014 (Table 3-3). Approximately 37.3 percent of the families are entitled to two-bedroom housing while 42.4 percent have a three-bedroom requirement and 20.3 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	-	-	20	20
O5	-	74	23	97
O4	-	119	38	157
O3	83	31	38	152
O2	8	2	1	11
O1	9	2	1	12
Officers	100	228	122	450
E9	-	17	3	20
E8	-	43	10	53
E7	-	179	46	225
E6	172	134	100	406
E5	191	77	40	308
E4	97	9	10	116
E3	36	5	1	42
E2	7	-	-	7
E1	5	-	-	5
Enlisted	508	464	210	1,182
Total	608	692	332	1,632

3.3 UNACCOMPANIED PERSONNEL HOUSING REQUIREMENTS

Unaccompanied personnel housing requirements are the number of unaccompanied households that the installation housing office 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 723 permanent party unaccompanied service members for whom Edwards AFB has the responsibility to house in 2009. In 2014, there are projected to be a total of 779 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	-	-	12	12
O4	-	-	34	34
O3	-	65	-	65
O2	-	32	-	32
O1	-	35	-	35
Officers	-	132	48	180
E9	-	-	-	-
E8	-	1	-	1
E7	-	20	-	20
E6	-	55	-	55
E5	172	-	-	172
E4	156	-	-	156
E3	151	-	-	151
E2	26	-	-	26
E1	18	-	-	18
Enlisted	523	76	-	599
Total	523	208	48	779

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 Edwards 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 family 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 165 housing units based on 1,632 military families (Table 4-1).

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

Currently, there are 100 Key and Essential positions at Edwards 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 Edwards 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 Edwards AFB is 216 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	-	-	2	2
O5	-	8	2	10
O4	-	12	4	16
O3	8	3	4	15
O2	1	-	-	1
O1	1	-	-	1
Officers	10	23	12	45
E9	-	2	-	2
E8	-	4	1	5
E7	-	18	5	23
E6	17	14	10	41
E5	19	8	4	31
E4	10	1	1	12
E3	4	-	-	4
E2	1	-	-	1
E1	1	-	-	1
Enlisted	52	47	21	120
Total	62	70	33	165

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

Pay Grade	Number of Bedrooms			Total
	Two	Three	Four+	
O7+	-	-	1	1
O6	-	-	17	17
O5	-	18	6	24
O4	-	5	2	7
O3	18	7	9	34
O2	2	-	-	2
O1	-	-	-	-
Officers	20	30	35	85
E9	-	-	3	3
E8	-	-	-	-
E7	-	4	1	5
E6	2	1	1	4
E5	2	1	-	3
E4	-	-	-	-
E3	-	-	-	-
E2	-	-	-	-
E1	-	-	-	-
Enlisted	4	6	5	15
Total	24	36	40	100

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	-	-	17	17
O5	-	18	6	24
O4	-	12	4	16
O3	18	7	9	34
O2	2	-	-	2
O1	1	-	-	1
Officers	21	37	37	95
E9	-	-	3	3
E8	-	4	1	5
E7	-	18	5	23
E6	17	14	10	41
E5	19	8	4	31
E4	10	1	1	12
E3	4	-	-	4
E2	1	-	-	1
E1	1	-	-	1
Enlisted	52	45	24	121
Total	73	82	61	216

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, 234 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	156	39
E3	151	151
E2	26	26
E1	18	18
Enlisted	351	234
Total	351	234

5.0 COMPETING DEMAND

In the final year of the planning period, military families in excess of the Military Family Minimum Housing Requirement and unaccompanied personnel in excess of the Unaccompanied Personnel 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 1,416 military families will require housing 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	1,632
Minimum Housing Requirement	216
In Private Sector	1,417

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

Pay Grade	Number of Bedrooms			Total
	Two	Three	Four+	
O7+	-	-	-	-
O6	-	-	3	3
O5	-	56	17	73
O4	-	107	34	141
O3	65	24	29	118
O2	6	2	1	9
O1	8	2	1	11
Officers	79	191	85	355
E9	-	17	-	17
E8	-	39	9	48
E7	-	161	41	202
E6	155	120	90	365
E5	172	69	36	277
E4	87	8	9	104
E3	32	5	1	38
E2	6	-	-	6
E1	4	-	-	4
Enlisted	456	419	186	1,061
Total	535	610	271	1,416

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 were no longer available.

Homeownership and rental rates applied in this study are based on the Air Force Housing Survey for Edwards AFB conducted from April to May 2009 (Table 5-3). Military family homeownership rates are based military families 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	37.9%	62.1%
O4	23.5%	76.5%
O3	25.0%	75.0%
O2	16.7%	83.3%
O1	26.7%	73.3%
E9	33.3%	66.7%
E8	50.0%	50.0%
E7	44.7%	55.3%
E6	33.8%	66.2%
E5	22.1%	77.9%
E4	3.7%	96.3%
E3	-	100.0%
E2	-	100.0%
E1	-	100.0%

For the projected year of the analysis, 460 families are estimated to require homeowner housing and the remaining 956 families are expected to require rental housing (Tables 5-4 and 5-5). Approximately 42.6 percent of the rental requirements will be in the two-bedroom category, while three- and four-bedroom rental requirements will respectively account for 39.2 and 18.2 percent of the total rental demand.

Table 5-4. Military Family Homeowner Requirement, 2014

Pay Grade	Total
O7+	-
O6	-
O5	37
O4	37
O3	39
O2	1
O1	3
Officers	117
E9	6
E8	27
E7	101
E6	137
E5	68
E4	4
E3	-
E2	-
E1	-
Enlisted	343
Total	460

Table 5-5. Military Family Rental Requirement, 2014

Pay Grade	Number of Bedrooms			Total
	Two	Three	Four+	
O7+	-	-	-	-
O6	-	-	3	3
O5	-	28	8	36
O4	-	79	25	104
O3	44	16	19	79
O2	5	2	1	8
O1	6	1	1	8
Officers	55	126	57	238
E9	-	11	-	11
E8	-	17	4	21
E7	-	81	20	101
E6	97	75	56	228
E5	130	52	27	209
E4	83	8	9	100
E3	32	5	1	38
E2	6	-	-	6
E1	4	-	-	4
Enlisted	352	249	117	718
Total	407	375	174	956

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+	\$2,297	-	-	\$1,394
O6	\$2,270	-	-	\$1,394
O5	\$2,252	-	\$1,009	\$1,394
O4	\$2,111	-	\$1,009	\$1,394
O3	\$1,907	\$868	\$1,009	\$1,394
O2	\$1,618	\$868	\$1,009	\$1,394
O1	\$1,432	\$868	\$1,009	\$1,394
E9	\$1,966	\$868	\$1,009	\$1,394
E8	\$1,841	\$868	\$1,009	\$1,394
E7	\$1,727	\$868	\$1,009	\$1,394
E6	\$1,622	\$868	\$1,009	\$1,394
E5	\$1,408	\$868	\$1,009	\$1,394
E4	\$1,310	\$868	\$1,009	\$1,394
E3	\$1,310	\$868	\$1,009	\$1,394
E2	\$1,310	\$868	\$1,009	\$1,394
E1	\$1,310	\$868	\$1,009	\$1,394

Service members are allocated to market segments between the minimum cost and their MAHC (Table 5-7). Military households with a 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	-	-	-	-
\$1,500 - \$1,999	3	67	69	139
\$1,300 - \$1,499	27	119	103	249
\$1,150 - \$1,299	90	116	2	208
\$1,000 - \$1,149	162	73	-	235
\$900 - \$999	102	-	-	102
\$800 - \$899	23	-	-	23
\$700 - \$799	-	-	-	-
\$600 - \$699	-	-	-	-
\$500 - \$599	-	-	-	-
\$400 - \$499	-	-	-	-
Below \$400	-	-	-	-
Total	407	375	174	956

5.2 UNACCOMPANIED PERSONNEL REQUIRING RENTAL HOUSING

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

Table 5-8. Unaccompanied Personnel Requiring Housing, 2014

	2014
Unaccompanied Personnel	779
In Government Quarters	234
In Private Sector	545

For the projected year of the analysis, there are 545 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	-	-	12	12
O4	-	-	34	34
O3	-	65	-	65
O2	-	32	-	32
O1	-	35	-	35
Officers	-	132	48	180
E9	-	-	-	-
E8	-	1	-	1
E7	-	20	-	20
E6	-	55	-	55
E5	172	-	-	172
E4	117	-	-	117
E3	-	-	-	-
E2	-	-	-	-
E1	-	-	-	-
Enlisted	289	76	-	365
Total	289	208	48	545

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 Air Force Housing Survey conducted for Edwards AFB from April to May 2009 (Table 5-10).

Table 5-10. Homeownership Rates for Unaccompanied Personnel

Pay Grade	Percentage Homeowners	Percentage Renters
O7+	-	100.0%
O6	-	100.0%
O5	50.0%	50.0%
O4	37.5%	62.5%
O3	17.7%	82.4%
O2	20.7%	79.3%
O1	6.8%	93.2%
E9	40.0%	60.0%
E8	40.0%	60.0%
E7	40.0%	60.0%
E6	35.7%	64.3%
E5	13.3%	86.7%
E4	5.3%	94.7%
E3	-	100.0%
E2	-	100.0%
E1	-	100.0%

An estimated 96 unaccompanied service members will require homeowner housing (Table 5-11), and 449 unaccompanied service members will require rental housing (Table 5-12).

Table 5-11. Unaccompanied Personnel Homeowner Requirement, 2014

Pay Grade	Total
O7+	-
O6	-
O5	6
O4	13
O3	11
O2	7
O1	2
Officers	39
E9	-
E8	-
E7	8
E6	20
E5	23
E4	6
E3	-
E2	-
E1	-
Enlisted	57
Total	96

Table 5-12. Unaccompanied Personnel Rental Requirement, 2014

Pay Grade	Number of Bedrooms			Total
	One	Two	Three	
O7+	-	-	-	-
O6	-	-	2	2
O5	-	-	6	6
O4	-	-	21	21
O3	-	54	-	54
O2	-	25	-	25
O1	-	33	-	33
Officers	-	112	29	141
E9	-	-	-	-
E8	-	1	-	1
E7	-	12	-	12
E6	-	35	-	35
E5	149	-	-	149
E4	111	-	-	111
E3	-	-	-	-
E2	-	-	-	-
E1	-	-	-	-
Enlisted	260	48	-	308
Total	260	160	29	449

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+	\$1,950	-	-	\$1,009
O6	\$1,912	-	-	\$1,009
O5	\$1,806	-	\$868	\$1,009
O4	\$1,737	-	\$868	\$1,009
O3	\$1,545	\$690	\$868	\$1,009
O2	\$1,374	\$690	\$868	\$1,009
O1	\$1,212	\$690	\$868	\$1,009
E9	\$1,517	\$690	\$868	\$1,009
E8	\$1,450	\$690	\$868	\$1,009
E7	\$1,317	\$690	\$868	\$1,009
E6	\$1,226	\$690	\$868	\$1,009
E5	\$1,175	\$690	\$868	\$1,009
E4	\$1,100	\$690	\$868	\$1,009
E3	\$1,100	\$690	\$868	\$1,009
E2	\$1,100	\$690	\$868	\$1,009
E1	\$1,100	\$690	\$868	\$1,009

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

Rental Cost ¹	Number of Bedrooms			Total
	One	Two	Three	
\$2,000 & Above	-	-	-	-
\$1,500 - \$1,999	-	-	6	6
\$1,300 - \$1,499	-	7	9	16
\$1,150 - \$1,299	1	29	9	39
\$1,000 - \$1,149	80	69	5	154
\$900 - \$999	63	43	-	106
\$800 - \$899	57	12	-	69
\$700 - \$799	55	-	-	55
\$600 - \$699	4	-	-	4
\$500 - \$599	-	-	-	-
\$400 - \$499	-	-	-	-
Below \$400	-	-	-	-
Total	260	160	29	449

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 34,277 (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	26	56	85	640	287	1,094
\$1,500 - \$1,999	95	209	528	1,820	652	3,304
\$1,300 - \$1,499	95	242	770	1,802	684	3,593
\$1,150 - \$1,299	142	750	1,680	1,200	404	4,176
\$1,000 - \$1,149	252	1,470	2,743	995	298	5,758
\$900 - \$999	206	1,087	2,062	686	211	4,252
\$800 - \$899	299	1,111	1,671	354	114	3,549
\$700 - \$799	478	1,172	1,095	170	59	2,974
\$600 - \$699	378	925	767	126	43	2,239
\$500 - \$599	214	561	415	76	25	1,291
\$400 - \$499	126	390	223	59	20	818
Below \$400	124	584	387	102	32	1,229
Total	2,435	8,557	12,426	8,030	2,829	34,277

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

6.0 EFFECTIVE RENTAL HOUSING SUPPLY

In this analysis, the Total Military 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 is estimated to increase by 1.6 percent annually through 2014 to a total of 122,515 units, including 85,121 homeowner units and 37,394 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	85,121
Rental Housing	37,394
Effective Supply	14,477
Percent of Total Rental Supply	39 %
Total	122,515

6.2 HOMEOWNER HOUSING SUPPLY

Homeowner housing is estimated to grow at 1.9 percent annually, reaching 85,121 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 addressed 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 37,394 units. Two-bedroom and smaller units make up 68.3 percent of rental housing supply (Table 6-2). Three-bedroom units make up 23.5 percent of rental housing and the remaining 8.2 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	25	51	75	580	299	1,030
\$1,500 - \$1,999	90	199	466	1,910	669	3,334
\$1,300 - \$1,499	93	238	782	1,830	658	3,601
\$1,150 - \$1,299	131	629	1,559	1,523	525	4,367
\$1,000 - \$1,149	247	1,496	2,959	1,015	286	6,003
\$900 - \$999	222	1,180	2,325	784	233	4,744
\$800 - \$899	258	1,197	2,067	512	169	4,203
\$700 - \$799	539	1,389	1,273	196	67	3,464
\$600 - \$699	440	1,125	931	156	54	2,706
\$500 - \$599	253	656	526	91	30	1,556
\$400 - \$499	145	435	258	68	23	929
Below \$400	155	680	458	123	41	1,457
Total	2,598	9,275	13,679	8,788	3,054	37,394

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 Edwards 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. 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 Edwards AFB housing office and published crime data. Applied unsuitable areas are defined for analytical purposes only.

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	\$550	\$120	\$20	\$690
Two	\$696	\$146	\$27	\$868
Three	\$800	\$175	\$34	\$1,009
Four+	\$1,150	\$204	\$40	\$1,394

6.3.4 EFFECTIVE RENTAL SUPPLY

The effective rental housing supply in the Housing Market Area is estimated at 14,477 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	-	-	17	11	28
\$1,500 - \$1,999	-	231	1,604	595	2,430
\$1,300 - \$1,499	-	602	1,459	291	2,352
\$1,150 - \$1,299	76	1,095	1,181	-	2,352
\$1,000 - \$1,149	1,061	1,953	758	-	3,772
\$900 - \$999	702	1,246	-	-	1,948
\$800 - \$899	629	305	-	-	934
\$700 - \$799	614	-	-	-	614
\$600 - \$699	47	-	-	-	47
\$500 - \$599	-	-	-	-	-
\$400 - \$499	-	-	-	-	-
Below \$400	-	-	-	-	-
Total	3,129	5,432	5,019	897	14,477

¹ Minimum rent estimates are based on Edwards AFB provided AHRN listings from April 13, 2009.

² Average cost estimates are based on 9 HUD Allowances for Tenant Furnished Utilities for the North County region of Los Angeles County, CA.

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

7.0 TOTAL MILITARY FAMILY HOUSING REQUIREMENT

This chapter summarizes the determination of the Total Military Family Housing Requirement for Edwards AFB. The Private Sector Shortfall of 306 units coupled with the 216 unit Military Family Minimum Housing Requirement results in a Total Military Family Housing Requirement of 522 units.

7.1 PRIVATE SECTOR SHORTFALL

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.

7.1.1 SUITABLE MARKET SUPPLY ALLOCATED TO THE MILITARY

The allocation of suitable rental housing to the military families requiring rental housing is shown in Table 7-1. The analysis indicates that 650 military families would be successful in obtaining suitable rental units. There is still an additional requirement, or shortfall, of 306 suitable community rentals for Edwards AFB in excess of its Military Family Minimum Housing Requirement in 2014.

Table 7-1. Market Allocation of Suitable Rental Housing

Military Families	956
Allocated Suitable Housing	650
Private Sector Shortfall	306

7.1.2 PRIVATE SECTOR HOUSING SHORTFALL

As determined by the allocation analysis, the Private Sector Shortfall of 306 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	-	-	-	-
\$1,500 - \$1,999	2	12	16	30
\$1,300 - \$1,499	7	31	49	87
\$1,150 - \$1,299	36	15	2	53
\$1,000 - \$1,149	58	20	-	78
\$900 - \$999	46	-	-	46
\$800 - \$899	12	-	-	12
\$700 - \$799	-	-	-	-
\$600 - \$699	-	-	-	-
\$500 - \$599	-	-	-	-
\$400 - \$499	-	-	-	-
Below \$400	-	-	-	-
Total	161	78	67	306

7.2 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 7-3). About 80.8 percent of the 306 unit Private Sector Shortfall is in two and three bedroom units with the remaining 19.2 percent in four bedrooms units (Table 7-4). 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 7-5).

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

Table 7-3. 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	20	2	17	-	17	1	18
O5	97	10	24	-	24	8	32
O4	157	16	7	-	16	23	39
O3	152	15	34	-	34	28	62
O2	11	1	2	-	2	4	6
O1	12	1	-	-	1	1	2
Officers	450	45	85	-	95	65	160
E9	20	2	3	-	3	2	5
E8	53	5	-	-	5	6	11
E7	225	23	5	-	23	22	45
E6	406	41	4	-	41	74	115
E5	308	31	3	-	31	75	106
E4	116	12	-	-	12	44	56
E3	42	4	-	-	4	15	19
E2	7	1	-	-	1	2	3
E1	5	1	-	-	1	1	2
Enlisted	1,182	120	15	-	121	241	362
Total	1,632	165	100	-	216	306	522

Table 7-4. Military Family Private Sector Shortfall

Pay Grade	Number of Bedrooms			
	Two	Three	Four+	Total
O7+	-	-	-	-
O6	-	-	1	1
O5	-	6	2	8
O4	-	15	8	23
O3	118	4	6	28
O2	3	-	1	4
O1	1	-	-	1
Officers	22	25	18	65
E9	-	2	-	2
E8	-	5	1	6
E7	-	16	6	22
E6	38	16	20	74
E5	52	11	12	75
E4	33	2	9	44
E3	13	1	1	15
E2	2	-	-	2
E1	1	-	-	1
Enlisted	139	53	49	241
Total	161	78	67	306

Table 7-5. Total Military Family Housing Requirement

Pay Grade	Number of Bedrooms			
	Two	Three	Four+	Total
O7+	-	-	1	1
O6	-	-	18	18
O5	-	24	8	32
O4	-	27	12	39
O3	36	11	15	62
O2	5	-	1	6
O1	2	-	-	2
Officers	43	62	55	160
E9	-	2	3	5
E8	-	9	2	11
E7	-	34	11	45
E6	55	30	30	115
E5	71	19	16	106
E4	43	3	10	56
E3	17	1	1	19
E2	3	-	-	3
E1	2	-	-	2
Enlisted	191	98	73	362
Total	234	160	128	522

8.0 SUMMARY

This chapter summarizes the HRMA Total Military Family Housing Requirement results for Edwards AFB.

Table 8-1. Military Family Housing Requirement Summary

Total Military Housing Requirements	Military Families
Military Households	1,632
Minimum Housing Requirement	216
Private Sector Shortfall	306
Total Military Housing Requirements	522

HOUSING MARKET AREA

Edwards AFB is located in the southeastern corner of Kern County, California in the Antelope Valley. The base is approximately 30 miles northeast of Lancaster, California, and approximately 100 miles northeast of central Los Angeles.

HOUSING SUPPLY

There is a total private housing stock of 113,370 units, including 77,494 homeowner units and 35,876 rental units. At an estimated annual growth rate of 1.6 percent, the housing market would increase to 122,515 units in 2014.

Edwards AFB currently has 669 total military family housing units and is expected to reach an end-state of 796 privatized units by 2014.

MILITARY HOUSING DEMAND

The Edwards AFB housing office is currently responsible for supporting 2,672 military personnel including tenant personnel and civilian Key and Essential personnel. This number is expected to increase to 2,801 authorizations by 2014.

There are projected to be 1,632 military families and 779 unaccompanied personnel, of which 1,416 military families and 545 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 216 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 165 housing units.

Key and Essential Housing Requirement

There are projected to be 100 Key and Essential positions at Edwards AFB.

Historic Housing Requirement

There are no historic housing units at Edwards AFB.

PRIVATE SECTOR SHORTFALL FOR MILITARY FAMILIES

There is a projected shortfall of 306 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 522 military housing units.

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APPENDIX A – TOTAL UNACCOMPANIED PERSONNEL HOUSING REQUIREMENT

Table A-1. Edwards AFB Total Unaccompanied Personnel Housing Requirement

Pay Grade	Unaccompanied Personnel	Minimum Housing Requirement	Require Private Sector Housing	Private Sector Shortfall	Total Military Housing Requirement
O7+	-	-	-	-	-
O6	2	-	2	-	-
O5	12	-	12	-	-
O4	32	-	34	5	5
O3	65	-	65	21	21
O2	32	-	32	10	10
O1	35	-	35	13	13
Officers	180	-	180	49	49
E9	-	-	-	-	-
E8	1	-	1	-	-
E7	20	-	20	5	5
E6	55	-	55	15	15
E5	172	-	172	63	63
E4	156	39	117	49	88
E3	151	151	-	-	151
E2	26	26	-	-	26
E1	18	18	-	-	18
Enlisted	599	234	365	132	366
Total	779	234	545	181	415

APPENDIX B – EDWARDS AFB MANNING SENSITIVITY ANALYSIS

This sensitivity analysis incorporates potential changes to the projected authorized manpower for Edwards AFB based on manpower increases in the Joint Strike Fighter (JSF) mission that vary from those applied in the main body of the Housing Requirements and Market Analysis Draft Report.

The HRMA Report assumes JSF manpower of 163. The sensitivity analysis projects JSF manpower to increase by 374 personnel in the final year of the analysis, including 70 new USAF JSF requirements, 247 non-USAF US military JSF requirements and 57 foreign military JSF requirements.

The Total Military Family Housing Requirement for Edwards AFB is estimated to increase from 522 units to 596 units with an increase of manpower authorizations to 3,175.

Table B-1. Total Military Family Housing Requirements Summary, Including Projected JSF Mission Manpower Increase

HRMA Analysis Version	HRMA Report	HRMA Sensitivity Analysis
PLANNED MANPOWER	2,801	3,175
MILITARY FAMILIES	1,632	1,837
Minimum Housing Requirement	216	231
Military Family Homeowners	460	506
Military Family Renters	956	1,100
Private Sector Shortfall	306	365
TOTAL MILITARY FAMILY HOUSING REQUIREMENT	522	596

**Table B-2. Edwards AFB Total Military Family Housing Requirement, Including
Projected JSF Mission Manpower Increase**

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	20	2	17	-	17	-	17
O5	99	10	24	-	24	8	32
O4	190	19	7	-	19	29	48
O3	183	18	34	-	34	37	71
O2	11	1	2	-	2	1	3
O1	12	1	-	-	1	1	2
Officers	516	51	85	-	98	76	174
E9	22	2	3	-	3	2	5
E8	56	6	-	-	6	6	12
E7	234	23	5	-	23	26	49
E6	452	45	4	-	45	86	131
E5	352	35	3	-	35	90	125
E4	143	14	-	-	14	57	71
E3	47	5	-	-	5	18	23
E2	8	1	-	-	1	3	4
E1	6	1	-	-	1	1	2
Enlisted	1,321	132	15	-	133	289	422
Total	1,837	183	100	-	231	365	596