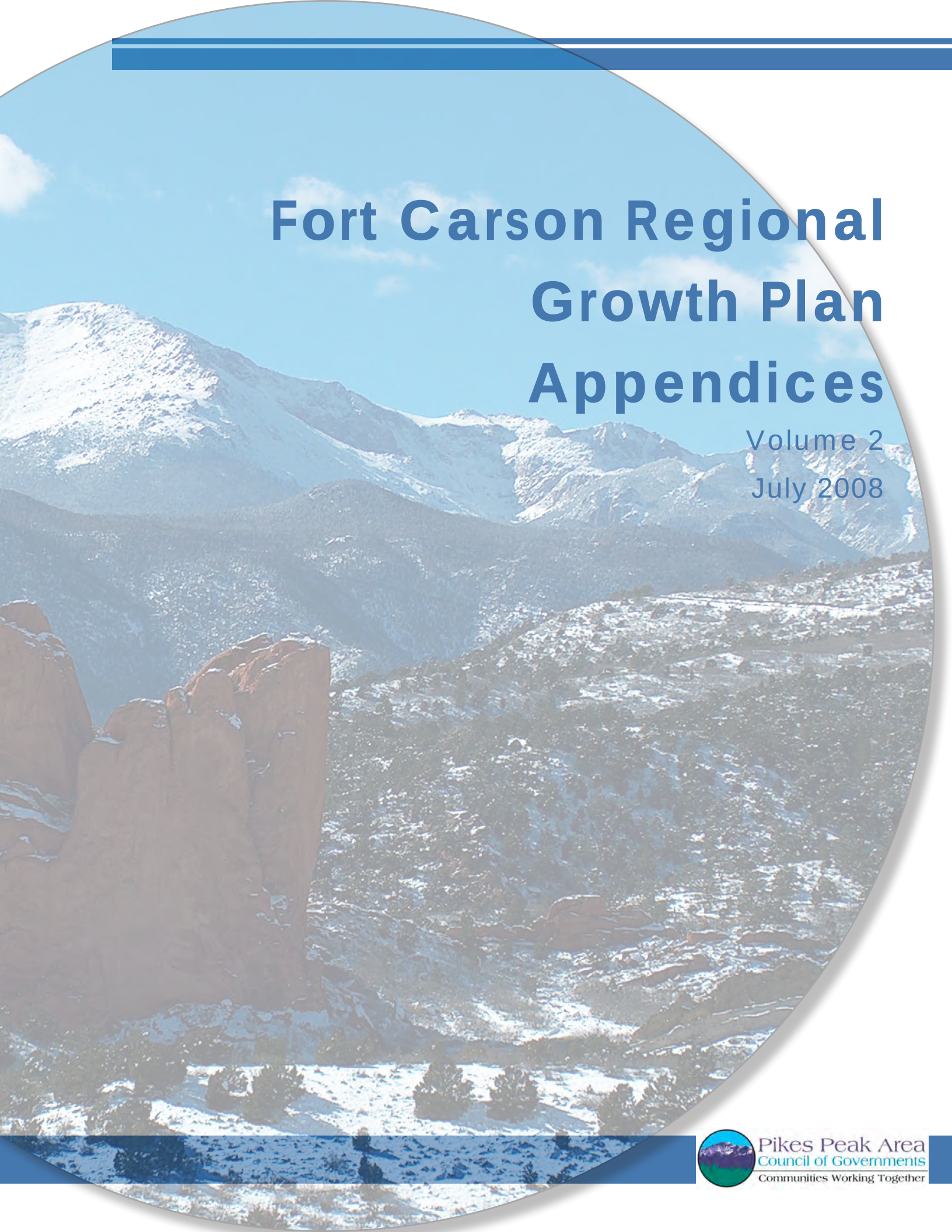

Fort Carson Regional Growth Plan Appendices

Volume 2

July 2008

Pikes Peak Area Council of Governments

Communities Working Together

Appendix A

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September 12, 2007

Pikes Peak Area Council of Governments

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A. DEMOGRAPHIC PROJECTIONS

The following is a demographic forecast of the authorized military personnel, civilian personnel, and their associated dependents that will be relocated to Fort Carson over the next five years. The new troops, civilians, and dependents will arrive at Fort Carson over the next few years due to troop movements as directed by Base Realignment and Closure (BRAC), Integrated Global Presence and Basing Strategy (IGPBS), and Army Modular Force (AMF) directives.

Recognizing that the number of additional military personnel authorized for Fort Carson may change over time, the use of a range for the projected increase in military personnel would be prudent in order to evaluate population impacts. A range, which establishes an "upper" and a "lower" number for the projected increase in military personnel, is given, referred to as the "Expected Growth Scenario" and the "Alternative Growth Scenario".

The "Expected Growth Scenario" assumes 11,400 additional troops will be authorized for Fort Carson. This number is based on information provided by officials at Fort Carson, and will function as the projected total number of troops that will be authorized for the installation during the next five years.

A second scenario, referred to as the "Alternative Growth Scenario", assumes a reduction to 75% of the "Expected Growth Scenario" in troop authorizations each year. This scenario results in 8,550 troops authorized for Fort Carson by the end of FY 2011. The "Alternative Growth Scenario" uses the same schedule for troop increases as the "Expected Growth Scenario, with larger increases in troops under both scenarios occurring in FY 2007 and FY 2009. Both Scenarios are presented in Table 1.

Table 1. Military Personnel Authorized for Fort Carson

	New Authorized Military Personnel to Fort Carson	
Date	**Expected Growth Scenario**	**Alternative Growth Scenario**
New Troops by FY 07	4,700	3,525
New Troops by FY 08	100	75
New Troops by FY 09	5,200	3,900
New Troops by FY 10	700	525
New Troops by FY 11	700	525
Total Estimated Authorized Military Personnel	**11,400**	**8,550**

Source: Fort Carson; RKG Associates for the Alternative Growth Scenario.

The use of two scenarios provides a basis for evaluating a range of potential impacts associated with the expansion of Fort Carson. This type of approach, referred to as a sensitivity analysis, affords the opportunity to respond to possible development impacts if changes occur in the authorization of military personnel during the next five years. In effect, the "Alternative Growth Scenario" introduces a contingency factor into the analysis in order to take into account the possibility of lower or slower growth at Fort Carson through FY 2011.

The overall goal of this analysis is to provide an "end state" as a basis for examining the long-term impacts of Fort Carson's growth on the region. For example, it is important to understand housing impacts at the conclusion of base expansion in order to answer questions such as: "Does the regional homebuilder community have the capability of building the required number of dwelling units?" "Is there available developable land?" "What type of off-post housing can military personnel afford?" Using a range with an upper limit of 11,400 and a lower limit of 8,550 new military personnel provides more flexibility and responsiveness in the planning effort.

As information related to troop authorization is updated through 2011, the Fort Carson Regional Growth Plan should be monitored and adjusted to examine impacts based on the actual troop population. It is vital that as the troops are authorized for Fort Carson, an ongoing informational exchange occur on a quarterly or other consistent basis.

A regional organization working closely with Fort Carson can function as a conduit to provide information to the local and regional community. This type of periodic monitoring will require continued cooperation between military officials at Fort Carson and regional organizations such as the Pikes Peak Area Council of Governments (PPACG).

Data related to military personnel location indicate roughly 97% of personnel live and work in El Paso County, with less than 2.5% of personnel residing in Pueblo County, and less than 0.5% living in Fremont County. The regional housing supply (both current and future real estate development) suggests that the vast majority of housing will remain in El Paso County, specifically Colorado Springs, unincorporated El Paso County (specifically Security and Widefield) and the Fountain area. While Pueblo and Fremont Counties will increase their housing supply, unless there is a dramatic change in housing affordability or a change in base commuting patterns, the location of future housing will mirror current housing trends.

The summary of the two scenarios for the forecast military personnel and dependents is presented below. For the "Expected Growth Scenario", the total gain in military personnel is estimated to be 11,400, as well as 21,287 military dependents, 430 civilian personnel, 692 civilian dependents, for a total population increase of 33,810, as presented in Table 2. Please note that the figures presented in tables throughout this document, including multipliers, have been rounded.

Table 2. Projection of New Personnel to Fort Carson – Expected Growth Scenario

	Military Personnel	Military Dependents	**Total Military Personnel and Dependents**	Civilian Personnel	Civilian Dependents	Total Civilian Personnel and Dependents	**Total Population**
Number	11,400	21,287	**32,687**	430	692	1,122	**33,810**
Multiplier		1.87	**2.87**			2.61	

Source: RKG Associates, Inc., US Census, and Fort Carson.

Table 3 indicates the total net gain in population assuming the "Alternate Growth Scenario". The total gain in military personnel is assumed to be 8,550, with 15,966 military dependents. It is assumed the same number of civilian personnel and dependents will be added, for a total population increase of 25,638.

Table 3. Projection of New Personnel to Fort Carson – Alternate Growth Scenario

	Military Personnel	Military Dependents	**Total Military Personnel and Dependents**	Civilian Personnel	Civilian Dependents	Total Civilian Personnel and Dependents	**Total Population**
Number	8,550	15,966	**24,516**	430	692	1,122	**25,638**
Multiplier		1.87	**2.87**			2.61	

Source: RKG Associates, Inc., US Census, and Fort Carson.

The methodology used in this analysis is based on current data from Fort Carson, including the existing number of military personnel by rank and paygrade, on-post housing data, off-post housing data, and the Basic Allowance for Housing (BAH) reports.

The key assumption in this demographic information is the dependent multiplier. This multiplier represents the number of dependents one military personnel member will contribute to the community, and may consist of a spouse, children, and/or other family member. This multiplier represents an average of dependents, and is further refined by rank and group in a later section of this memorandum. The average multiplier used in this analysis is 2.87, which means that for every military personnel, it can be assumed that 1.87 additional dependents would be added to the community (2.87 and 1.87 are rounded to the hundredths place). If the average multiplier of 2.87 were applied to the "Expected Growth Forecast" with 11,400 troops proposed to be relocated to Fort Carson, this would thus represent a total population of 32,687 (11,400 x 2.87 = 32,687), with 21,287 dependents. For comparative purposes, the multiplier for civilian dependents based on 2000 U.S. Census data is 2.61.

Several multipliers have been suggested and examined for their applicability to this project and are presented in Table 4. Four different sets of average multipliers were examined, which provide sufficient data to suggest that the average multiplier of 2.87 should be used. The four data sources include the U.S. Army "CG Smart Card", the Environmental Impact Statement (EIS) prepared for the U.S. Army for Fort Carson in 2005, data from Fort Benning, Georgia, and data from Fort Riley, Kansas. These four sources are relatively consistent in their average multiplier, which ranges from 2.41 to 3.05. Two of the sources, Fort Benning and the U.S. Army Smart Card are very close to 2.80, and use 2.82 and 2.93, respectively.

Table 4. Multipliers for Fort Carson

CG Smart Card

	Military Personnel	Military Dependents	**Total Military Personnel and Dependents**
Number	16,208	31,320	**47,528**
Multiplier		1.93	**2.93**

Source: US Army, 2007

From Fort Benning Estimates

	Military Personnel	Military Dependents	**Total Military Personnel and Dependents**
Number	5,810	10,570	**16,380**
Multiplier		1.82	**2.82**

Source: Fort Benning Office of Public Affairs, 2006

Army EIS Multiplier

	Military Personnel	Military Dependents	**Total Military Personnel and Dependents**
Number	20,145	41,300	**61,445**
Multiplier		2.05	**3.05**

Source: Draft Environmental Impact Statement; US Army 2006

From Fort Riley - Estimated BRAC Actions

	Military Personnel	Military Dependents	**Total Military Personnel and Dependents**
Number	9,700	13,655	**23,355**
Multiplier		1.41	**2.41**

Source: RKG Associates, REMI, Fort Riley, 2006

The average multiplier of 2.87 is further refined in order to analyze the incoming troops and dependents in order to assess housing needs, demand for schools, etc. Thus, three groups of military

personnel have been identified, and are presented in Figure 1 with their respective percentages of the current on-post population.

The first group, "E-1 to E-3" represents the smallest portion of the population (17%), and is made up of new recruits and Privates. The second group, "E-4 to E-6", includes mid-level enlisted personnel, but make up 59% of the current population of Fort Carson. The third group, "E-7 to E-9, Warrant Officers, and Officers" make up approximately 23% of the total population.

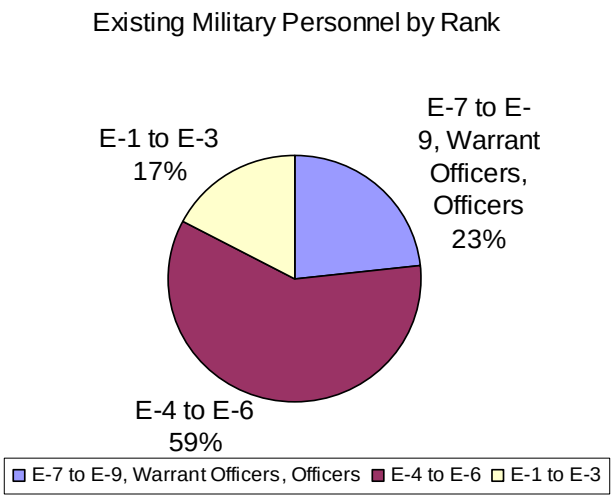


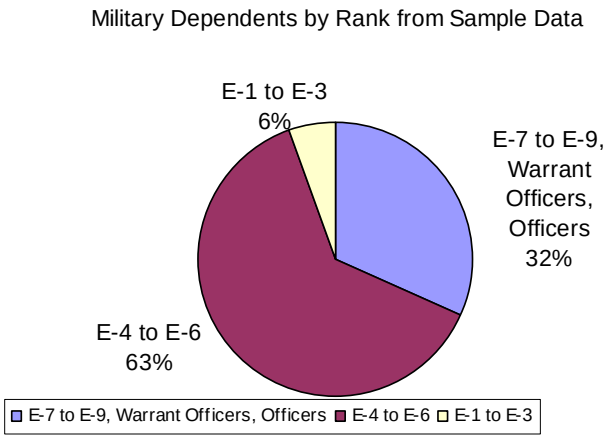
Figure 1. Existing Military Personnel by Rank

Thus, it is assumed that under the "Expected Growth Scenario", 11,400 troops will be relocated to Fort Carson, the troops will likely break down along similar groups, unless other information is made available that suggests otherwise. Under the "Alternative Growth Scenario", 8,550 troops will be relocated, and will also consist of 23% "E7-Officers", 59% "E4-E6", and 17% "E1-E3". Table 5 presents the breakdown of troops by rank.

Table 5. Forecast New Military Personnel by Rank

	Expected Growth Scenario		*Alternative Growth Scenario*	
Rank	**Percent of Military Personnel**	**Allocation of Military Personnel**	**Percent of Military Personnel**	**Allocation of Military Personnel**
E7-Officers	23%	2,660	23%	1,995
E4-E6	59%	6,769	59%	5,077
E1-E3	17%	1,971	17%	1,478
Total Military Personnel	**100%**	**11,400**	**100%**	**8,550**

Source: RKG Associates



Source: Fort Carson, RKG Associates

Figure 2. Military Dependents by Rank from Sample Data

Table 6 presents the data used to analyze the breakdown of dependents. These breakdowns provide more detail for the allocation of dependents by rank. Thus, "E-7 to E-9s, Warrant Officers and Officers" appear to have dependent ratios of 2.54, "E-4 to E-6" have dependent ratios of 1.97, and "E-1 to E-3" have much lower dependent ratios of 0.61. These multipliers may be rounded to 2.5, 2.0 and 0.6 in future analysis.

Table 6. Multipliers by Group

	Personnel On-Post		Personnel Receiving BAH						
Rank	**Barracks**	**On-Post Housing**	**Personnel W/Out Dependents**	**Personnel With Dependents**	**Total Personnel**	**Percent of Dependents by Rank**	**Assumed Dependents for Families with Dependents**	**Percent of Dependents by Rank**	**Implied Multiplier**
Source of Data:	Office of Garrison Commander	Directorate of Public Works	Fort Carson BAH Report	Fort Carson BAH Report			Factor provided by RKG Associates		
O-8	0	0	0	0	0	0%	0	0%	
O-7	0	3	0	0	3	0%	9	0%	
O-6	0	10	1	46	57	0%	171	1%	
O-5	0	26	17	160	203	1%	569	2%	
O-4	0	34	40	251	325	2%	872	3%	
O-3	0	95	238	383	716	5%	1,462	5%	
O-2	0	50	144	114	308	2%	502	2%	
O-1	0	25	36	28	89	1%	162	1%	
W-5	0	2	1	4	7	0%	18	0%	
W-4	0	7	1	42	50	0%	150	1%	
W-3	0	25	6	69	100	1%	287	1%	
W-2	0	46	15	99	160	1%	443	2%	
W-1	0	6	5	44	55	0%	153	1%	
E-9	0	20	7	51	78	0%	217	1%	
E-8	0	65	29	227	321	2%	893	3%	
E-7	0	234	86	888	1,208	8%	3,432	12%	
E-7 to E-9, Warrant Officers, Officers	**0**	**648**	**626**	**2,406**	**3,680**	**23%**	**9,341**	**32%**	**2.54**
E-6	0	370	279	1,473	2,122	13%	5,637	19%	
E-5	764	598	294	1,689	3,345	21%	6,995	24%	
E-4	1,812	778	185	1,122	3,897	25%	5,811	20%	
E-4 to E-6	**2,575**	**1,746**	**758**	**4,284**	**9,363**	**59%**	**18,442**	**63%**	**1.97**
E-3	1,185	173	27	202	1,587	10%	1,147	4%	
E-2	567	97	6	50	720	5%	450	2%	
E-1	397	0	0	22	419	3%	67	0%	
E-1 to E-3	**2,149**	**270**	**33**	**274**	**2,726**	**17%**	**1,664**	**6%**	**0.61**
Total	**4,725**	**2,664**	**1,417**	**6,964**	**15,770**	**100%**	**29,447**	**100%**	**1.87**

Source: RKG Associates, Fort Carson
As of Spring 2007.

These dependent ratios are then applied to the forecast expansion for both the "Expected Growth Scenario" and the "Alternative Growth Scenario", as presented in Table 7.

Table 7. Allocation of New Military Personnel and Dependents by Rank

Rank	Percent of Military Personnel	Allocation of Military Personnel	Implied Multiplier	Allocation of Dependents	Total New Military Personnel and Dependents
Expected Growth Scenario					
E7-Officers	23%	2,660	2.54	6,752	9,412
E4-E6	59%	6,769	1.97	13,332	20,101
E1-E3	17%	1,971	0.61	1,203	3,174
Total Military Personnel	**100%**	**11,400**	**1.87**	**21,287**	**32,687**
Alternative Growth Scenario					
E7-Officers	23%	1,995	2.54	5,064	7,060
E4-E6	59%	5,077	1.97	9,999	15,076
E1-E3	17%	1,478	0.61	902	2,380
Total Military Personnel	**100%**	**8,550**	**1.87**	**15,966**	**24,516**

Source: RKG Associates

Table 8 and Table 9 provide an annual breakdown of net military personnel and dependents for the "Expected Growth Scenario" and the "Alternative Growth Scenario", respectively.

Table 8. Forecast New Personnel and Dependents by Year – Expected Growth Scenario

Fiscal Year/ Rank	Additional Personnel	Allocation By Rank		Multiplier	Additional Dependents	Total New Residents	Cumulative Personnel	Cumulative Dependents	Cumulative Total
FY 07	**4,700**								
E7-Officers		23%	1,097	2.54	2,784	3,881			
E4-E6		59%	2,791	1.97	5,497	8,287			
E1-E3		17%	812	0.61	496	1,308			
Total			4,700		8,776	13,476	4,700	8,776	13,476
FY 08	**100**								
E7-Officers		23%	23	2.54	59	83			
E4-E6		59%	59	1.97	117	176			
E1-E3		17%	17	0.61	11	28			
Total			100		187	287	4,800	8,963	13,763
FY 09	**5,200**								
E7-Officers		23%	1,213	2.54	3,080	4,294			
E4-E6		59%	3,088	1.97	6,081	9,169			
E1-E3		17%	899	0.61	549	1,448			
Total			5,200		9,710	14,910	10,000	18,673	28,673
FY 10	**700**								
E7-Officers		23%	163	2.54	415	578			
E4-E6		59%	416	1.97	819	1,234			
E1-E3		17%	121	0.61	74	195			
Total			700		1,307	2,007	10,700	19,980	30,680
FY 11	**700**								
E7-Officers		23%	163	2.54	415	578			
E4-E6		59%	416	1.97	819	1,234			
E1-E3		17%	121	0.61	74	195			
Total			700		1,307	2,007	11,400	21,287	32,687
End State	**11,400**								
E7-Officers			**2,660**		**6,752**	**9,413**			
E4-E6			**6,769**		**13,332**	**20,101**			
E1-E3			**1,971**		**1,203**	**3,174**			
Total			**11,400**		**21,287**	**32,687**			

Source: RKG Associates, Inc. and Fort Carson.

Table 9. Forecast New Personnel and Dependents by Year – Alternative Growth Scenario

Fiscal Year/ Rank	Additional Personnel	Allocation By Rank		Multiplier	Additional Dependents	Total New Residents	Cumulative Personnel	Cumulative Dependents	Cumulative Total
FY 07	**3,525**								
E7-Officers		23%	823	2.54	2,088	2,911			
E4-E6		59%	2,093	1.97	4,122	6,216			
E1-E3		17%	609	0.61	372	981			
Total			3,525		6,582	10,107	3,525	6,582	10,107
FY 08	**75**								
E7-Officers		23%	18	2.54	44	62			
E4-E6		59%	45	1.97	88	132			
E1-E3		17%	13	0.61	8	21			
Total			75		140	215	3,600	6,722	10,322
FY 09	**3,900**								
E7-Officers		23%	910	2.54	2,310	3,220			
E4-E6		59%	2,316	1.97	4,561	6,877			
E1-E3		17%	674	0.61	411	1,086			
Total			3,900		7,283	11,183	7,500	14,005	21,505
FY 10	**525**								
E7-Officers		23%	123	2.54	311	433			
E4-E6		59%	312	1.97	614	926			
E1-E3		17%	91	0.61	55	146			
Total			525		980	1,505	8,025	14,985	23,010
FY 11	**525**								
E7-Officers		23%	123	2.54	311	433			
E4-E6		59%	312	1.97	614	926			
E1-E3		17%	91	0.61	55	146			
Total			525		980	1,505	8,550	15,966	24,516
End State	**8,550**								
E7-Officers			**1,995**		**5,064**	**7,060**			
E4-E6			**5,077**		**9,999**	**15,076**			
E1-E3			**1,478**		**902**	**2,380**			
Total			**8,550**		**15,966**	**24,516**			

Source: RKG Associates, Inc. and Fort Carson.

Economic Impacts Technical Report

Fort Carson Regional Growth Plan

January 11, 2008

Pikes Peak Area Council of Governments

Communities Working Together

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A. BACKGROUND

Summary of Demographic Impacts

New troops, civilians, and dependents are beginning to arrive at Fort Carson as a result of directives on troop movements due to Base Realignment and Closure (BRAC), Integrated Global Presence and Basing Strategy (IGPBS), and Army Modular Force (AMF). An estimated 12,600 military personnel were authorized for Fort Carson at the end of FY 2006, with an estimated 23,000 dependents living within the region. Thus, the population of the Fort Carson community at the beginning of FY 2007 was approximately 36,000 persons.

A range, which establishes an "upper" and a "lower" number for the projected increase in military personnel, was established, referred to as the "Expected Growth Scenario" and the "Alternative Growth Scenario." The "Expected Growth Scenario" assumes 11,400 additional troops will be assigned to Fort Carson. A second scenario, referred to as the "Alternative Growth Scenario", assumes a reduction to 75% of the "Expected Growth Scenario" in troop assignments each year. The "Expected Growth Scenario" was based on information provided by officials at Fort Carson, and will function in this document as the projected total number of troops that will be authorized for the installation through FY 2011. Thus, total population growth associated with the troop increase at Fort Carson is expected to be roughly 33,800, consisting of approximately 11,400 newly authorized troops, 21,300 military dependents, 430 civilians, and 690 civilian dependents (see the Demographic Technical Report).

Two large surges of troop arrivals are anticipated through FY 2011. The first increase in troops, currently underway, is expected to add 4,700 troops by the end of Fiscal Year (FY) 2007, which is equivalent to the end of September, 2007. The second increase, expected to occur before the end of FY 2009, will add an additional 5,200 new troops. FY 2008, 2010, and 2011 are expected to add 100, 700, and 700 new soldiers, respectively.

New population growth associated with the forecast troop increases (including military personnel, civilians, and all dependents) will add approximately 33,800 new persons to the study area population as shown in Table 1, and the total Fort Carson related population will make up over 8% of the total study area population by FY 2011.

These new residents will impact all aspects of the regional community, including the housing market, local school systems, state and local municipal services, quality of life, etc. The demographic forecasts provide the base assumptions used to create the Fort Carson Regional Growth Plan.

Table 1. Summary of Population Impacts

Population	Population as of 2006	Population Increase (2007 to 2011)	Population by 2011
Military Personnel (1)	12,600	11,400	24,000
Military Dependents (estimated)	23,000	21,287	44,287
Civilians Working On-Post (2)	3,119	430	3,549
Civilians Dependents (estimated)	5,022	693	5,715
Total Fort Carson Related Population	**43,741**	**33,810**	**77,551**
Non-Military Related Population (3)	723,709	91,182	814,891
Total Regional Population	**767,450**	**124,992**	**892,442**

(1) The current Military Personnel Population used in this analysis differs from the FY 2006 Statistical Data Card and represents information provided by Fort Carson personnel.
(2) Includes DA and NAF Civilian Employees.
(3) Based on Colorado DOLA forecast information as of Spring 2007.
Source: Fort Carson Garrison Command, End FY 06 Fort Carson Statistical Data Card, RKG Associates, Inc.

Summary of Housing Impacts

New housing under construction, in anticipation of the increase in demand from Fort Carson troop arrivals, will provide a significant increase in the local construction economy. Several thousand for-sale units could be built over the next few years in response to an increase in housing demand from the Fort Carson troop increase, as will several hundred new housing units on-post. By comparison, limited new multi-family product is slated for development.

The local real estate market, building in anticipation of troop increases at Fort Carson, is realistic about the growth potential and has taken a conservative approach of getting development plans approved and making some infrastructure improvements, but has held off from offering final housing product. Most builders believe they can construct homes within 3 to 6 months with finalized lots and the majority of infrastructure in place. Over the past few years, El Paso County has built several thousand new units, primarily in northern Colorado Springs. Thus, the regional construction community has become somewhat efficient in terms of its ability to produce units at a high rate. No shortages of labor, subcontractors, or materials have been reported.

As of spring 2007, it is estimated there are approximately 800 residential units built or under construction, approximately 6,400 lots with infrastructure to be completed by end of year, and over 14,000 lots undergoing the development approval process. Thus, over 21,000 for-sale units, including both single-family units and townhome units, could potentially be in the pipeline for the next decade.

For-sale unit demand is projected to be just over 12,500 homes by 2012. These units will be located primarily in southern Colorado Springs, Fountain, and unincorporated El Paso County. It is likely that between 5,200 and 8,600 new units will be built by FY 2009, which would match the demand for new units.

The rental market has remained relatively flat over the past few years, and forecast demand is approximately 8,700 units, which is slightly above the number of vacant units, future units, and

on-post units. Thus, the majority of demand for rental product will likely be met by existing units, which are primarily located within Colorado Springs.

It is projected that the majority of all new housing growth will occur primarily in southern Colorado Springs, Fountain, and unincorporated El Paso County (Security and Widefield). Approximately 97% of population growth is forecast to occur within this limited area.

Regional and State Economy

The State of Colorado's Gross Domestic Product (GDP), as estimated by the U.S. Bureau of Economic Analysis (BEA) was $198,683 million (or $198.7 billion) in FY 2006. GDP is defined by the BEA as the inflation adjusted measure for the goods and services being produced within the state. In comparison, the GDP of the nation is $11.3 trillion, with Colorado the 20th highest state in terms of GDP. Per capita GDP, however, is $41,798 per person, which is the 7th highest nation wide.

Table 2 presents current and future operating budgets of Fort Carson, as well as current and future disposable income of Fort Carson personnel. Direct impacts of operating budgets plus disposable income are estimated to be $1.1 billion annually, assuming all troops are added to Fort Carson by FY 2011. Additional output, or the indirect impact on the local economy, is estimated to be $1.5 billion. Thus, total ongoing impacts of current and future operating budgets and disposable income are expected to be approximately $2.6 billion annually. Comparing this to the State's GDP of $198.7 billion, ongoing impacts of Fort Carson make up approximately 1.3% of the total State of Colorado's GDP.

Table 2. Ongoing Impacts Compared to State Annual GDP ($2007) Assuming FY 2011 Staffing Levels

Impact	Direct Impacts	Additional Output	Total Direct and Indirect Output
Operational Budget			
Current Operational Budget	$204,288,433	$362,638,623	**$566,927,056**
Future Operational Budget	$109,607,336	$194,567,323	**$304,174,660**
Disposable Income			
Current Disposable Income of Fort Carson Personnel	$513,197,367	$605,624,213	**$1,118,821,580**
Future Disposable Income of Fort Carson Personnel (2011)	$266,205,890	$314,149,571	**$580,355,461**
Total	**$1,093,299,027**	**$1,476,979,730**	**$2,570,278,757**
State GDP (rounded) [1]			**$198,683,000,000**
Total Direct and Indirect Output as a percent of State GDP			**1.29%**

Source: RKG Associates, Inc.
[1] BEA, 2006 GDP By State

The study area for this analysis includes El Paso, Fremont, and Pueblo. RIMS II multipliers are used for the three-county area, and while it is difficult to extract exactly what portion will be allotted to each county, it would be reasonable to assume that the majority of impacts will be in El Paso County. Multipliers supplied by RIMS II for El Paso County are almost as large as the multiplier for the three-county area. While the size of the multiplier should not be used to determine what

percentage of impact can be allocated between the counties, similarity in multipliers does suggest that the regional economy and the economy of El Paso County are similar. Anecdotal evidence suggests that Fremont County and Pueblo County are driven by different economic forces.

In addition, the majority of growth is expected to occur in El Paso County, and there are limited economic linkages between El Paso, Pueblo, and Fremont Counties. No measures of economic linkages could be determined for this study; however, anecdotal evidence suggests that each of the three counties' economies operate somewhat independently. Commuting to work data indicate that less than 5% of employed individuals residing in Pueblo population commute to El Paso County, and less than 8% of individuals living in Fremont County commute to work in El Paso County. Less than 0.5% of employed persons residing in El Paso County commute to work in Fremont and Pueblo Counties combined[1].

It should be noted that this analysis includes all three counties, and any impacts are assumed to be unallocated between the counties, but instead represent a regional impact.

While GDP is not measured by county in the State of Colorado, sales for each county are provided, and can be used as a proxy for GDP. Data were provided by the Colorado Governor's Office of State Planning and Budgeting as follows:

- El Paso County sales – $12.0 billion
- Fremont County sales – $600 million
- Pueblo County sales – $3.1 billion

Thus, using rounded numbers, the study area's approximate product would be $15.7 billion, 16% of which represents the economic contribution of Fort Carson with the region.

B. ONE-TIME IMPACTS

One-time impacts for this analysis include both construction on-post and housing growth off-post. On-post construction will be conducted from FY 2007 to FY 2013, which is two years after the troop increase is expected to end. Thus, construction items listed below included initiatives other than BRAC, IGPBS, and AMF, but are included here to show the total impact on the construction sector of the economy[2]. Off-post housing, also a one-time cost, is calculated assuming average housing prices based on data available in FY 2007. Each house built is assumed to have a one-year impact, and are expected to be built along demand assumptions based on troop arrival schedules.

Fort Carson On-Post Construction

Approximately $945.2 million will be spent from BRAC, GDPR, and AMF initiatives, $80.0 million from MCA/MCD funding, $133.8 million in new on-post housing and facilities, $114.7 million in transportation related funding, and $51.5 million on other on-post improvements. By 2013, approximately $1.3 billion will be spent for on-post construction, which is summarized in Table 3.

[1] US Census, 2000, Journey To Work Data for El Paso, Fremont, and Pueblo Counties.
[2] This analysis does not include expansion related to Piñon Canyon.

Table 3. Fort Carson Related Construction Spending FY 2007 – FY 2013 ($2007)

Category	Total Cost	Start	End	Category	Total Cost	Start	End
Construction Supporting BRAC & Global Defense Posture Repositioning				**Community and Housing Facilities**			
4ID Div HQ Complex - Phase 1	$84,000,000	2007	- 2007	Child Development Center	$19,500,000	2008	- 2013
4ID Div HQ Complex - Phase 2	$20,000,000	2008	- 2008	Chapel	$9,500,000	2012	- 2012
Light BCT Facilities - Phase 1	$88,000,000	2011	- 2011	Child Development Center	$6,500,000	2008	- 2008
Light BCT Facilities - Phase 2	$86,000,000	2012	- 2012	Housing Units	$80,200,000	2007	- 2009
Evans Army Community Hospital Alteration	$25,000,000	2008	- 2008	Physical Fitness Facility	$17,500,000	2008	- 2008
Consilidated Clinic	$50,000,000	2008	- 2008	Executive Quarters	$600,000	2007	- 2009
Heavy Brigade Facilities	$381,200,000	2006	- 2008	**Subtotal Community and Housing**	**$133,800,000**		
Subtotal Construction from BRAC and GDPR	**$734,200,000**						
Construction Supporting AMF and "Grow the Army"				**Strategic Mobility**			
Brigade, EOD Group, Spec. Troop, 3 Co. HQs	$37,500,000	2008	- 2008	RTA Academy Blvd. Expansion	$22,500,000	2007	- 2008
Barracks	$47,500,000	2008	- 2008	Rail Yard Repair and Expansion (MCA Project)	$7,500,000	2010	- 2010
Medical Clinic Addition	$12,500,000	2008	- 2008	Colorado DOT I-25 and SH16 Interchange Upgrad	$60,000,000	2008	- 2008
EAB/EOD Complex	$12,500,000	2007	- 2007	Defense Access Road	$8,000,000	2008	- 2008
2 Company HQ and Maint Facility	$11,000,000	2008	- 2008	Arrival/Departure Air Control Group Complex	$16,666,667	2007	- 2007
Battalion HQ 12 Company HQ	$52,500,000	2008	- 2008	**Subtotal Strategic Mobility**	**$114,666,667**		
Military Intelligence Battalion	$37,500,000	2009	- 2009				
Subtotal Construction from AMF and GTA	**$211,000,000**						
Regular MCA/MCD Funded Construction				**Other Improvements**			
Barracks/Company HQ	$22,500,000	2007	- 2007	Range and Training Improvements	$38,500,000	2008	- 2013
10th SFG Support Battalion	$22,500,000	2007	- 2007	Museum	$13,000,000	2010	- 2010
Regional Training Support Center	$12,500,000	2010	- 2010	**Subtotal Other Improvements**	**$51,500,000**		
Battle Command Training Center	$22,500,000	2011	- 2011				
Subtotal Construction from MCA/MCD	**$80,000,000**			**Total Construction**	**$1,325,166,667**		

Source: Fort Carson Department of Public Works, 2007.

These estimated construction facilities and improvements will provide output, salaries, and jobs within the construction sector of the study area's economy. The $1.3 billion will "ripple" through the construction sector of the regional economy, and provide induced impacts as outlined in Table 4. Approximately $2.6 billion in induced output will be created from Fort Carson construction, $887.5 million in wages, and 23,142 one-year employment increments. Because these are one-time impacts, each year will have a different impact. Impacts are not cumulative; however, total spending is presented for the period between 2007 and 2012.

Table 4. Direct and Indirect Impacts from Fort Carson Construction Spending by Year ($2007)

Category	2007	2008	2009	2010	2011	2012	Total
Direct Impact:							
Annual Construction Spending	$316,350,000	$445,683,333	$275,633,333	$42,000,000	$139,500,000	$106,000,000	**$1,325,166,667**
Indirect Impacts:							
Output ($)	$627,100,605	$883,478,072	$546,387,957	$83,256,600	$276,530,850	$210,123,800	**$2,626,877,883**
Earnings ($)	$211,859,595	$298,474,128	$184,591,643	$28,127,400	$93,423,150	$70,988,200	**$887,464,117**
Employment (jobs)	5,525	7,783	4,814	733	2,436	1,851	**23,142**

Source: Fort Carson, BEA 2007.

Multipliers:	
Final Demand Multiplier	1.982
Earnings Multiplier	0.670
Employment Multiplier	17.464
Source of Multipliers: RIMS II, 2007.	

These indirect impacts are for one-year only and do not represent new total jobs, but make up the sum of the impacts over a six-year period. For example, in FY 2007, 5,525 jobs will be supported by the construction for a one-year time frame, and $211.9 million in wages (earnings) will be added to the economy for a one-year time frame.

Housing Construction

New housing within the region will also stimulate the construction sector of the regional economy. All housing in this analysis will be off-post, and is based on a demand schedule driven by the arrival of new troops and civilians.

Direct impacts are estimated to be $1.5 billion in housing, assuming an average new home price of $225,000, and a total of 6,487 homes built in response to troop increases at Fort Carson. As these units are built, they will stimulate additional economic activity for each year. The sum of all indirect economic impacts related to new home construction is $2.9 billion, $977.6 million in wages, and 25,491 in one-year employment increments. Table 5 provides an overview of direct and indirect impacts related to new home construction.

Table 5. Direct and Indirect Impacts from New Home Construction by Year ($2007)

Rank	Estimated Housing Cost	2007	2008	2009	2010	2011	Total [1]	Annual Average
Houses Purchased		2,616	110	2,888	437	437	6,487	1,081
Housing Spending	$225,000	$588,516,081	$24,770,207	$649,792,807	$98,302,277	$98,302,277	$1,459,683,650	$243,280,608
Total Output		**$1,166,615,428**	**$49,101,981**	**$1,288,084,281**	**$194,864,605**	**$194,864,605**	**$2,893,530,899**	**$482,255,150**
Total Earnings		**$394,129,220**	**$16,588,608**	**$435,166,243**	**$65,833,035**	**$65,833,035**	**$977,550,140**	**$162,925,023**
Total Employment		**10,278**	**433**	**11,348**	**1,717**	**1,717**	**25,491**	**4,249**

Source: RKG Associates, Inc.
[1] All impacts are for one year only.

Multipliers:	
Final Demand Multiplier	1.982
Earnings Multiplier	0.670
Employment Multiplier	17.464
Source of Multipliers: RIMS II, 2007.	

The indirect economic activity is assumed to be a one-year timeframe, so that homes built in FY 2007 will also induce the indirect activity to occur within the same year. For example, in 2007, an estimated 2,616 new homes will be built, adding $588.5 million in spending to the regional economy. New home construction in FY 2007 will stimulate total output of $1.2 billion, with $394.1 million in wages (earnings), and will support 10,278 construction related jobs.

C. ONGOING IMPACTS

Ongoing impacts are related to spending that occurs on a consistent, annual basis. For example, each year Fort Carson is expected to expend $17.4 million for utility services[3]. This amount stimulates approximately $24.0 million in additional economic activity related to utilities within the regional economy. Personnel and their families also spend a portion of their earnings in the local economy on day-to-day living expenses. This spending, referred to as "disposable income," injects money into the regional economy and also stimulates output and supports additional jobs and wages.

Fort Carson Operational Expenditures

It is assumed that as Fort Carson adds new personnel, these costs will increase on a pro rata share. Thus, if there are currently 20,000 civilian and military personnel[4] on-post, and an additional 11,830 military and civilian personnel are added, operational costs should increase by roughly 55%.

Fort Carson operational expenditures, provided by the Garrison Resource Management staff, include several annual expenditures. Local purchases and contracts, which represent payments to regional companies for services and other ongoing operational costs, TRICARE payments to

[3] Source: Fort Carson Statistical Data Card, 2006.
[4] This number is based on data from the Fort Carson Statistical Data Card, 2006 and differs slightly from other demographic projections. It is used here only to allocate a share of cost to new personnel.

regional health care facilities, utility payments, tuition assistance and rent/lease payments. Current estimates for total Fort Carson 2006 operational expenditures are approximately $204.3 million.

If this $204.3 million were adjusted on a pro rata share for an additional 11,830 troops and civilian personnel, then an additional $109.6 million would be spent annually. This annual expenditure is referred to as the direct impact for Fort Carson operations, and would create an indirect impact of $194.6 million, additional earnings of $60.8 million, and support an additional 1,546 full time equivalent (FTE) jobs annually. Detail for annual expenditures and indirect growth is presented in Table 6.

Table 6. Direct and Indirect Impacts from Fort Carson Operational Expenditures ($2007)

	Amount	Pro Rata Share	Additional Direct Impact Spending	Multiplier	Output	Multiplier	Earnings	Multiplier	Employment
New Troops		**11,830**							
Fort Carson Expenditures									
Local Purchases and Contracts	$132,489,294	$6,009	$71,084,782	1.728	$122,862,936	0.529	$37,589,632	12.079	859
Tricare	$46,201,137	$2,095	$24,788,401	2.012	$49,879,220	0.729	$18,068,265	21.738	539
Utilities	$17,362,586	$787	$9,315,588	1.384	$12,896,500	0.246	$2,289,771	4.480	42
Tuition Assistance	$5,267,000	$239	$2,825,915	2.034	$5,747,347	0.725	$2,047,658	30.197	85
Rent & Lease Payments	$2,968,416	$135	$1,592,651	1.998	$3,181,320	0.504	$802,218	13.315	21
Total	**$204,288,433**		**$109,607,336**		**$194,567,323**		**$60,797,546**		**1,546**

Source: Fort Carson Garrison Resource Management, 2007, RKG Associates, Inc.

Disposable Income

Currently, Fort Carson provides over $1.0 billion in payroll to military and civilian personnel on an annual basis. The additional 11,830 personnel will increase the total amount of payroll by approximately $526.8 million, which is injected into the regional economy for a total Fort Carson impact of $1.52 billion annually.

The additional military and civilian personnel will spend a portion of their income within the regional economy. Disposable income removes taxes, housing/rental payments (referred to by BEA as "shelter"), pensions/insurance, savings and debt payments. Thus, roughly 60% of pre-tax income is spent as disposable. Data collected from local real estate firms suggest that approximately 55% of married individuals have working spouses and 52% of personnel are married, which is also factored into disposable income estimates. It is assumed the soldier or civilian is the head of household and represent a "household" unit in this analysis.

Assumptions for disposable income are:

- E1-E3 personnel have an annual disposable income of just under $16,000.
- E4-E6 personnel have an annual disposable income of just over $20,000.
- E7-E9, Warrant Officers and Officers have an annual disposable income of roughly $32,000.
- Civilians have an annual disposable income of just over $28,000.

This income is then used to drive a cumulative disposable income value, as presented in Table 7.

Table 7. Direct and Indirect Impacts from Disposable Income ($2007)

Rank	Estimated Disposable Income	Additional Personnel 2007	2008	2009	2010	2011
E7-Officers		1,097	23	1,213	163	163
E4-E6		2,791	59	3,088	416	416
E1-E3		812	17	899	121	121
Civilians Personnel		86	86	86	86	86
Subtotal New Personnel		**4,786**	**186**	**5,286**	**786**	**786**
Cumulative Personnel		**4,786**	**4,972**	**10,258**	**11,044**	**11,830**
E7-Officers	$31,940	$35,031,688	$745,355	$38,758,463	$5,217,485	$5,217,485
E4-E6	$20,344	$56,775,318	$1,207,985	$62,815,245	$8,455,898	$8,455,898
E1-E3	$15,918	$12,933,073	$275,172	$14,308,932	$1,926,202	$1,926,202
Civilians Personnel	$28,269	$2,431,097	$2,431,097	$2,431,097	$2,431,097	$2,431,097
Subtotal Disposable Income		$107,171,176	$4,659,610	$118,313,738	$18,030,683	$18,030,683
Cumulative Disposable Income		**$107,171,176**	**$111,830,786**	**$230,144,523**	**$248,175,207**	**$266,205,890**
Total Output [1]		**$126,472,705**	**$131,971,510**	**$271,593,552**	**$292,871,561**	**$314,149,571**
Total Earnings [1]		**$36,791,865**	**$38,391,509**	**$79,008,615**	**$85,198,548**	**$91,388,482**
Total Employment [1]		**1,220**	**1,273**	**2,620**	**2,825**	**3,030**

[1] Impacts are cumulative.

Multipliers:	
Final Demand Multiplier	1.180
Earnings Multiplier	0.343
Employment Multiplier	11.382
Source of Multipliers: RIMS II, 2007.	

Source: RKG Associates

Disposable income is estimated to be $107.2 million in FY 2007 and $266.2 million by FY 2011 on a cumulative basis. For 2011, approximately 11,830 direct jobs will be in place which will drive approximately $266.2 million in disposable spending. Disposable spending will, in turn, stimulate $314.2 million in output, $91.4 million in earnings, and support 3,030 jobs.

Employment Training Needs

The expansion of Fort Carson will result in a demand for additional workers as well as growth within the labor force. Currently demand for additional employees primarily involves construction activities at Fort Carson. By FY 2011 Fort Carson is anticipating an additional 430 new civilian positions to be added to support the troop growth. During the next several years, however, other employment opportunities will also be created as the regional economy expands.

In order to meet some of these future employment needs the Pikes Peak Workforce Center (PPWFC) provides assistance to businesses in solving workforce problems, as well as assists individuals in career transition. For example, the Workforce Center, in addition to other activities, has traditionally provided transition assistance to veterans, as well as programs for military spouses seeking employment within the region.

In the fall of 2007, the Pikes Peak Workforce Center received approximately $1 million to provide funding for education and training, including tuition, books, necessary equipment, and credentialing and licensing fees in nationally identified high-growth career fields, such as

education, health care, information technology, construction trades and financial services. It is anticipated that this program will be initiated in January of 2008 and could assist military spouses in their efforts to find employment in key areas such as child care, education, and healthcare. This type of program, as well as other employment training activities in areas such as child care will become increasingly important during the expansion of Fort Carson.

D. RECOMMENDATIONS

Fort Carson provides significant economic benefits to the region. The increase of soldiers, civilians, and dependents from on-going operations and incomes will add to the economy of the region, and on- and off-post construction to accommodate growth will be a major economic driver in surrounding communities over the next several years. Fort Carson growth will also impact workforce issues in the study area. In order to further the region's understanding of Fort Carson's impacts on the local economy and prepare for that growth effectively, this report recommends the actions listed below.

Regular Reporting of Economic Data

Issue: Data related to the economic impact of Fort Carson on the region should be regularly updated, examined, and reported.

Recommendation: Define and evaluate the economic impact of Fort Carson in more detail through an economic forecasting model to examine direct and indirect economic impacts, such as Fort Carson spending, local economic capture rates, employment, workforce training, economic diversification options, and other economic indicators. Provide regular reports on economic impacts of Fort Carson on the region.

Workforce Training

Issue: Several employment opportunities exist for military spouses in key areas, such as education, healthcare, and childcare.

Recommendation: Increase the level of workforce training available for military spouses through continued pursuit of grant monies and expanded programs.

Housing Technical Report

Fort Carson Regional Growth Plan

January 11, 2008

Pikes Peak Area Council of Governments

Communities Working Together

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A. INTRODUCTION AND METHODOLOGY

Introduction

Housing is a vital community resource that provides shelter and enhances a region's quality of life. The type and value of housing within a community is shaped to a significant degree by the interplay of demand and supply factors. The examination of demand for housing in this analysis is primarily related to projected increases in military personnel at Fort Carson, as well as other existing growth trends. The supply of housing, primarily driven by private and public actions, is also examined in terms of demand changes due to projected growth at Fort Carson.

Although the housing market within the Pikes Peak region has been expanding for the past few years, it is now exhibiting signs of a general slowdown. A recent decrease in building permits and an increase in sales inventory indicates the market is responding to a reduction in demand. Builders are taking action in anticipation of this slowdown by decreasing speculative construction and tightening future homebuilding initiatives.

The region, however, does not exhibit characteristics commonly associated with a housing bubble such as low affordability, low income growth, or a high cost of living. Therefore, the risk of an unanticipated contraction in the regional housing market is minimized.

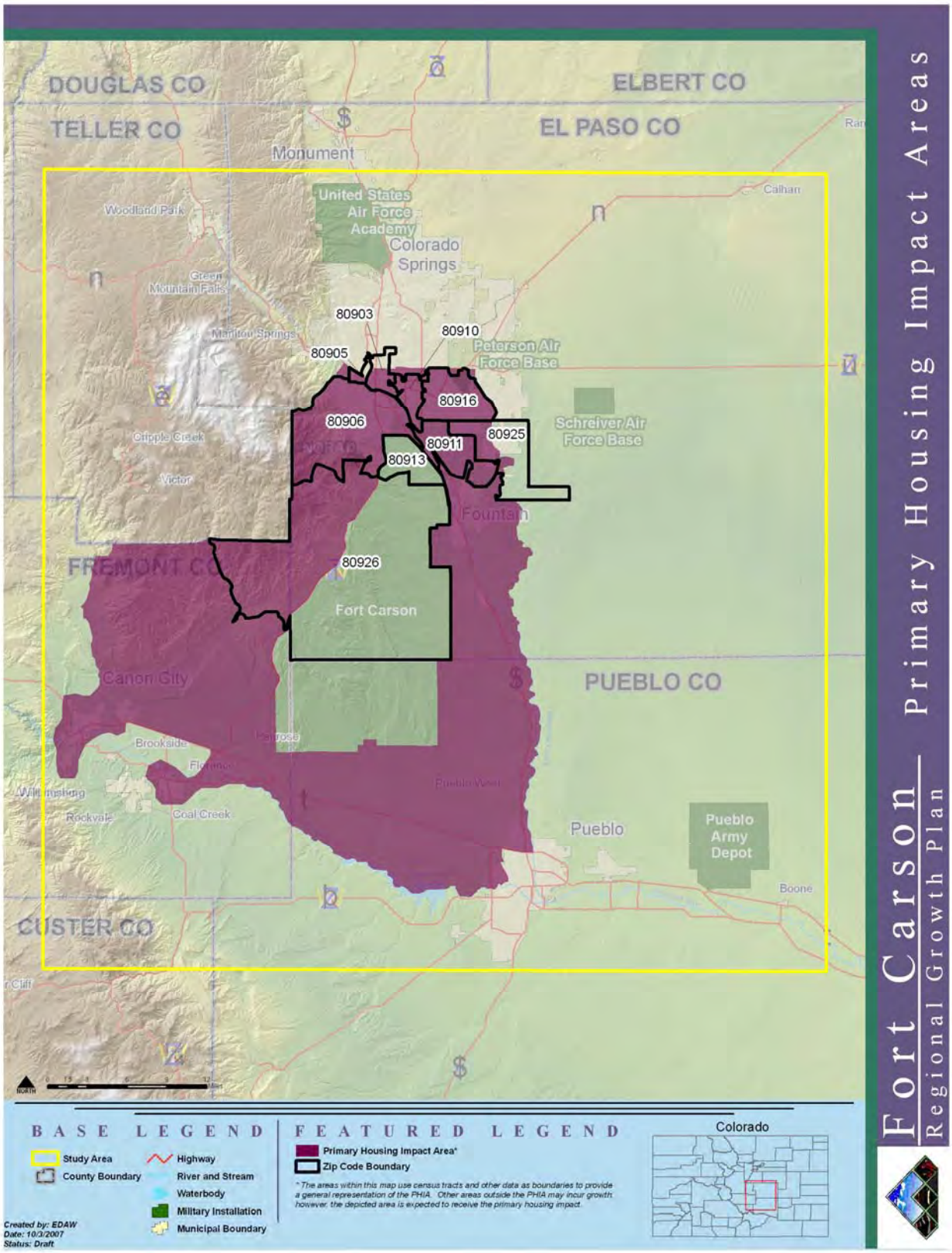
The growth in personnel at Fort Carson will increase demand for housing over the next few years; however, the building community appears to have prepared for this expansion for some time. Housing construction during the next several years will most likely be significantly influenced by periodic increases in military and civilian personnel at Fort Carson.

Methodology

This analysis compares current and near-future housing market supply to forecast housing demand derived from an assessment of an increase in troops reassigned to Fort Carson. This evaluation provides an end-state analysis and should not be considered as a formal housing market study.

Demand projections for housing in this analysis are based on extrapolations of demographic projections, supplied by Fort Carson, as summarized in the Demographics Technical Report and used as the foundation for all forecast housing demand. Estimates for the housing supply are based on existing data provided by local and regional planning personnel, as well as comments and data supplied by developers, builders, military housing personnel, and other stakeholders. All housing developments listed in this report were contacted and interviewed in preparing estimates of future supply, status of current development efforts, as well as comments on other related housing issues.

This analysis focuses on the current housing market within the Fort Carson Study Area, which includes El Paso, Fremont, and Pueblo Counties. A subset area, which consists of several key housing markets, has been identified within the Fort Carson Study Area and is referred to as the Primary Housing Impact Area (PHIA) (see Map 1). The PHIA includes Southern Colorado Springs, Security, Widefield, Fountain, Pueblo West, Pueblo, and Canon City (as well as smaller areas outside of Canon City within Fremont County).



Map 1. Primary Housing Impact Areas

The boundaries of the PHIA were determined from input provided by local officials, stakeholders and real estate professionals and represent the historic and expected areas where Fort Carson personnel typically find housing. The PHIA was based on two factors: the location of current Fort Carson personnel and future housing supply. Historically, the majority of military and civilian personnel have lived within southern Colorado Springs, Fountain, and unincorporated El Paso County (Security and Widefield). Future housing supply appears to be focusing on unincorporated El Paso County, Fountain, and limited portions of Colorado Springs, and was thus included in the PHIA. Other communities are also building new housing in anticipation of attracting growth from Fort Carson, and include portions of Pueblo, Pueblo West, and Fremont County and were also included in the PHIA boundary. Census tracts were identified that contain historic and projected housing growth related to Fort Carson, and were then used as the basis for drawing the PHIA. Some census tracts were modified slightly to include portions of large census tracts.

While areas such as northern Colorado Springs and Falcon may experience some growth from the increase of personnel at Fort Carson, historic data do not suggest significant levels of housing demand from households associated with Fort Carson exist in those areas. Many of the areas within the three counties that are outside the PHIA are characterized by different demographics, housing demand indicators, and growth history and are not geared towards accommodating future growth.

B. CURRENT HOUSING MARKET OVERVIEW

The entire nation has experienced a housing expansion over the past decade, with a somewhat erratic slowdown within the past year. Similar to national trends, the housing market for the Study Area has been expanding for the past few years and is similarly showing signs of a general slowdown. A reduction in the average number of building permits issued is evident for 2006 and 2007, and sales inventory has gone up as sales volumes have declined.

As the Study Area is currently experiencing a slowdown in new home construction, data collected from interviews suggests that most builders have taken action in anticipation of the slowdown. The Colorado Springs area does not appear to exhibit characteristics commonly associated with a housing bubble such as low affordability, low income growth, or a high cost of living. Thus, there is minimal risk of a significant contraction in the housing market over the next few years.

According to the Department of Housing and Urban Development (HUD), the regional economy experienced a recovery in 2004 and is expected to continue to expand over the next few years. The troop increase at Fort Carson will further assist the region in maintaining a healthy and expanding economy over the next few years.

Summary of Key Findings

Industry Perceptions and Strategies

Many builders in the area view the increase of military and civilian personnel at Fort Carson as a driver to an expanding housing market, but are realistic about the growth potential. Builders have taken a conservative tack of getting development plans approved, making some infrastructure improvements, but have held off from offering final housing product. Most developers have sold off speculative inventory and will not build spec homes until demand is present. Builders are waiting until actual troop movement has occurred at Fort Carson before they begin full-scale building efforts. This strategy allows builders and developers to reduce their

exposure to risk by minimizing cash flow strains, reducing leverage, and ensuring they are building homes to meet expected market needs.

Several contingents of local stakeholders have begun to market housing options at Fort Carson to troops expected to arrive from Fort Hood. Groups of real estate professionals have physically visited Fort Hood to provide marketing information and have worked to create supplemental information on-line.

Permits and Sales

On average, over 5,000 building permits for single family homes have been issued per year since 2000, with a drop to about 4,700 in 2006. Sales data from the Pikes Peak Multiple Listing Service (MLS) indicate sales of single family homes has averaged over 12,000 homes per year since 2004, with 11,900 in 2006. Average sales prices have increased from $227,000 to $260,000 between 2004 and 2006, which is an increase in sales price of 7.0% annually, slightly higher than the State's average of 6.5%. Sales have therefore slowed, however valuation has stayed within expected ranges.

One qualitative indicator of a regional slowdown includes the departure of several national homebuilders from the southern Colorado Springs area. Several national builders have reportedly sold off projects and are uncertain if they will work on future projects if demand increases.

Housing Growth Potential

As of spring of 2007, it is estimated that there are approximately 1,000 residential units built or under construction, approximately 4,200 lots with infrastructure to be completed by end of year, and over 17,000 lots undergoing the approval process. Thus, over 22,000 total for-sale units, including both single family units and townhome units, could potentially be in the pipeline.

Because of recent housing expansion within the region, the building industry has become very efficient at building a variety of housing products, including both single family and townhome-style projects. No major issues related to shortages in labor, specialized subcontractors, or building materials were reported by the building community. Although some builders were reporting a tightening in capital, most believed it was appropriate given the recent housing slowdown and were able to find necessary project funding.

Most builders believe they can begin construction of homes within a short period of time. Comments from the building community indicate that they can construct homes within 3 to 6 months if lots are finalized and the majority of infrastructure is in place. Unfinished lots (e.g., those lots that are approved and platted but not yet improved) are estimated to require an additional 3 to 6 months to install the required infrastructure. Thus, most builders with approved plans felt they could respond in less than a year to any significant increase in housing demand.

For Sale Unit Demand and Supply

For-sale unit demand is projected to be just over 12,500 homes by 2012. These units will be located primarily in the PHIA, and include growth in the baseline population, additional military and civilian personnel, and induced growth. Approximately 60% of new residents are forecast to purchase homes. However, as troops arrive, new residents may choose to rent for a short-term basis while they find accommodations in the region.

Comparing the demand of 12,500 units to the potential supply of 22,000 units indicates that it is likely that approximately 9,500 units currently going through the planning process may not be built over the next five years.

Rental Demand and Supply

Rents have stayed relatively constant over the past few years, and minimal new rental products have been added recently, which indicates a flat rental market. Forecast demand for rental units is approximately 8,700 units, which is slightly above the number of vacant units, future units, and on-post units. Thus, the current supply of on-post units and off-post rental units should meet the majority of demand for the next five years but will induce a very low vacancy rate unless additional units are added.

Affordability

Data from a local lending institution has been examined to provide a sample of average prices, debt load, and additional spousal income. The average price for a single family home for E3 to E6 personnel is approximately $203,000, while the average home price for E7 to Officers is approximately $337,000. Military personnel typically have about $670 in other debt, including auto loans, credit card debt, etc. About 30% of purchasers have a co-signer on their loan, which is typically a spouse who earns approximately $3,000 per month.

Location of Housing

A regional evaluation of the location of future housing supply suggests that most of the off-post housing serving Fort Carson personnel will be located in southern Colorado Springs and southern unincorporated El Paso County, Fountain, Security and Widefield. Pueblo and Fremont Counties will increase their housing supply. However, unless there is a dramatic change in housing affordability (e.g., Colorado Springs becomes significantly less affordable) or a change in base commuting patterns (e.g., a southern gate is opened and fully improved), the majority of housing will be located within 10 miles of Fort Carson.

Housing Supply (PHIA)

This section provides an overview of the current housing supply within the Primary Housing Impact Area (PHIA). This supply is based on data collected by various city and county planning agencies, other real estate related entities, and interviews with local stakeholders and professionals.

On-Post Housing Supply

Fort Carson supplies on-post housing products to a range of military personnel, including both officers and enlisted personnel. Fort Carson has approximately 5,700 barrack units and about 2,700 single family units.

Barracks

Barracks are on-post housing units that are typically one to two bedroom units and are preferred by personnel without families. While the majority of personnel occupying barrack units tend to be enlisted soldiers, primarily E-1 to E3, some mid-level enlisted soldiers, such as E-4s and E-5s, stay in barrack units for simplicity and convenience. By 2011, it is expected that an additional 3,167 new barrack spaces will be made available (Table 1). These units are currently under construction and will be available within the next few years, although exact timelines are not available.

Table 1. Estimated Barrack Spaces – Spring 2007

Approximate Barrack Spaces	5,705
New Barracks Currently Under Cons	3,167
Total Barrack Spaces	8,872
Occupancy Rate	75%
Occupied Units	6,654
Available Spaces	2,218
600 Reserved Units	600
Available Spaces less Reserves	1,618

Source: RKG Associates and Directorate of Public Works, Fort Carson.

Current spaces within the barracks are 5,705, with 3,167 new spaces to be built within the next few years, as presented in Table 1. Approximately 600 of these units are reserved for personnel preparing to deploy or have recently returned from deployment. Assuming the historic occupancy rate of 75%, approximately 1,618 barrack spaces will be available as Fort Carson increases its military personnel over the next few years.

Single Family Housing

Single family housing is provided on-post as well, and ranges from 2 to 4 bedroom units. Single family units can range from single detached housing units to attached housing units (e.g., duplex, triplex, etc.).

There is typically a constant demand for on-post housing, with a waiting list that usually exceeds the current number of units. As shown in Table 2, there are presently about 30 units that are not currently reserved through the waiting list system. This number will fluctuate on a monthly basis, but indicates that on-post housing is in high demand. Actual vacancy represents the number of vacant and available units that are not taken by individuals on the waiting list, and represent the number of units open to new residents.

On-post housing is expected to expand in 2008 and 2009, with an additional 212 single family units to be added in 2008, and 192 single family units in 2009. These units will be a mix of multiplex housing (i.e., duplex, triplex, etc.), and will be provided to military personnel with families. Actual vacancy represents the number of vacant and available units that are not taken by individuals on the waiting list, and represent the number of units open to new residents.

Table 2. Estimated Single Family Units

Category	Units	Occupied Units	Vacant Units	Units Vacant & Available (March 2007)	Persons on Waiting List (March 2007)	Actual Vacancy
Calculation	*a*	*b*	*c = a - b*	*d*	*e*	*f = d - e (if d>e)*
2 Bedroom Junior	741	648	93	62	134	0
3 Bedroom Junior	894	774	120	91	75	16
4 Bedroom Junior	118	115	3	0	82	0
2 Bedroom SGT & SSG	92	78	14	8	127	0
3 Bedroom SGT & SSG	106	98	8	0	51	0
4 Bedroom SGT & SSG	64	62	2	0	33	0
2 Bedroom SFC	65	43	22	19	15	4
3 Bedroom SFC	191	188	3	0	17	0
4 Bedroom SFC	76	74	2	0	13	0
3 Bedroom CSM/SGM	44	41	3	2	7	0
4 Bedroom CSM/SGM	42	40	2	1	6	0
2 Bedroom Co. Grade	60	43	17	14	15	0
3 Bedroom Co. Grade	69	47	22	21	10	11
4 Bedroom Co. Grade	20	20	0	0	10	0
2 Bedroom Field Grade	0	0	0	0	0	0
3 Bedroom Field Grade	43	29	14	11	15	0
4 Bedroom Field Grade	28	28	0	0	22	0
2 Bedroom Senior Officer	0	0	0	0	0	0
3 Bedroom Senior Officer	0	0	0	0	0	0
4 Bedroom Senior Officer	8	8	0	0	2	0
4 Bedroom General Officer	3	3	0	0	0	0
2 Bedroom Units			146			4
3 Bedroom Units			170			27
4 Bedroom Units			9			0
Total	**2,664**	**2,339**	**325**	**229**	**634**	**31**

Source: Directorate of Public Works, Fort Carson.

On-post housing is expected to expand in 2008 and 2009, with an additional 212 single family units to be added in 2008, and 192 single family units in 2009 for a total of 404 new units of on post housing bringing the total to 3,068. These units will be a mix of multiplex housing (i.e., duplex, triplex, etc.), and will be provided to military personnel with families.

Off-Post Housing Supply

The off-post housing supply for the Fort Carson region includes all housing located outside of the base within the PHIA. This section considers two basic housing types: off-post rental units and off-post for-sale units.

The majority of future personnel at Fort Carson will probably utilize off-post housing as their primary housing option since there is limited availability on-post.

Off-Post Rentals

Off-post rentals are typically multifamily units, although some military personnel do rent single family units. The Apartment Association of Colorado Springs and several other local entities sponsor the publication of the Colorado Springs Metro Area Apartment Vacancy and Rent Study (Vacancy and Rent Study), which is used as the primary data source for much of the rental housing analysis. It should be noted the regions in the Vacancy and Rent Study used in this analysis were similar to the boundaries of the PHIA, but not exactly contiguous. Minor adjustments were made to apply the data provided by the Vacancy and Rent Study to the PHIA.

According to the Vacancy and Rent Study, there are approximately 43,700 rental units within the Colorado Springs Metro Area. Of these units, approximately 89% are rented, or 38,700 units. Thus, there are an estimated 4,982 units available as of the first quarter of 2007, as presented in Table 3. Single family homes (including condos, duplex units, and single family homes) are also offered to Fort Carson personnel, with an estimated 775 units for rent as of 2007. Thus, an estimated 5,757 rental units, including apartment units, condo units, duplexes, and single family homes, are currently available for rent.

Table 3. Unit Availability Colorado Springs Metro Area

Units	2007
Total Apartment Units Available	43,682
Apartment Units Added Since Last Survey	16
Adjusted Total Apartment Units Available	43,698
Quarterly Vacancy Rate	11.4%
Apartment Units Rented	38,716
Apartment Units Vacant	4,982
For-Sale Units Converted to Rentals	775
Total Rental Units (Apartments & Other)	5,757
Number Absorbed in Time Period	538

Source: Colorado Springs Metro Area Apartment Vacancy and Rent Study, 2007.

The first comment most Colorado Springs residents make in relation to rental housing market is the high vacancy rate. The local rental market has been relatively “soft” over the past few years, fueled primarily by an increase in home ownership, new rental product added before 2003, and troop deployments at Fort Carson.

Rental units within Fountain were included in the estimate of available units despite a significant number of units being in sub-standard condition. While these units are not directly marketed at Fort Carson personnel, they do have a historic trend of being occupied, which would indicate there is some level of demand for these units. Comments from the City of Fountain suggest that there is a need for additional higher quality units in the future.

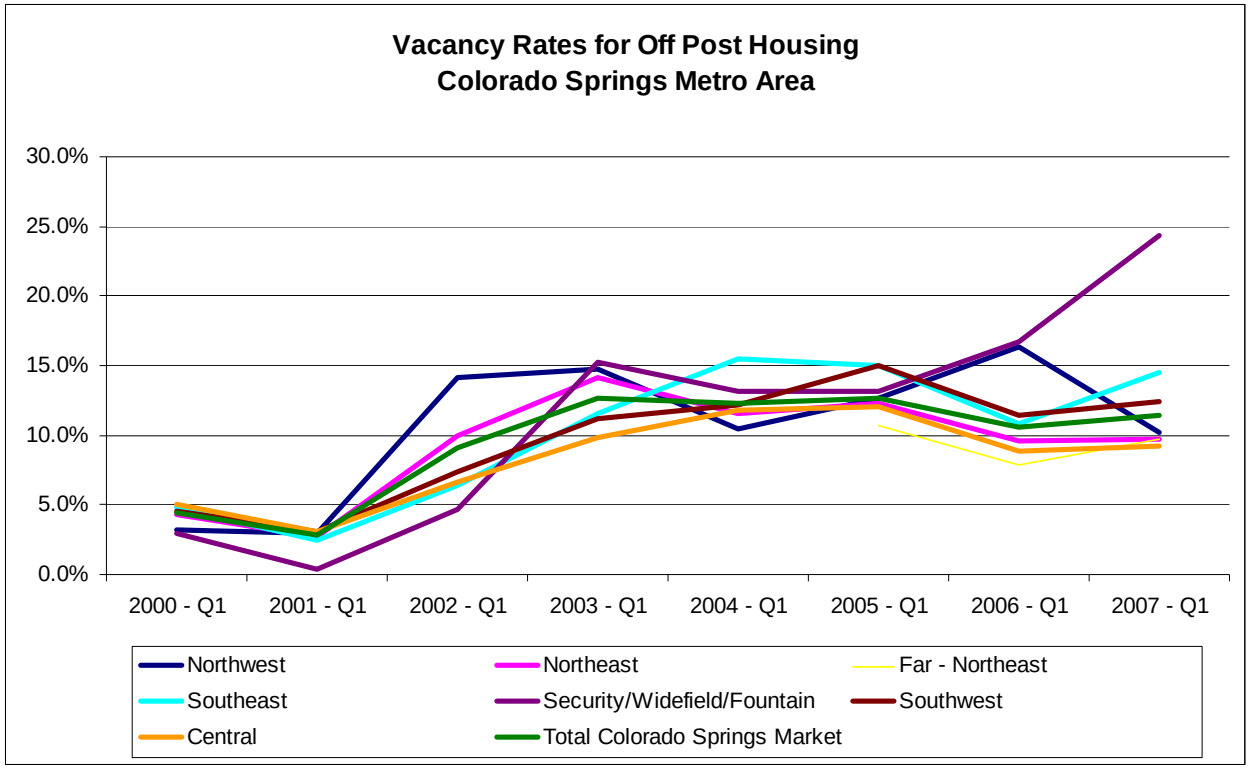
Managers at most rental properties understand the role military personnel play in the rental market, and target military individuals and families as a key market. A number of promotions for military families is typically provided and includes rent discounts, low deposits, and other concessions. The local market also understands legal obligations related to a release from a rental agreement before deployment or other required military duty.

Vacancy rates have risen to over 11 percent over the past few years, with Security/Widefield/Fountain having the highest vacancies of over 24% in Q1 of 2007. Southeast and Southwest areas of Colorado Springs also have vacancy rates above 14% and 12%, respectively. It should be noted that these three areas are the closest markets to Fort Carson, and will likely receive the majority of demand from new troops. Table 4 indicates the vacancy data for the region, and Figure 1 provides a graphic depiction of historic vacancy rates.

Table 4. Vacancy Rates

Area	2000 - Q1	2001 - Q1	2002 - Q1	2003 - Q1	2004 - Q1	2005 - Q1	2006 - Q1	2007 - Q1
Northwest	3.2%	3.0%	14.1%	14.8%	10.4%	12.7%	16.3%	10.2%
Northeast	4.3%	2.7%	10.0%	14.1%	11.5%	12.3%	9.6%	9.7%
Far - Northeast						10.7%	7.9%	9.7%
Southeast	4.8%	2.4%	6.4%	11.5%	15.5%	15.0%	10.8%	14.5%
Security/Widefield/Fountain	3.0%	0.4%	4.7%	15.3%	13.2%	13.2%	16.7%	24.3%
Southwest	4.6%	3.1%	7.4%	11.2%	12.2%	15.0%	11.4%	12.4%
Central	5.0%	3.1%	6.6%	9.8%	11.8%	12.1%	8.9%	9.2%
Total Colorado Springs Market	**4.4%**	**2.8%**	**9.1%**	**12.7%**	**12.3%**	**12.7%**	**10.6%**	**11.4%**

Source: Colorado Springs Metro Area Apartment Vacancy and Rent Study, 2007.



Source: RKG Associates; Colorado Springs Metro Area Apartment Vacancy and Rent Study, 2007.

Figure 1. Vacancy Rates for Off-Post Housing

The number of new multifamily building permits (by unit) has dropped dramatically since 2000. Data for Colorado Springs indicates that a 35.9% average annual drop in multifamily building permits has occurred since 2000, as illustrated in Table 5.

Table 5. Multifamily Building Permits in Colorado Springs by Unit

City of Colorado Springs	Multifamily
2000	1,149
2001	1,708
2002	1,663
2003	219
2004	332
2005	131
2006	80
Average Annual Percent Change from 2000-2006	**-35.9%**

Source: Pikes Peak Regional Building Department.

Very few building permits have been pulled for multifamily product within the region, with just over 724 permits since 2004. No multifamily building permits have been pulled in Fremont County. There have been 181 permits for multifamily pulled within Pueblo County since 2004 (Table 6).

Table 6. Recent Regional Multifamily Building Permit Activity

Area	2004	2005	2006	Total
El Paso County				
Colorado Springs	332	131	80	543
Fountain	0	0	0	0
Falcon	0	0	0	0
Security	0	0	0	0
Other Areas	0	0	0	0
Total El Paso County	332	131	80	543
Pueblo County				
Pueblo City	88	8	43	139
Unincorporated Pueblo County	9	24	9	42
Total Pueblo County	97	32	52	181
Fremont County				
Total Fremont County	0	0	0	0
Regional Count	**429**	**163**	**132**	**724**

Source: Pikes Peak Regional, Pueblo Regional, Fremont County Building Department.

Rents

Average rents were examined for the Colorado Springs Metro Area, and are presented in Table 7. A 2 Bedroom, 2 Bathroom (2BR 2BA) unit typically rents for $896, with slightly higher rents in Northern Colorado Springs. Southeast, Central, and Security/Widefield/Fountain have rents that are less than $900 for 2BR 2BA units. There are relatively fewer units in the Southwest area, which may explain why its rents are generally higher and lie outside the average.

Table 7. Average Rents for the Colorado Springs Metro Area – 2007

Area	Efficiency	1 Bedroom	2 Bedroom, 1 Bath	2 Bedroom, 2 Bath	Three Bedroom	All
Northwest	$415	$632	$779	$903	$871	$740
Northeast	$562	$580	$630	$842	$853	$663
Far - Northeast	$445	$654	$640	$934	$1,146	$761
Southeast	$392	$457	$568	$761	$815	$575
Security/Widefield/Fountain	n/a	$563	$577	$529	$670	$586
Southwest	$490	$796	$787	$971	$1,023	$831
Central	$410	$507	$577	$897	$772	$579
Avg. Colorado Springs Market	**$483**	**$616**	**$656**	**$896**	**$912**	**$705**

Source: Colorado Springs Metro Area Apartment Vacancy and Rent Study, 2007.

Rents have stayed constant over time for most units, and have increased less than one percentage point on an annual average basis since Q1 of 2000. 2BR 2BA units have increased the most, with an average annual increase of 4.0%. Table 8 and Figure 2 present average rents by unit type for the Colorado Springs Metro Area.

Table 8. Average Rents by Type Colorado Springs Metro Area – 2007

Unit Type	2000 - Q1	2001 - Q1	2002 - Q1	2003 - Q1	2004 - Q1	2005 - Q1	2006 - Q1	2007 - Q1	Average Annual Increase
Efficiency	$498	$502	$544	$511	$483	$451	$487	$483	**-0.4%**
One Bedroom	$534	$570	$584	$582	$571	$583	$599	$616	**2.1%**
Two Bed, One Bath	$558	$650	$660	$658	$599	$642	$661	$656	**2.3%**
Two Bed, Two Bath	$679	$768	$809	$821	$832	$848	$873	$896	**4.0%**
Three Bedroom	$914	$848	$836	$869	$847	$887	$966	$922	**0.1%**
Average Colorado Springs Metro Area	$670	$642	$658	$658	$652	$678	$703	$705	**0.7%**

Source: RKG Associates; Colorado Springs Metro Area Apartment Vacancy and Rent Study, 2007.

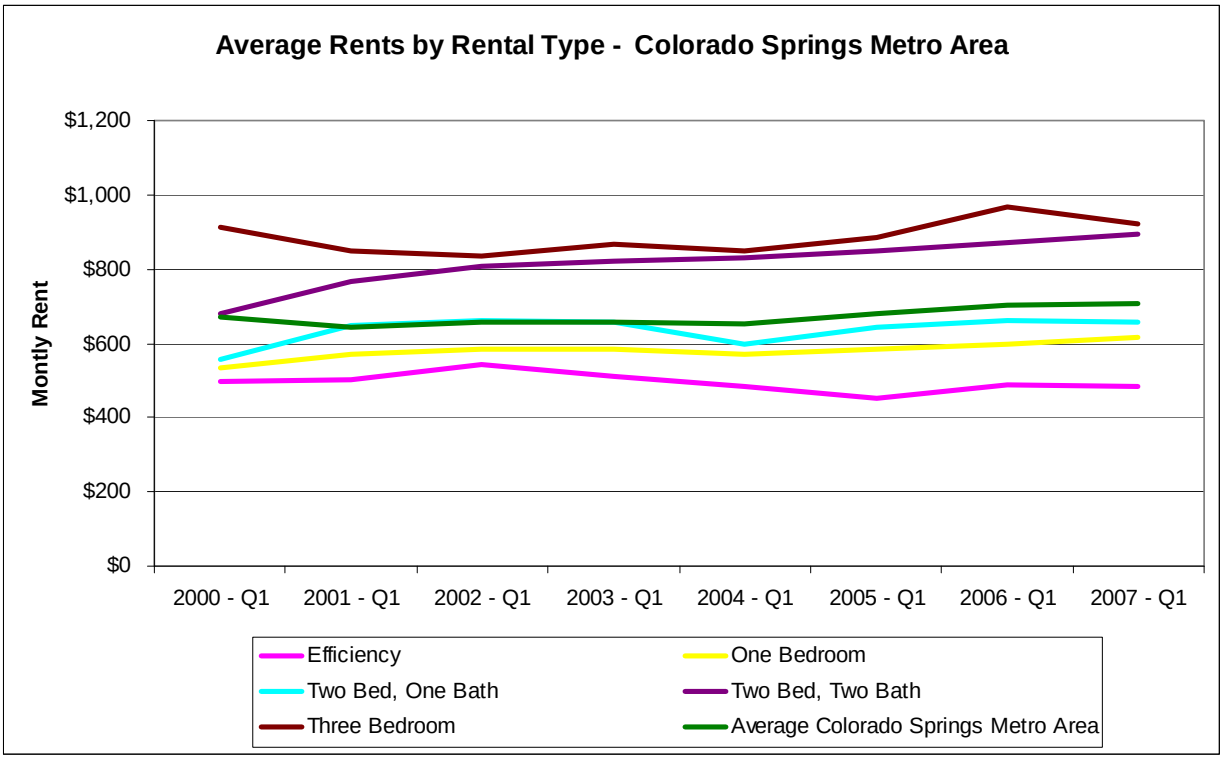


Figure 2. Average Rents by Rental Type

Typically, markets with high vacancy rates and minimal changes in rent indicate a non-expanding rental market, which is the case for the Study Area. As the base expands, it is likely that vacancy rates will decrease and rents may begin to increase.

Fair market rent (FMR) is the monthly cost of modest, non-luxury rental units in a specific market area including rent and utilities, as determined by the U.S. Dept. of Housing and Urban Development (HUD). FMR sets the limit for HUD Section 8 vouchers, which are generally used as affordability indicators. Fair market rents are presented in Table 9 for 2BR units, and show that rents have increased at a steady rate of 2.5% to 3.1% each year. FMR has generally tracked average annual rent increases for the Colorado Springs Area. The reader should note that FMR is calculated through a different methodology and includes slightly broader areas than the Colorado Springs Metro Area. The conclusion of comparing the two data sources is that increases in rent appear to be somewhat consistent throughout the region.

Table 9. Fair Market Rents 2BR - 2003 to 2007

Area	2000	2001	2002	2003	2004	2005	2006	2007	Average Annual Increase
El Paso County/Colorado Springs	$634	$647	$668	$690	$701	$731	$759	$785	**3.1%**
Fremont County	$499	$503	$520	$437	$543	$575	$594	$615	**3.0%**
Pueblo County	$550	$561	$579	$598	$608	$610	$630	$652	**2.5%**

Source: HUD, 2007.

Single Family Rentals

In addition to multifamily unit rentals, single family homes are rented to military personnel and families from Fort Carson. While limited data are available on actual single family rentals, Fort Carson does keep track of the number of units specifically marketed to Fort Carson personnel through the Automated Housing Referral Network (AHRN). Currently, 775 condominiums, duplexes, or homes are being offered to Fort Carson personnel (Table 10). Rents appear to be similar to apartment asking rents, but a square foot comparison is not available at this time. For example, a 2 BR apartment rents for $785 for Colorado Springs, and a 2 BR condo, duplex, and house are offered at $837, $764, and $820, respectively, which is a difference of less than $52 per month.

Table 10. Rental Homes Currently Offered to Fort Carson Personnel

Type of Housing	Average Asking Rent	Number of Rentals
Condo		
1 Bedroom	$803	7
2 Bedroom	$837	37
3 Bedroom	$1,118	16
Duplex		
1 Bedroom	$611	4
2 Bedroom	$764	118
3 Bedroom	$1,041	72
4 Bedroom	$1,245	10
House		
1 Bedroom	$500	5
2 Bedroom	$820	27
3 Bedroom	$1,077	240
4 Bedroom	$1,282	190
5 Bedroom	$1,284	39
Mobile Home	$640	10
Total Number		775

Source: AHRN Report, Fort Carson; RKG Associates.

For-Sale Housing Off-Post

General Market Indicators

General market data are included to provide a background of the housing market, and include indicators such as turnover and age of housing.

Table 11 provides data related to turnover of owner-occupied housing based on U.S. Census data. The PHIA and Study Area function similarly to the State of Colorado. Thus, even though the Fort Carson area is a "military town", home ownership trends appear to be in line with the

state-wide norm. Within the Study Area, approximately 45% of residents have moved in within five years of 2000, and approximately 14% have moved in within one year of 2000.

Table 11. Turnover Data

Time	El Paso County	Fremont County	Pueblo County	Study Area	Primary Housing Impact Area	State of Colorado
Year Moved In:						
Moved in 1969 or earlier	7,915	871	6,968	15,754	2,987	87,086
Moved in 1970 to 1979	12,679	1,193	5,331	19,203	3,966	116,073
Moved in 1980 to 1989	19,853	1,998	5,914	27,765	4,441	179,969
Moved in 1990 to 1994	25,268	2,169	5,968	33,405	5,527	220,143
Moved in 1995 to 1998	40,264	3,696	10,017	53,977	9,166	351,444
Moved in 1999 to March 2000	18,464	1,644	4,236	24,344	3,997	161,590
Total	124,443	11,571	38,434	174,448	30,084	1,116,305
Moved in w/in 5 Years	**47%**	**46%**	**37%**	**45%**	**44%**	**46%**
Moved in w/in 1 Year	**15%**	**14%**	**11%**	**14%**	**13%**	**14%**

Source: US Census 2000.

Census data also indicate that the majority of the Study Area's residents prefer to own homes as opposed to rent. Approximately two thirds of housing units are owner occupied as opposed to rental, with 174,448 owner occupied units within the Study Area (Table 12).

Table 12. Tenure Data

Housing Unit	El Paso County	Percent	Fremont County	Percent	Pueblo County	Percent	Study Area	Percent
Owner occupied	124,443	64.7%	11,571	76.0%	38,434	70.4%	**174,448**	**66.5%**
Renter occupied	67,966	35.3%	3,661	24.0%	16,145	29.6%	**87,772**	**33.5%**
Total	192,409		15,232		54,579		**262,220**	

Source: US Census 2000.

Timing of construction has been examined for properties within the Study Area. Census data supply the year a structure was built up to 2000. Assuming all building permits pulled from 2000 to 2006 have yielded structures, then a median year of construction can be estimated for recent growth within the Study Area.

Table 13 provides a median year of construction for residential units, including recent building activity. El Paso County has an estimated 38,000 new residential structures built since 2000, approximately 16% of its total building stock. The median year of construction for El Paso County is 1979, which indicates it has the newest units on average within the study area. Fremont County is estimated to have added about 3% of its building stock since 2000, and Pueblo County has added just fewer than 10% since 2000. The Study Area's median year of construction for residential units is calculated to be 1976. Because this calculation is a weighted average, the high level of building activity of El Paso County brings up that average considerably.

Table 13. Median Year of Construction for Residential Units

Year Built	El Paso County	% of Total	Fremont County	% of Total	Pueblo County	% of Total	Total	% of Total
New Permits from 2000 to 2006	35,298	14.8%	347	2.0%	8,792	13.0%	44,437	13.8%
Built 1999 to 2000	7,775	3.3%	495	2.8%	2,240	3.3%	10,510	3.3%
Built 1990 to 1999	36,795	15.5%	3,207	18.3%	7,844	11.6%	47,846	14.8%
Built 1980 to 1989	44,911	18.9%	2,446	14.0%	4,780	7.1%	52,137	16.1%
Built 1970 to 1979	47,762	20.1%	3,991	22.8%	11,335	16.7%	63,088	19.5%
Built 1960 to 1969	26,560	11.2%	1,711	9.8%	7,544	11.1%	35,815	11.1%
Built 1950 to 1959	18,720	7.9%	1,264	7.2%	9,313	13.8%	29,297	9.1%
Built 1940 to 1949	5,239	2.2%	835	4.8%	4,528	6.7%	10,602	3.3%
Built 1939 or earlier	14,666	6.2%	3,196	18.3%	11,342	16.7%	29,204	9.0%
Total	**237,726**	**100.0%**	**17,492**	**100.0%**	**67,718**	**100.0%**	**322,936**	**100.0%**
Median year structure built [1]	**1979**		**1969**		**1969**		**1976**	

[1] Total for Median Year Structure Built is a weighted average of all counties.
Source: RKG Associates, US Census, 2000.

Building Permits

Building permits are further examined for the Study Area in order to determine recent building trends within the region. While new building from 2000 to 2006 has almost matched the amount of building from 1990 to 1999, a recent slowdown can been seen in building permit data.

For all regions except for Fountain, Falcon, Unincorporated Pueblo County (predominantly Pueblo West), and cities within Fremont County, a slight decrease in building permits has occurred on an average annual basis. Building permit data for single family homes are presented in Table 14. The year 2006 saw a considerable decrease in building activity, largely because of the slowdown in building activity in northern Colorado Springs.

Table 14. Building Permit Data – Single Family Homes

Area	2000	2001	2002	2003	2004	2005	2006	Average Annual Increase
El Paso County								
Colorado Springs	3,143	3,227	3,121	3,003	3,598	3,408	2,025	**-7.1%**
Fountain	247	324	320	330	393	503	352	**6.1%**
Falcon	90	226	220	447	437	529	200	**14.2%**
Security	240	296	148	68	27	72	120	**-10.9%**
Other Areas	737	682	523	424	531	705	711	**-0.6%**
Total El Paso County	4,457	4,755	4,332	4,272	4,986	5,217	3,408	**-4.4%**
Pueblo County								
Pueblo City	472	571	580	436	333	331	397	**-2.8%**
Unincorporated Pueblo County	726	744	699	770	745	759	799	**1.6%**
Total Pueblo County	1,198	1,315	1,279	1,206	1,078	1,090	1,196	**0.0%**
Fremont County (Estimated)								
Penrose, Canon City, Florence	47	34	33	35	27	26	49	**0.7%**
Other Areas	20	14	14	15	6	7	20	**-0.1%**
Total Fremont County	67	48	47	50	33	33	69	**0.5%**
Regional Count	**5,722**	**6,118**	**5,658**	**5,528**	**6,097**	**6,340**	**4,673**	**-3.3%**

Source: Pikes Peak Regional, Pueblo Regional, Fremont County Building Department.

Conversely, building permit activity for townhomes has increased consistently (except for the City of Pueblo), over the last seven years (Table 15). Colorado Springs, Fountain, and other areas of El Paso County have all experienced an increased in the number of building permits

pulled for townhomes. Overall, the number of townhome building permits has increased by over 10% on an average annual basis.

Table 15. Building Permit Data – Townhomes

Area	2000	2001	2002	2003	2004	2005	2006	Average Annual Increase
El Paso County								
Colorado Springs	268	288	409	419	652	645	476	**10.0%**
Fountain	0	0	8	21	41	178	105	**n/a**
Falcon	0	0	0	0	0	24	0	**n/a**
Security	0	1	8	6	13	2	6	**n/a**
Other Areas	33	38	15	31	8	82	94	**19.1%**
Total El Paso County	301	327	440	477	714	931	681	**14.6%**
Pueblo County								
Pueblo City	80	84	57	87	71	37	14	**-25.2%**
Total Pueblo County	80	84	57	87	71	37	14	**-25.2%**
Regional Count	**381**	**411**	**497**	**564**	**785**	**968**	**695**	**10.5%**

Source: Pikes Peak Regional, Pueblo Regional, Fremont County Building Department.

Sales Data

Sales data have been examined for the Study Area, with a primary focus on Multiple Listing Data (MLS) data supplied by the Pikes Peak Association of Realtors (PPAR)[1]. Sales data are typically used to assess the health of a real estate market or find trends or anomalies. For example, a market with spikes and drops in sales prices with variable sales rates may indicate market volatility, while a market with steady sales prices and consistent sales may indicate a stable market. The PHIA has shown a steady increase in sales prices and generally stable sales rates over the past few years, thus indicating it is a generally stable market.

Overall, sales prices have generally increased for single family homes, with the exception of Fremont County, which has experienced a minor drop in average sales prices. Pueblo County has seen the largest increase in sales prices, with an average annual change of 12%. Table 16 provides the average sales price for the Study Area.

[1] Data from the Pueblo Association of Realtors and the Royal Gorge Association of Realtors were not made available for the study. However, sales data from Pueblo and Fremont Counties are included in this analysis, as some realtors who belong to the Pikes Peak Association of Realtors made sales in Pueblo and Fremont Counties.

Table 16. Average Sales Price – Study Area

Area	2004	2005	2006	Average Annual Change
Single Family Home				
El Paso County	$227,898	$246,105	$261,442	**7.1%**
Pueblo County	$121,956	$147,260	$152,859	**12.0%**
Fremont County	$187,450	$174,784	$177,010	**-2.8%**
Weighted Average	$227,309	$245,035	$259,645	
Townhome				
El Paso County	$166,566	$152,901	$148,947	**-5.4%**
Pueblo County	$179,900	n/a	n/a	**n/a**
Fremont County	$111,200	n/a	n/a	**n/a**

Source: RKG Associates, Pikes Peak MLS.

In order to further refine sales prices, sales data were adjusted to include only the PHIA, which keeps Fremont and Pueblo sales data, but adjusts El Paso County data to remove areas in northern Colorado Springs and El Paso County, such as Briargate, Falcon, Monument, etc. Once average sales prices from northern areas are removed, the average sales price drops by about 15%, and thus, the weighted average sales price, (weighted by number of sales), for a single family home in the PHIA is $217,254 in 2006 (Table 17).

Table 17. Average Sales Price – Primary Housing Impact Area

Area	2004	2005	2006	Average Annual Change
Single Family Home				
El Paso County	$196,810	$211,129	$219,262	**5.6%**
Pueblo County	$121,956	$147,260	$152,859	**12.0%**
Fremont County	$187,450	$174,784	$177,010	**-2.8%**
Weighted Average	$196,161	$209,957	$217,254	
Townhome				
El Paso County	$162,953	$147,300	$147,355	**-4.9%**
Pueblo County	$179,900	n/a	n/a	**n/a**
Fremont County	$111,200	n/a	n/a	**n/a**

Source: RKG Associates, Pikes Peak MLS.

Figure 3 illustrates average sales prices for El Paso County, Fremont County, Pueblo County, and Southern Colorado Springs.

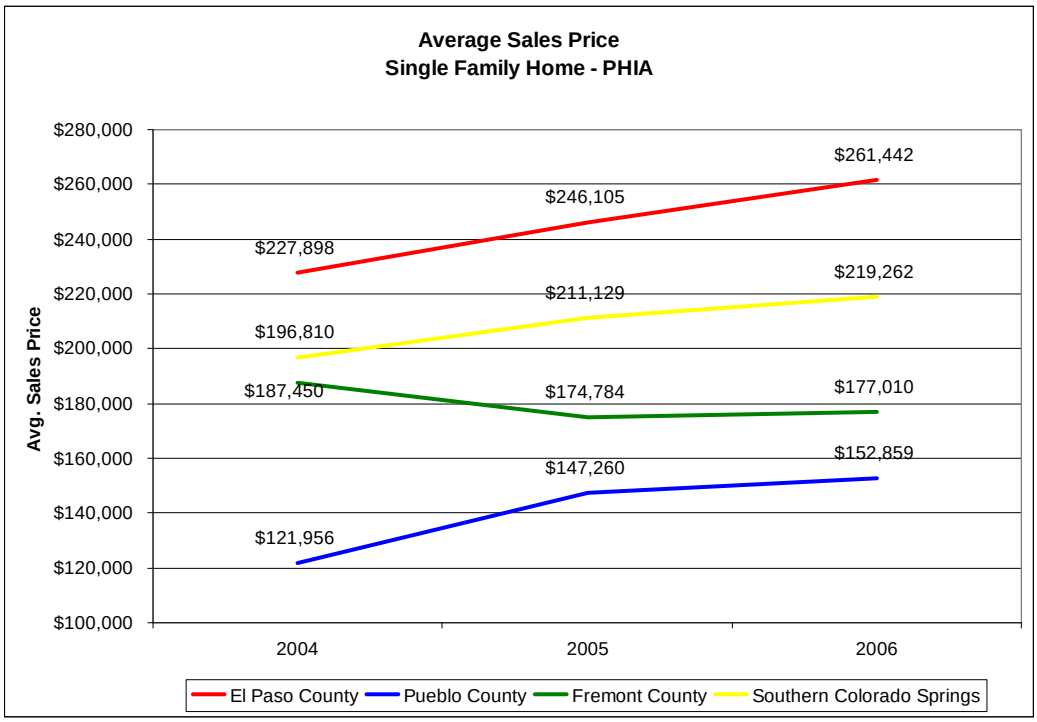


Figure 3. Average Sales Price – Single Family Home - PHIA

Table 18 provides detailed sales data from the Pikes Peak Association of Realtors, and presents all sales, existing home sales, and new home sales from 2004 to 2006 within the Colorado Springs Area[2]. Overall, more than 90% of listings sold through the PPAR are existing homes, which sell for approximately 5% less than new homes on average.

Table 18. Detailed Sales Data – Pikes Peak Association of Realtors

	All Sales			Existing Homes			New Homes in MLS			Percent of Homes Sold Are Existing - 2006	Percent of Homes Sold are New - 2006
	2004	2005	2006	2004	2005	2006	2004	2005	2006		
Single Family/Patio Homes											
New Listings	21,010	20,223	20,841	18,538	17,826	18,509	2,472	2,397	2,332	89%	11%
Sales	11,746	13,124	11,911	10,312	11,464	10,293	1,434	1,660	1,618	86%	14%
Unsold Listings	9,264	7,099	8,930	8,226	6,362	8,216	1,038	737	714	92%	8%
Avg. Sales Price	$227,309	$245,035	$259,645	$219,415	$231,819	$243,372					
Condo/Townhomes											
New Listings	3,167	2,921	3,102	2,634	2,385	2,512	533	536	590	81%	19%
Sales	1,579	1,776	1,797	1,318	1,508	1,402	261	268	395	78%	22%
Unsold Listings	1,588	1,145	1,305	1,316	877	1,110	272	268	195	85%	15%
Avg. Sales Price	$148,997	$152,901	$148,947	$141,510	$143,012	$153,378					
Total Housing											
New Listings	24,177	23,144	23,943	21,172	20,211	21,021	3,005	2,933	2,922	88%	12%
Sales	13,325	14,900	13,708	11,630	12,972	11,695	1,695	1,928	2,013	85%	15%
Unsold Listings	10,852	8,244	10,235	9,542	7,239	9,326	1,310	1,005	909	91%	9%

Source: RKG Associates, Pikes Peak MLS.

Sales listings dropped slightly in 2005, but increased in 2006, as shown in Figure 4. The number of sales peaked in 2005, and the number of unsold listings (which is typically inverse to sales) dropped in 2005. Overall, sales patterns show that 2006 had more listings with slightly fewer sales, but a higher average sales price. New homes sold with MLS records remained relatively constant over the past three years.

[2] The sales data presented are based on sales made by realtors that are members of the PPAR and not necessarily sales within a defined geographic area. The majority of sales is within the PHIA, but may include some sales data from adjacent areas.

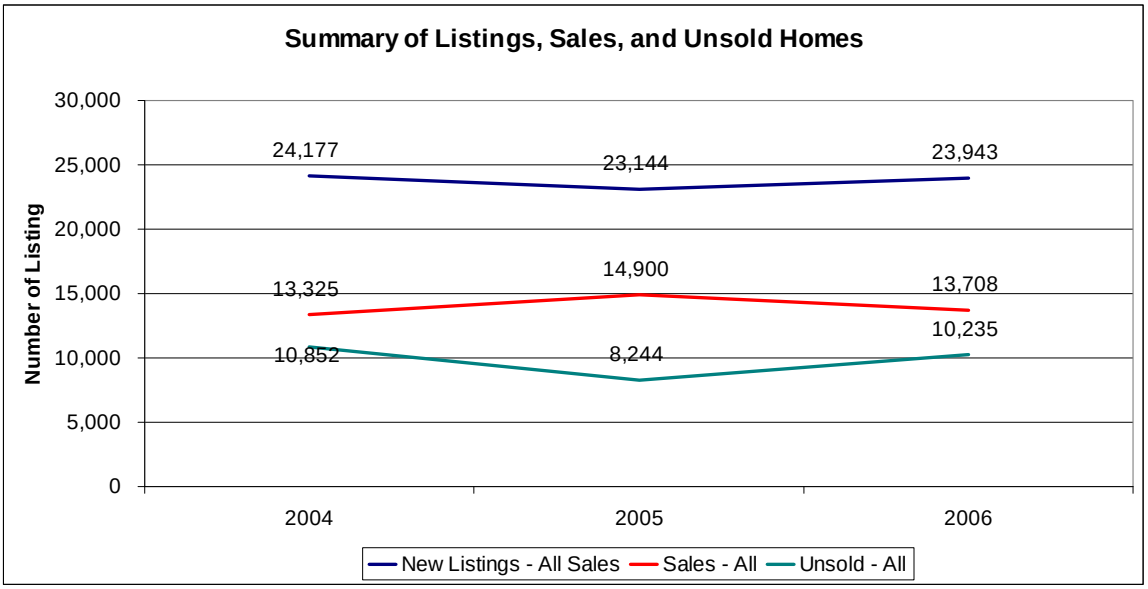


Figure 4. Summary of Listings, Sales, and Unsold Homes - Pikes Peak Association of Realtors

Monthly sales data were also examined and provide an estimate of the current supply of homes for sale (i.e., inventory) on the market as shown in Table 19. For the Study Area, approximately 5,349 homes are actively listed, and approximately 3,992 sales have been made this year. For the PHIA, however, approximately 2,730 homes are listed, which is approximately 46% of the Study Area.

Table 19. Monthly Sales Estimates

Month	Category	Study Area	PHIA
December-06	Total Active Listings [1]	4,077	2,139
January-07	New Listings	1,599	855
	Total Active Listings	4,451	2,335
	Estimated Sales	1,225	659
February-07	New Listings	1,393	769
	Total Active Listings	4,600	2,428
	Estimated Sales	1,244	676
March-07	New Listings	1,918	990
	Total Active Listings	4,995	2,625
	Estimated Sales	1,523	793
April-07	New Listings	1,857	926
	Total Active Listings	5,349	2,730
Estimated Three Month Sales		3,992	2,128

[1] Estimated.
Source: RKG Associates, Pikes Peak MLS.

Affordability

Affordability is a key component to future impacts to the housing market. In this analysis, affordability refers to the price of a home a Fort Carson buyer can purchase, assuming basic allowance for housing (BAH), average debt, and household income. It should be noted that this assessment of affordability will require updating as the market expands over the next few years.

This analysis uses a data sample that should be expanded and updated as the housing market grows. More research will be required as several key factors, including pricing, mortgage rates, lending patterns, and buying trends, continue to evolve.

Current market conditions have been favorable for homebuyers, with 30 year fixed lending rates ranging from 6.0% to 6.5%. According to local economists, favorable mortgage rates have contributed to the general increase in homeownership over the past few years. However, national and regional trends indicate that the housing market is experiencing a "cooling," driven partly by the expectation that inflation rates, which are correlated to interest rates, will rise.

Data from over 200 military personnel[3] in the Fort Carson region were obtained from CB&T Mortgage Company and were used as the basis for debt loads and other sales information. Average income of military personnel purchasing homes was approximately $48,000, and average household income (personnel income plus spousal/other co-signer income) was approximately $59,000. Average "other" debt service, such as auto loans, student loans, etc., was about $670 per month. The average sales price was just under $298,000, which is expressed as a sales price to household income ratio of 5.06. These data, as shown in Table 20, are further detailed below, and used as the basis for several affordability calculations.

Table 20. Lending Data for Military Personnel within the Region

By Service	Average Income	Average Household Income	Average Other Debt Monthly Payment	Average Sales Price	Sales Price to Income Ratio
US Air Force	$51,062	$66,521	$876	$314,796	4.73
US Army	$42,714	$50,665	$404	$272,219	5.37
US Navy	$62,044	$62,644	$1,261	$371,340	5.93
US Coast Guard	$69,070	$69,070	$787	$345,209	5.00
Average All Services	**$47,966**	**$58,933**	**$670**	**$297,909**	**5.06**

Source: RKG Associates, data supplied by CB&T Mortgages.

Average household income used in this analysis is derived from data related to co-signers of home loans[4]. As presented in Table 21, approximately 30% of borrowers have a co-signer, which is typically a spouse or other family member. Of the co-signers, average monthly income is just over $3,000 per month. If this amount is applied to on an average basis to *all* borrowers, the average monthly co-signer income is $914 per month, or $10,967 annually. Thus, the average household income is $58,933, or $10,967 higher than the average sole income of military personnel, which is $47,966.

[3] Data are composed primarily of Army and Air Force personnel, with some Navy and Coast Guard personnel as well. Minimal variance is observed between different services of the military.

[4] Note that this is a different utilization of the term household income than used in other demographic sources, such as the U.S. Census. The term household income is used here for purposes of calculating lending patterns for military personnel.

Table 21. Lending Data Related to Military Households

Rank	Number of Borrowers	Number of Co-signers	Percent of Borrowers with a Co-signer	Average Monthly Co-Signer Income	Adjusted Average Monthly Co-Signer Income	Adjusted Average Co-Signer Income
	a	*b*	*c = b / a*	*d*	*e = c x d*	*f = e x 12*
E7 to Officer	134	37	28%	$3,501	$967	$11,599
E6 to E4	79	27	34%	$2,413	$825	$9,896
E1 to E3	6	2	33%	$914	$305	$3,655
Total	**219**	**66**	**30%**	**$3,033**	**$914**	**$10,967**

Source: RKG Associates, data supplied by CB&T Mortgages.

Average debt was also examined for military personnel. Of the military personnel, approximately 58% had some form of debt other than the mortgage. On average, then, military personnel had a monthly obligation of $670 per month. E7 to Officers had an average monthly debt of $732, which ranged from $424 to $1,257. E3 to E6 personnel had a lower monthly average of $336, with a range of $200 to $504.

Average Principal, Interest, Taxes, and Insurance (PITI) and sales prices are presented in Table 22. Average sales prices were approximately $337,000 for E7 to Officers, and $203,000 for E3 to E6 personnel.

Table 22. Average PITI and Home Prices

By Rank	Average PITI	Average Sales Price
O6	$2,654	$476,302
O5	$2,257	$431,078
O4	$2,282	$365,676
O3	$1,911	$305,984
O2 - E8	$1,880	$294,716
E7	$2,262	$319,729
Average E7 - O6	**$2,077**	**$337,235**
E6	$1,857	$275,204
E5	$1,530	$219,134
E4	$1,119	$161,649
E3	$1,132	$156,067
Average E3 to E6	**$1,409**	**$203,013**

PITI is "principal, interest, taxes and insurance".
Source: RKG Associates, data supplied by CB&T Mortgages.

Debt ratios are useful in examining the affordability of housing, and are presented in Table 23. Average monthly household income plus BAH provides an estimate of monthly income for military personnel, which can be compared to the average PITI (principal, interest, taxes, insurance) for the Front End Debt to Income Ratio. For E7 to Officers, the average Front End Debt to Income Ratio is 29.4% and 34.7% for E3 to E6 personnel. Back End Debt to Income Ratios take into account other debt individuals have when calculating the debt to income ratio. Thus Back End Debt to Income Ratios are calculated to be 39.8% for E7 to Officers, and 43.0% for E3 to E6 personnel. In general, the Veterans Administration (VA) guidelines suggest Back End Debt to Income Ratios of 41% or lower, however, they are often extended beyond that limit if

compensating factors are shown to be above average (e.g., good credit history, long term employment, liquid assets, etc.).

Table 23 also illustrates the value the Basic Allowance for Housing (BAH) plays in the lending calculation. Without the BAH, Back End Debt to Income Ratios would exceed the 41% limit, suggesting that the BAH provides a significant role in home purchasing decisions.

Table 23. Debt to Income Ratios

By Rank	Average Monthly Household Income	Average BAH Payment	Monthly Income plus BAH	Average Other Debt	Average PITI	Front End Debt to Income Ratio	Back End Debt to Income Ratio
	a	*b*	*c = a + b*	*d*	*e*	*f = e / c*	*f = (e + d) / c*
With BAH							
E7 to O6	$5,731	$1,333	$7,063	$732	$2,077	29.4%	39.8%
E3 to E6	$3,056	$1,007	$4,063	$336	$1,409	34.7%	43.0%
Without BAH							
E7 to O6	$5,731	$0	$5,731	$732	$2,077	36.2%	49.0%
E3 to E6	$3,056	$0	$3,056	$336	$1,409	46.1%	57.1%

Source: RKG Associates, data supplied by CB&T Mortgages.

Average income, BAH, debt load, taxes, insurance, and interest rates have been used to provide a home affordability range matrix, as presented in Table 24. This table provides the percent of household income a potential homeowner would have to spend in order to afford a range of homes. BAH less other debt obligations is used to estimate a capitalized value of the BAH. This amount is equivalent to a value of a home purchased with solely BAH funds, which is typically not enough to purchase a home. Thus, a portion of the personnel's salary must be contributed to afford a typical home.

Table 24 provides a matrix of the percent of salary a homeowner would be required to spend in order to afford a range of homes. For example, an E-7 would have to spend 16.9% of his/her salary to afford a $150,000 home. As most financial advisors suggest that no more than 30% of income should go towards a mortgage payment, any value that is above 30% is in dark gray and indicates that home would be unaffordable.

These estimates generally match average sales prices as provided by CB&T Mortgage, which indicates military homebuyers are not overbuying or stretching personal finances too far.

Table 24. Home Affordability Matrix – 6.5% Interest Rate

Rank	Basic Allowance for Housing	Average Other Debt	Capitalized Value of BAH Less Other Debt	Monthly Pay Plus Average Co-Signer Income [1]	Percent of Salary Required for $150,000 Home [2]	Percent of Salary Required for $200,000 Home [2]	Percent of Salary Required for $250,000 Home [2]	Percent of Salary Required for $300,000 Home [2]	Percent of Salary Required for $350,000 Home [2]	Percent of Salary Required for $400,000 Home [2]
Home Price:					**$150,000**	**$200,000**	**$250,000**	**$300,000**	**$350,000**	**$400,000**
O-7	$1,583	$710	**$105,685**	**$10,038**	2.8%	5.9%	9.1%	12.2%	15.4%	18.5%
O-6	$1,565	$710	**$102,837**	**$8,636**	3.5%	7.1%	10.8%	14.4%	18.1%	21.7%
O-5	$1,552	$710	**$100,780**	**$6,970**	4.5%	9.0%	13.5%	18.1%	22.6%	27.1%
O-4	$1,467	$710	**$87,332**	**$6,221**	6.4%	11.4%	16.5%	21.6%	26.7%	***31.8%***
O-3	$1,345	$710	**$68,031**	**$5,709**	9.1%	14.6%	20.1%	25.7%	***31.2%***	***36.8%***
O-2	$1,162	$710	**$39,078**	**$5,233**	13.4%	19.4%	25.5%	***31.5%***	***37.6%***	***43.6%***
O-1	$1,060	$710	**$22,941**	**$4,889**	16.4%	22.9%	29.4%	***35.8%***	***42.3%***	***48.7%***
Warrant	$1,322	$710	**$64,455**	**$4,366**	12.4%	19.6%	26.9%	***34.1%***	***41.3%***	***48.6%***
E-9	$1,381	$710	**$73,726**	**$5,377**	9.0%	14.8%	20.7%	26.6%	***32.5%***	***38.4%***
E-8	$1,303	$710	**$61,386**	**$4,406**	12.7%	19.9%	27.1%	***34.2%***	***41.4%***	***48.6%***
E-7	$1,231	$710	**$49,995**	**$3,740**	16.9%	25.4%	***33.8%***	***42.3%***	***50.7%***	***59.2%***
E-6	$1,165	$340	**$98,091**	**$3,266**	10.0%	19.7%	29.4%	***39.1%***	***48.8%***	***58.4%***
E-5	$1,046	$340	**$79,264**	**$3,039**	14.7%	25.1%	***35.5%***	***45.9%***	***56.3%***	***66.7%***
E-4	$908	$340	**$57,431**	**$2,758**	21.2%	***32.7%***	***44.1%***	***55.6%***	***67.0%***	***78.5%***
E-3	$908	$340	**$57,431**	**$1,992**	29.4%	***45.2%***	***61.1%***	***77.0%***	***92.8%***	***108.7%***
E-2	$908	$340	**$57,431**	**$1,764**	***33.2%***	***51.1%***	***69.0%***	***86.9%***	***104.9%***	***122.8%***
E-1	$908	$340	**$57,431**	**$1,606**	***36.4%***	***56.1%***	***75.8%***	***95.5%***	***115.1%***	***134.8%***

[1] Average household data includes income from co-signers. Data for O7 was not available, and uses data from O6.
[2] Areas in gray denote a value of over 30%. Other assumptions include:
30 Year Term
6.5% Interest Rate
$960 In Annual Property Taxes
$1,500 In Annual Insurance Costs
0% Downpayment (Assumes VA Loan)

Source: RKG Associates, Inc.

As discussed, it is possible that interest rates may increase over the next few years. Assuming a 7.5% interest rate and all other inputs to the matrix are the same, affordability begins to lessen for all ranks, as presented in Table 25.

Table 25. Home Affordability Matrix – 7.5% Interest Rate

Rank	Basic Allowance for Housing	Average Other Debt	Capitalized Value of BAH Less Other Debt	Monthly Pay Plus Average Co-Signer Income [1]	Percent of Salary Required for $150,000 Home [2]	Percent of Salary Required for $200,000 Home [2]	Percent of Salary Required for $250,000 Home [2]	Percent of Salary Required for $300,000 Home [2]	Percent of Salary Required for $350,000 Home [2]	Percent of Salary Required for $400,000 Home [2]
Home Price:					**$150,000**	**$200,000**	**$250,000**	**$300,000**	**$350,000**	**$400,000**
O-7	$1,583	$710	**$95,536**	**$10,038**	3.8%	7.3%	10.8%	14.2%	17.7%	21.2%
O-6	$1,565	$710	**$92,961**	**$8,636**	4.6%	8.7%	12.7%	16.8%	20.8%	24.9%
O-5	$1,552	$710	**$91,102**	**$6,970**	5.9%	10.9%	15.9%	21.0%	26.0%	***31.0%***
O-4	$1,467	$710	**$78,946**	**$6,221**	8.0%	13.6%	19.2%	24.8%	***30.5%***	***36.1%***
O-3	$1,345	$710	**$61,498**	**$5,709**	10.8%	17.0%	23.1%	29.2%	***35.3%***	***41.5%***
O-2	$1,162	$710	**$35,325**	**$5,233**	15.3%	22.0%	28.7%	***35.4%***	***42.0%***	***48.7%***
O-1	$1,060	$710	**$20,738**	**$4,889**	18.5%	25.6%	***32.8%***	***39.9%***	***47.1%***	***54.2%***
Warrant	$1,322	$710	**$58,265**	**$4,366**	14.7%	22.7%	***30.7%***	***38.7%***	***46.7%***	***54.7%***
E-9	$1,381	$710	**$66,646**	**$5,377**	10.8%	17.3%	23.8%	***30.3%***	***36.8%***	***43.3%***
E-8	$1,303	$710	**$55,491**	**$4,406**	15.0%	22.9%	***30.9%***	***38.8%***	***46.7%***	***54.7%***
E-7	$1,231	$710	**$45,194**	**$3,740**	19.6%	28.9%	***38.3%***	***47.6%***	***57.0%***	***66.3%***
E-6	$1,165	$340	**$88,671**	**$3,266**	13.1%	23.8%	***34.5%***	***45.2%***	***55.9%***	***66.7%***
E-5	$1,046	$340	**$71,652**	**$3,039**	18.0%	29.5%	***41.0%***	***52.5%***	***64.0%***	***75.6%***
E-4	$908	$340	**$51,915**	**$2,758**	24.9%	***37.5%***	***50.2%***	***62.9%***	***75.6%***	***88.2%***
E-3	$908	$340	**$51,915**	**$1,992**	***34.4%***	***52.0%***	***69.5%***	***87.1%***	***104.6%***	***122.2%***
E-2	$908	$340	**$51,915**	**$1,764**	***38.9%***	***58.7%***	***78.5%***	***98.4%***	***118.2%***	***138.0%***
E-1	$908	$340	**$51,915**	**$1,606**	***42.7%***	***64.5%***	***86.2%***	***108.0%***	***129.8%***	***151.5%***

[1] Average household data includes income from co-signers. Data for O7 was not available, and uses data from O6.
[2] Areas in gray denote a value of over 30%. Other assumptions include:
30 Year Term
7.5% Interest Rate
$960 In Annual Property Taxes
$1,500 In Annual Insurance Costs
0% Downpayment (Assumes VA Loan)

Source: RKG Associates, Inc.

Current and Near Term Supply

The projected housing supply for the PHIA has been examined, and is presented below. Data were provided by various local planning departments and interviews with developers and other

stakeholders. While housing supply data are constantly in fluctuation, this section provides an estimate of housing supply that can be compared to forecast demand projections.

This section examines both single family and multifamily housing; however, the primary source of new building will be single family product in the future. It should be noted that because different data sets were used to estimate supply for for-sale housing and multifamily housing, the area used to estimate multifamily housing supply is slightly larger than that of the PHIA. This was done to include an area where there were multifamily units that were historically rented to Fort Carson personnel, but no new for-sale housing developments.

Housing data are categorized by estimated date of completion and current project status. Estimated time of completion and status were obtained primarily through direct contact with builders or developers. Most developers were only able to provide general estimates of timing of completion, and suggested that *all timing is flexible*.

Most builders and developers have taken a conservative tack in response to current market conditions. Very few builders are currently finishing homes on a speculative basis. Instead, most builders that intend to build within the next few years have approved (or soon to be approved) maps, and a range of infrastructure improvements. The majority of projects have infrastructure in place for their developments, or will be able to do so within 3 months. A small number of builders have begun to build homes, will build homes within the next few months, or are sitting on current inventory.

While the majority of units are within El Paso County, all areas of the PHIA were included in this analysis of supply. Project status has been broken down into four categories for this project, and includes: “Under Construction/Inventory”, “Infrastructure/Approved”, “Planned”, or “Discussion”. A brief description of each category is listed below:

- Under Construction/Inventory – Builders either have inventory, are sure they build within the year.
- Infrastructure/Approved – These are approved lots, with infrastructure either installed or scheduled to be installed within the next year.
- Planned – These units are currently undergoing the planning process and will likely be approved within the next year.
- Discussion – These units are merely under consideration, with no formal plans or construction progress. These units are not counted in the inventory for the next few years, but are discussed for longer term consideration.

It should be noted that as of May 2007, an estimated 5,349 existing homes are actively being marketed through the MLS system, of which about 2,730 are within the PHIA. Historic data suggest that the number of existing homes on the market has been relatively consistent, with a turnover rate generally between 10% and 15% on an annual basis.

As new military personnel and other related homebuyers search for homes, many may choose to purchase existing homes. Thus, the number of existing homes on the market may decrease in the short term as sales increase, but would probably revert to the historic turnover rate over time as this rate is driven by net migration. A portion of these 2,730 units will go to meet the short term housing demand, but it is difficult to accurately estimate the actual amount. The reader should

assume that a portion of these units will act as inventory in addition to the units counted in Table 28.

Single Family Housing Supply

A summary of new single family housing projects within the PHIA is provided in Table 26. In 2007, approximately 883 units are currently built or are committed to be built by the end of the year. Approximately 3,083 lots are slated to have infrastructure improvements by the end of the year, and an additional 85 lots are expected to be approved through the planning process by the end of the year.

For 2008, approximately 2,996 single family units will receive completed infrastructure and approval, and an additional 1,151 will be approved through the planning process. By 2009, it is estimated that 1,720 units will be approved with final platted maps.

For 2010 and beyond, it is estimated a considerable number of units could be planned, and over 25,000 more units are under "discussion", which includes a few projects that could be over several thousand units apiece. These units are not likely to go forward within the next five years, but are included for reference to future projects on the horizon.

Table 26. Estimated Supply of New Single Family Housing by Year and Project Status

Year	Status	Units	Average Price	Percent
Single Family				
2007	Under Construction/ Inventory	883	$220,750	22%
2007	Infrastructure/Approved	3,083	$221,200	76%
2007	Planned	85	$217,500	2%
2007	Discussion	0	$0	0%
2007	**Total**	**4,051**		**100%**
2008	Infrastructure/Approved	2,996	$188,385	72%
2008	Planned	1,151	$205,375	28%
2008	Discussion	0	$0	0%
2008	**Total**	**4,147**		**100%**
2009	Planned	1,720	$217,250	100%
2009	Discussion	0	$0	0%
2009	**Total**	**1,720**		**100%**
2010+	Infrastructure/Approved	150	n/a	0%
2010+	Planned	9,877	n/a	28%
2010+	Discussion	25,502	n/a	72%
2010+	**Total**	**35,529**		**100%**
Total Single Family Units		**45,447**		

Source: RKG Associates

Pricing for single family product is included and ranges between $205,000 and $225,000. As most builders have improved lots and are awaiting specific demand for housing, *final home pricing is still variable*. Builders can upgrade or even re-map properties as appropriate, which provides some flexibility in meeting housing demand.

One consistent comment made by builders is the recently increased water tap fees charged by the City of Fountain. While most developers understood the methodology for calculating the fee, the increase does challenge builders to stay within price ranges of $200,000 to $225,000, as profit margins are smaller than for higher priced units. According to the building community, this could force home prices up in the future.

Townhome Supply

In addition to single family units, a considerable number of townhomes are currently under development. Table 27 provides a summary of new units, timing, and status. Approximately 155 new units are currently under construction or listed as inventory, and 1,132 units are undergoing infrastructure improvements.

Table 27. Estimated Supply of New Townhome/Condos by Year and Project Status

Year	Status	Units	Average Price	Percent
Townhomes				
2007	Under Construction/ Inventory	155	$196,000	12%
2007	Infrastructure/Approved	1,132	$206,650	88%
2007	Planned	0	n/a	0%
2007	Discussion	0	n/a	0%
2007	**Total**	**1,287**		**100%**
2008	Infrastructure/Approved	117	$166,250	45%
2008	Planned	141	$156,250	55%
2008	Discussion	0	n/a	0%
2008	**Total**	**258**		**100%**
2009	Planned	0	n/a	0%
2009	Discussion	0	n/a	0%
2009	**Total**	**0**		**0%**
2010+	Infrastructure/Approved	150	n/a	11%
2010+	Planned	751	n/a	53%
2010+	Discussion	505	n/a	36%
2010+	**Total**	**1,406**		**100%**
Total Townhomes		**2,951**		

Source: RKG Associates

Pricing for townhomes and condominium units has generally stayed under $210,000, and is expected to range between $150,000 and $225,000. Prices for townhomes are also variable and will evolve as demand increases.

As planning for the increase of personnel at Fort Carson continues, estimating the number of single family units by confidence of completion is a useful tool in estimating supply. Various levels of confidence of completion are estimated in order to provide insight into the probability of the future housing supply. This rating system is intended to allow planners to continually update the number of for-sale units available to new residents.

A high level of confidence includes units that are either currently built, or will definitely be built by the end of this year. A medium level of confidence includes units that are approved or have

infrastructure in place. Low levels of confidence include approved units "on paper", and various levels of business preparedness (e.g., having subcontractor agreements, etc.) may or may not be in place.

Input from almost all builders suggests that each level of confidence could take as long as three to six months. Thus, it is very possible that a developer/builder with improved lots could build by end of year, even though the project's units are considered medium level of confidence. It is also possible that an aggressive developer could convert paper lots into real homes within one year. However, the goal of the levels of confidence is to provide a picture of the likelihood of the forecast housing supply.

Total Single Family and Townhome Supply

Table 28 provides a summary of the supply of both single family housing and townhome units by level of confidence by completion date. For 2007, a high level of confidence is given to 1,038 units, which are committed to be built or currently built within the PHIA. An additional 4,215 units are also slated to have infrastructure improvements in 2007. As mentioned before, many builders feel confident these can be converted into for-sale units by end of year *if the demand for additional units is present*. Thus, 5,338 units are given a medium level of confidence for 2007.

For 2008, an additional 3,412 units are expected to have completed infrastructure, and 1,292 units are expected to go through some form of planning approval. Thus, by end of 2008, 8,665 units are given a medium level of confidence of completion, and 10,042 are given a low level of confidence of completion.

Units progress from low levels of confidence of completion to higher levels of confidence of completion as they move towards final construction. For example, a unit that is only approved on paper will "graduate" from a low level of confidence to a medium level of confidence once the site is graded and all necessary infrastructure is installed. Because the unit is closer to being built, it has a higher "probability" of being completed.

Table 28. Supply of Single Family and Townhome Units by Level of Confidence

Study Area	Confidence Level of Completion [1]	Completion Date: 2007	2008	2009	2010+
Under Construction/ Inventory - New Homes		1,038	0	0	0
Cumulative Under Construction or Inventory	**High**	**1,038**	**1,038**	**1,038**	**1,038**
Infrastructure/Approved		4,215	3,412	0	0
Cumulative Under Construction and/or Infrastructure/Approved	**Medium**	**5,253**	**8,665**	**8,665**	**8,665**
Planned		85	1,292	1,964	10,628
Cumulative Under Construction, Infrastructure/Approved, or Planned	**Low**	**5,338**	**10,042**	**12,006**	**22,634**

[1] Confidence level of completion is based on the current status of the project.
Source: RKG Associates

Table 29 provides a summary of the development by level of confidence of completion and by geographic area. The majority of high level of confidence of construction is forecast to occur in Fountain and Unincorporated El Paso County, including Security and Widefield. Approximately 1,038 single family and townhome units are expected to be available with a high level of

confidence. Pueblo County, primarily Pueblo West, has a number of newly built units in inventory that are currently available.

Colorado Springs has several projects that will be actively marketed to Fort Carson personnel. In 2001, Spring Creek, located in central Colorado Springs, provided an update to the master plan, with over 2,000 single family and townhome units expected over the next few years.

Pueblo County has had steady growth in Pueblo West and within the City of Pueblo. As few large builders are currently targeting Pueblo County for large developments (i.e., over 100 units), historic data are used to project future housing supply. Currently, Pueblo West has a number of units currently available and could add more inventory as necessary. The City of Pueblo is currently under discussion with several developers to create larger scale master planned communities on annexed land; however, these developments are several years out[5].

Table 29. Summary of Units by Confidence Level and Area

Area	Single Family	Townhomes	Potential For Sale Units
High Level of Confidence			
Colorado Springs	151	104	255
Fountain	222	51	273
Fremont County	25	0	25
Pueblo County	135	0	135
Unicorporated El Paso County	350	0	350
Subtotal High Level of Confidence	**883**	**155**	**1,038**
Medium Level of Confidence			
Colorado Springs	325	761	1,085
Fountain	3,868	638	4,506
Fremont County	100	0	100
Pueblo County	900	0	900
Unicorporated El Paso County	1,036	0	1,036
Subtotal Medium Level of Confidence	**6,229**	**1,399**	**7,627**
Low Level of Confidence			
Colorado Springs	725	725	1,450
Fountain	3,643	167	3,810
Fremont County	2,000	0	2,000
Pueblo County	2,070	0	2,070
Unicorporated El Paso County	4,639	0	4,639
Subtotal Low Level of Confidence	**13,077**	**892**	**13,969**

Source: RKG Associates

Fremont County currently has one major new development that it is expected to supply at least 25 units with a high level of confidence, 100 units per year with a medium level of confidence, and an additional 2,000 in the planning stage.

[5] The City of Pueblo is currently reviewing estimated projections.

Under the medium level of confidence, approximately 3,868 single family units could be built in Fountain and an additional 638 townhomes. Pueblo County could see several hundred new units as demand increases, which would likely occur in Pueblo West. Unincorporated El Paso County has 1,036 single family units with a medium level of confidence, and Colorado Springs could add 325 single family units and 761 townhomes with a medium level of confidence within the PHIA.

Under the low level of confidence, nearly 14,000 potential units could be given planning approval, with over 4,600 units in Unincorporated El Paso County, 3,800 in Fountain, 1,450 in Colorado Springs, and over 2,000 each in Fremont and Pueblo Counties.

Multifamily Supply

Multifamily supply is likely to remain constant over the next few years, as few projects have been proposed that are under serious consideration. One project in Fountain is under a medium level of confidence of completion for 2008, which will add 300 more rental units to the market. Another project in Fountain is given a medium level of confidence for 2009, with 238 units. Approximately 400 multifamily units are given a low level of confidence in Colorado Springs, with dates that are uncertain.

C. FORECAST DEMAND

This section provides an estimate of the increase in housing demand related to the increase of military and civilian personnel at Fort Carson. Three groups will provide an increase in demand for housing, and include baseline population growth, military personnel growth, and civilian personnel growth.

Baseline population growth is the population of growth that would occur without the increase of troops and their families. Estimates were provided by the Colorado Division of Local Affairs (DOLA) Demography Office and represent an average annual growth rate of about 2%.

The DOLA Demography Office originally included the new troops in its population projections, so that baseline growth projections included “natural” growth (i.e., growth that would have occurred without the population increase at Fort Carson), new military personnel and families, and induced population growth. Induced population growth is defined in this analysis as the population that moves to the region to pursue employment related to new regional opportunities. For example, individuals will move to the region to pursue jobs related to defense related activities as the demand for more defense contractors increases.

This analysis removes the military personnel and families from the baseline population growth, leaving behind natural growth and induced growth in the baseline population projections. Projections for the baseline population were also adjusted to include only population growth within the PHIA. Thus, the baseline population growth represents a population estimate for natural growth within the PHIA and induced population growth.

Baseline population within the PHIA is estimated to be 201,822 in 2007, with an increase in annual population of 4,158. This population figure is then divided by the average number of persons per household (2.77) to estimate the number of rental and/or for-sale units required from the

baseline population in the future. Thus, just over 1,500 rental and/or for-sale units will be required annually by the baseline population over the next few years.

It should be noted that demographic population forecasts were used as the basis for housing demand for the Expected Growth Scenario (11,400 troops) and the Alternative Growth Scenario (8,550 troops). As military and civilian personnel are assumed to be the head of each household, they represent one unit of demand for a rental unit or a for-sale house/townhome. For example, the Expected Growth Scenario will consist of 11,400 personnel, each the head of the household and thus equivalent to 11,400 households. These households will require 11,400 housing units, consisting of a mixture of barrack spaces, on-post housing, off-post rental units, and off-post for-sale units.

Expected Growth Scenario

Under the Expected Growth Scenario, military population is expected to increase by 4,700 in the 2007, 100 in 2008, 5,200 in 2009, and 700 in 2010 and 2011[6]. Military population is equivalent to the number of households and is used to estimate the number of housing units required over the next few years as the number of personnel at Fort Carson increases. Some personnel are the head of individual households, while others are the head of a family household. These assumptions are further examined below.

Civilian population increases are defined as growth from direct on-post civilian jobs, and is separate from induced population growth. These persons typically represent skilled workers, including technology workers, managers, and other professional positions funded through appropriated and non-appropriated funds by Fort Carson. It is estimated that approximately 430 civilians will be added to Fort Carson, and are assumed to be added to the population equally over the next five years.

Table 30 presents the forecast population and household growth under the Expected Growth Scenario. It should be noted that the number of new military and civilian personnel are assumed to be the head of the household and are thus equivalent to new households. The number of new households provides the basis for calculating housing demand.

[6] Dates provided assume Federal Fiscal Year, which begins on October 1 of each calendar year and ends on September 30 of the following calendar year

Table 30. Forecast Household Growth for Fort Carson – Expected Growth Scenario

Group	2007	2008	2009	2010	2011	2012
Baseline Population						
Baseline Population within Primary Housing Impact Area	201,822	205,890	209,968	214,079	218,216	222,294
Annual Population Growth (change from previous year)	4,158	4,068	4,078	4,111	4,137	4,078
Baseline Households (1)	**1,593**	**1,559**	**1,563**	**1,575**	**1,585**	**1,562**
Households by Rank						
E7-E9 and Officers	1,097	23	1,213	163	163	0
E4-E6	2,791	59	3,088	416	416	0
E1-E3	812	17	899	121	121	0
Military Households	**4,700**	**100**	**5,200**	**700**	**700**	**0**
Households from Civilian Personnel	**86**	**86**	**86**	**86**	**86**	**0**
Total New Households from Expected Growth Scenario	**6,379**	**1,745**	**6,849**	**2,361**	**2,371**	**1,562**

Source: DOLA Demography Office, RKG Associates, Inc.
(1) Baseline households is calculated by dividing the population growth by the 2.6, which is the avg. number of persons per househ

Table 31 applies rental and home ownership assumptions to household population projections to estimate the demand for rental and for-sale units. Estimates of the percent of households that will rent versus the percent that will buy have been applied to each population group. For example, it is estimated that 35% of baseline households will rent, and 65% will buy. The increase in population is then multiplied by this percentage to provide the number of future renters and homebuyers (1,593 x 35% = 563; 1,593 x 65% = 1,030).

Table 31. Owners vs. Renters – Expected Growth Scenario

Group	Assumption (1) (2)	2007	2008	2009	2010	2011	2012
Baseline Households		1,593	1,559	1,563	1,575	1,585	1,562
Rental Population	35% of Baseline Households	563	551	552	556	560	552
SF Home Purchase Population	65% of Baseline Households	1,030	1,008	1,011	1,019	1,025	1,010
Military Personnel (Head of Household)							
E7-E9 and Officer Population		1,097	23	1,213	163	163	0
Rental Population	35% of E7-E9 and Officer Population	380	8	420	57	57	0
SF Home Purchase Population	65% of E7-E9 and Officer Population	717	15	793	107	107	0
E4-E6 Population		2,791	59	3,088	416	416	0
Rental Population	37% of E4-E6 Population	1,029	22	1,139	153	153	0
SF Home Purchase Population	63% of E4-E6 Population	1,761	37	1,949	262	262	0
E1-E3 Population		812	17	899	121	121	0
Rental Population	90% of E1-E3 Population	731	16	809	109	109	0
SF Home Purchase Population	10% of E1-E3 Population	82	2	90	12	12	0
Civilian Households		86	86	86	86	86	0
Rental Population	35% of Civilian Households	30	30	30	30	30	0
SF Home Purchase Population	65% of Civilian Households	56	56	56	56	56	0
Total Rental Population		**2,733**	**626**	**2,950**	**906**	**909**	**552**
Total SF Home Purchase Population		**3,646**	**1,118**	**3,899**	**1,456**	**1,462**	**1,010**
Total Households/Population		**6,379**	**1,745**	**6,849**	**2,361**	**2,371**	**1,562**

[1] Percent of Baseline and Non-Military population renting vs. owning is derived from Year 2000 US Census Data.
[2] Percent of E1-E3, E4-E6 and Officer population renting vs. owning is derived from assumptions made by RKG based on Fort Carson housing and affordability data.
Source: RKG Associates, Inc.

Research was conducted using BAH data to estimate the number of military personnel who rent versus own for three categories: E7 to Officers, E4 to E6, and E1 to E3. For E7 to Officers, approximately 35% of personnel are expected to rent, and 65% are expected to purchase

homes. For E4 to E6 personnel, 37% are expected to rent, and 62% are expected to buy. For E1 to E3, the majority of personnel, 90%, are expected to rent and only 10% are expected to buy.

For 2007, there will be a demand for 2,733 rental accommodations and 3,646 homes (including both single family homes and townhomes). Thus, roughly 60% of new residents will purchase homes and 40% will seek rental accommodations.

Demand for single family and townhomes under the Expected Growth Scenario is presented in Table 32. This demand is provided in annual demand and cumulative demand. By 2012, it is expected that the cumulative demand for for-sale housing will be 12,591, which includes demand from baseline growth and additional military and civilian personnel.

Table 32. Demand for For-Sale Housing by Households – Expected Growth Scenario

Group	2007	2008	2009	2010	2011	2012
Baseline Households (not due to base expansion)	**1,030**	**1,008**	**1,011**	**1,019**	**1,025**	**1,010**
Growth Due to Base Expansion						
Military Households						
E7-E9 and Officer Households Purchasing	717	15	793	107	107	0
E4-E6 Households Purchasing	1,761	37	1,949	262	262	0
E1-E3 Households Purchasing	82	2	90	12	12	0
Civilian Households Purchasing	56	56	56	56	56	0
Subtotal Growth Due to Base Expansion	**2,616**	**110**	**2,888**	**437**	**437**	**0**
Total Household Purchasing	**3,646**	**1,118**	**3,899**	**1,456**	**1,462**	**1,010**
Cumulative Household Purchasing	**3,646**	**4,764**	**8,663**	**10,118**	**11,580**	**12,591**

Source: RKG Associates, Inc.

Table 33 presents the forecast demand for rental housing under the Expected Growth Scenario. For purposes of this analysis, on-post housing is equivalent to satisfying the demand for a rental unit, and includes both barrack and single family housing. Cumulative demand is expected to be 8,676 rental units consisting of ***both*** on-post units and off-post rental units.

Table 33. Demand for Rental Housing by Households – Expected Growth Scenario

Group	2007	2008	2009	2010	2011	2012
Baseline Households (not due to base expansion)	**563**	**551**	**552**	**556**	**560**	**552**
Growth Due to Base Expansion						
Military Households						
E7-E9 and Officer Households Renting	380	8	420	57	57	0
E4-E6 Households Renting	1,029	22	1,139	153	153	0
E1-E3 Households Renting	731	16	809	109	109	0
Civilian Households Renting	30	30	30	30	30	0
Subtotal Growth Due to Base Expansion	**2,170**	**76**	**2,398**	**349**	**349**	**0**
Total Households Renting	**2,733**	**626**	**2,950**	**906**	**909**	**552**
Cumulative Households Renting	**2,733**	**3,360**	**6,310**	**7,215**	**8,124**	**8,676**

Source: RKG Associates, Inc.

Alternative Growth Scenario

Forecast military population is expected to increase by 1,920 in the 2007, 41 in 2008, 2,124 in 2009, and 286 in 2010 and 2011 under the Alternative Growth Scenario as summarized in Table

34. The Housing Appendix provides detailed tables related to the calculation of demand for both for-sale and rental housing. Demand for housing under the Alternative Growth Scenario assumes 3,006 homebuyers in 2007, and a total number of homebuyers of 11,038 by 2012.

Table 34. Summary of Demand for Housing – Alternative Growth Scenario

Group	2007	2008	2009	2010	2011	2012
Baseline Households (not due to base expansion)	**1,030**	**1,008**	**1,011**	**1,019**	**1,025**	**1,010**
Growth Due to Base Expansion						
Military Households						
E7-E9 and Officer Households Purchasing	538	11	595	80	80	0
E4-E6 Households Purchasing	1,321	28	1,461	197	197	0
E1-E3 Households Purchasing	61	1	68	9	9	0
Civilian Households Purchasing	56	56	56	56	56	0
Subtotal Growth Due to Base Expansion	**1,976**	**96**	**2,180**	**342**	**342**	**0**
Total Household Purchasing	**3,006**	**1,104**	**3,191**	**1,360**	**1,367**	**1,010**
Cumulative Household Purchasing	**3,006**	**4,110**	**7,301**	**8,661**	**10,028**	**11,038**

Source: RKG Associates, Inc.

Forecast rental population under the Alternative Growth Scenario, is presented in Table 35. Demand for approximately 2,198 rental units will be present in 2007 and 7,378 rental units by 2012. Calculations for the Alternative Growth Scenario are included in the Appendix.

Table 35. Summary of Demand for Rental Units – Alternative Growth Scenario

Group	2007	2008	2009	2010	2011	2012
Baseline Households (not due to base expansion)	563	551	552	556	560	552
Growth Due to Base Expansion						
Military Households						
E7-E9 and Officer Households Renting	285	6	315	42	42	0
E4-E6 Households Renting	772	16	854	115	115	0
E1-E3 Households Renting	548	12	606	82	82	0
Civilian Households Renting	30	30	30	30	30	0
Subtotal Growth Due to Base Expansion	1,635	65	1,806	269	269	0
Total Households Renting	2,198	615	2,358	826	829	552
Cumulative Households Renting	**2,198**	**2,813**	**5,171**	**5,997**	**6,826**	**7,378**

Source: RKG Associates, Inc.

D. SUPPLY AND DEMAND FOR HOUSING – EXPECTED GROWTH SCENARIO

Forecast supply (detailed in Section B) and calculated demand (detailed in Section C) is compared in this section. This comparison is provided in order to estimate any surplus or deficits in the housing market. Both for-sale and rental housing supply and demand are presented below.

The methodology for estimating supply and demand involved numerous interviews with local planning officials, developers, builders, military housing personnel, and other stakeholders. Demand projections for housing are based on extrapolations of current housing trends. For example, the assumptions for number of households renting versus the number of households purchasing homes are based on current market information provided by military housing personnel and BAH data. Demographic projections, which were supplied by Fort Carson, are used as the foundation for all forecast housing demand.

Estimates for the housing supply are based on data provided by local and regional planning personnel and input from local developers. All housing developments listed in this report were contacted and interviewed for estimates of future supply, status of current development, and their input on any other housing issues.

For-Sale Housing

This section provides a comparison of supply and demand relating to for-sale units. Under the Expected Growth Scenario, demand for housing units is projected to increase to 12,591 by 2012. Approximately 22,634 units have been planned, have infrastructure, or will be built by 2012. Thus, if all units that are currently "on paper" are built, there will be an oversupply of housing units by 10,043. However, this is not a likely scenario. Rather, it is more likely that those units that have at least a medium level of confidence of completion will be built (estimated to be 8,665 units), as well as an additional 2,548 units under the low level of confidence of completion. In other words, all units that are currently under construction or are undergoing infrastructure improvements will likely be in demand over the next five years. An additional 3,926 units currently undergoing the planning process will also be required to meet demand by 2012.

Table 36 provides a comparison of supply and demand for single family and townhome units under the Expected Growth Scenario. For 2007, demand for 3,646 housing units is expected. Currently, 1,038 units are given a high level of confidence of completion. An additional 5,253 are given a medium level of confidence of completion. Thus, if all units given the medium level of confidence of completion were built, there would be a surplus capacity of 1,692 units in 2007. Figure 5 provides a graph for the estimated supply and demand for housing from 2007 to 2012.

Table 36. Supply and Demand for For-Sale Units – Expected Growth Scenario

Supply/Demand	2007	2008	2009	2010	2011	2012
Estimated Demand for Housing						
Demand Under Expected Growth Scenario	3,646	4,764	8,663	10,118	11,580	12,591
Estimated Supply of Housing						
High Confidence of Completion [1]	1,038	1,038	1,038	1,038	1,038	1,038
Surplus/(Deficit) Capacity	(2,608)	(3,726)	(7,625)	(9,080)	(10,542)	(11,553)
Medium Confidence of Completion [2]	5,253	8,665	8,665	8,665	8,665	8,665
Surplus/(Deficit) Capacity	1,607	3,901	2	(1,453)	(2,915)	(3,926)
Low Confidence of Completion [3]	5,338	10,042	12,006	22,634	22,634	22,634
Surplus/(Deficit) Capacity	1,692	5,278	3,343	12,516	11,054	10,043

All values except for Surplus/(Deficit) are cumulative.
[1] Includes units that are built, under construction, or under construction w/in next year.
[2] Includes units that have infrastructure w/in next year, plus units with high confidence level.
[3] Includes units that are undergoing the planning process plus units with medium and high level of confidence.
Source: RKG Associates

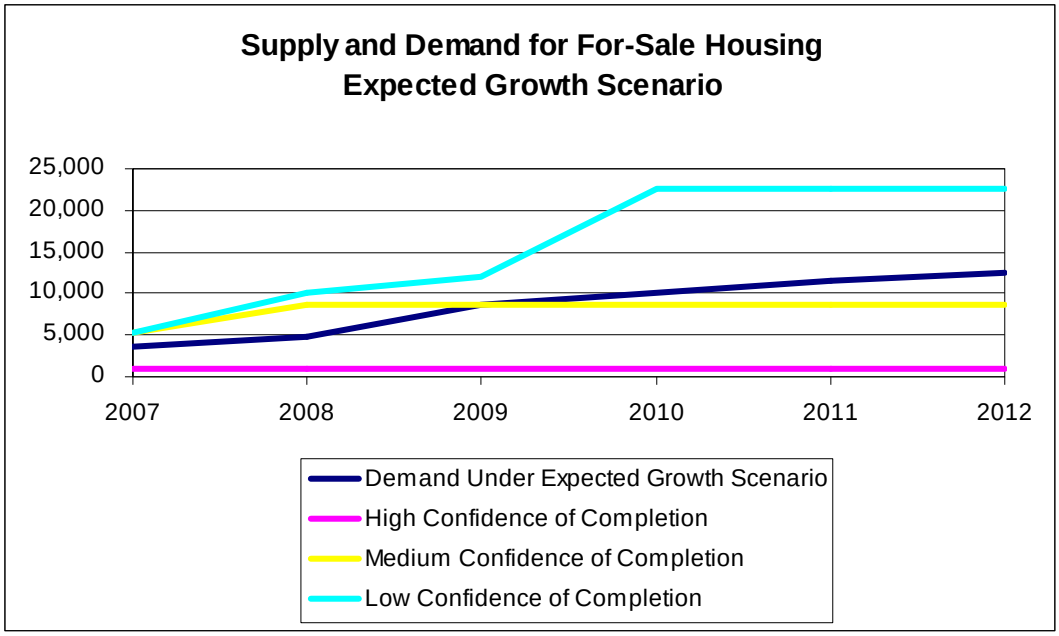


Figure 5. Supply and Demand for For-Sale Housing – Expected Growth Scenario

Rental Housing

Supply and demand for rental housing is analyzed under this section. A key assumption used in this analysis is that renters will first choose to live on-post before they seek rental accommodations off-post. Because on-post housing is not equivalent to a home purchase and satisfies a demand similar to off-post rental units, it is considered part of the rental supply. Rental demand for military personnel is examined in Table 37.

It should be noted that while a demand for single-oriented product is made separate from a demand for family-oriented product, it is assumed that single personnel or single heads of household will seek one-room units or efficiencies. It is likely that a number of single soldiers will be willing to share rental units which would then lower demand for all units.

It is also assumed that one barrack unit will be issued to each single soldier. Group quarters can often be "stretched" if necessary, and can increase capacity for short periods of time or in periods of excess demand. In this analysis it is assumed that after the barrack quarters reach capacity, soldiers will seek off-post rental accommodations, which may over-project off-post demand.

E1 to E3 personnel are expected to provide demand for at least 731 units in 2007. E1 to E3 personnel are also expected to be housed primarily in barrack spaces, of which it is estimated there are 1,618 units available. Thus, for 2007 to 2010, E1 to E3 personnel should be accommodated on-post.

E4 to E6 personnel will also provide a demand for on-post housing; however, non-barrack housing is currently almost at capacity. About 432 housing units are expected to be built on-post; however, they will be completed in two phases by 2009. As there are fewer than 20 units likely available on-post, demand for off-post rentals for E4 to E6 personnel will be 1,014 units. E7 to Officers are also expected to rent primarily off-post, with rental unit demand for approximately 364 units.

Thus, it is expected there will be demand for 491 off-post rental units in 2007, 3,138 for 2012, etc. as presented in Table 37.

Table 37. Supply and Demand for On-Post Housing – Expected Growth Scenario

Supply/Demand	2007	2008	2009	2010	2011	2012
E1-E3 Rental Demand	731	16	809	109	109	0
Cumulative Rental Demand	731	746	1,555	1,664	1,773	1,773
Less Barrack Space	1,618	1,618	1,618	1,618	1,618	1,618
Surplus or (Deficit) of On-Post Rentals	887	872	63	(46)	(155)	(155)
(Deficit indicates a required Off-Post Demand)						
E4-E6 Rental Demand	1,029	22	1,139	153	153	0
Cumulative Rental Demand	1,029	1,051	2,190	2,344	2,497	2,497
Less Available On Post Housing	16	122	218	218	218	218
Surplus or (Deficit) of On-Post Rentals	(1,014)	(930)	(1,973)	(2,126)	(2,279)	(2,279)
(Deficit indicates a required Off-Post Demand)						
E7-E9 and Officer Population Renting	380	8	420	57	57	0
Cumulative Rental Demand	380	388	808	864	921	921
Less Available On Post Housing	16	122	218	218	218	218
Surplus or (Deficit) of On-Post Rentals	(364)	(266)	(590)	(647)	(703)	(703)
(Deficit indicates a required Off-Post Demand)						
Total Off-Post Demand	**(491)**	**(325)**	**(2,500)**	**(2,819)**	**(3,138)**	**(3,138)**

Source: RKG Associates

Demand for off-post housing by military personnel and demand from baseline growth and civilian personnel is compared to supply in Table 38. The demand and supply is further refined for single-oriented housing (1BR, 1BA or efficiency) and family-oriented housing (e.g., 2+BR, 2 BA).

For the baseline population, an estimated 563 units will be in demand for rental units. Approximately 41% of the population will likely seek single-oriented rental product, or 232 units. E1 to E3 personnel are satisfied with on-post housing until 2010, at which point there will be additional demand for only 124 single-oriented rental units, and 31 family-oriented rental units. The demand for off post single-oriented rental units could be lower than exhibited below if the barracks under construction continue to be high-quality living environments (e.g., single bedroom, shared bathroom). E4 to E6 personnel will provide demand for 1,014 units in 2007, of which 64% are likely to be family-oriented. E7 to Officers will also be looking to rent mostly family-oriented rentals, and will likely rent 302 family-oriented units.

Thus, demand for single-oriented units is compared to the supply of single-oriented units off-post, with a surplus forecast until 2010. The supply of single-oriented units is primarily 1BR off-post apartment units and efficiency units, as well as some 1BR units that will be built over the next few years. By 2012, roughly 120 single-oriented units will need to be added to the market to meet demand, which does not signify a large future demand for additional efficiency/1BR units.

Table 38. Supply and Demand for Off-Post Rental Housing – Expected Growth Scenario

Supply/Demand	2007	2008	2009	2010	2011	2012
Off-Post Demand - Baseline Population	(563)	(1,113)	(1,665)	(2,222)	(2,782)	(3,333)
Percent Assumed Single 41%	(232)	(460)	(688)	(918)	(1,149)	(1,377)
Percent Assumed Married 59%	(330)	(653)	(977)	(1,304)	(1,633)	(1,957)
Total Off-Post Demand E1-E3	0	0	0	(46)	(155)	(155)
Percent Assumed Single 80%	0	0	0	(37)	(124)	(124)
Percent Assumed Married 20%	0	0	0	(9)	(31)	(31)
Total Off-Post Demand E4-E6	(1,014)	(930)	(1,973)	(2,126)	(2,279)	(2,279)
Percent Assumed Single 36%	(361)	(331)	(702)	(757)	(812)	(812)
Percent Assumed Married 64%	(653)	(599)	(1,270)	(1,369)	(1,468)	(1,468)
Total Off-Post Demand E7-E9 and Officer	(364)	(266)	(590)	(647)	(703)	(703)
Percent Assumed Single 17%	(62)	(45)	(100)	(110)	(120)	(120)
Percent Assumed Married 83%	(302)	(221)	(490)	(537)	(584)	(584)
Off-Post Demand - Civilian Personnel	(30)	(30)	(30)	(30)	(30)	(30)
Percent Assumed Single 41%	(13)	(13)	(13)	(13)	(13)	(13)
Percent Assumed Married 59%	(18)	(18)	(18)	(18)	(18)	(18)
Demand for Off-Post Single Product	**(668)**	**(849)**	**(1,503)**	**(1,834)**	**(2,216)**	**(2,444)**
Supply of Off-Post Single Oriented Product	**2,191**	**2,341**	**2,321**	**2,321**	**2,321**	**2,321**
Surplus or (Deficit) of Off-Post Rentals	**1,523**	**1,492**	**818**	**487**	**105**	**(123)**
Demand for Off-Post Family Product	**(1,303)**	**(1,491)**	**(2,756)**	**(3,237)**	**(3,733)**	**(4,057)**
Supply of Off-Post Family Oriented Product	**3,566**	**3,716**	**3,697**	**3,697**	**3,697**	**3,697**
Surplus or (Deficit) of Off-Post Rentals	**2,263**	**2,225**	**941**	**459**	**(37)**	**(361)**

Source: RKG Associates

The supply of family-oriented units includes existing 2+BR units, rental units that will be built over the next few years, and approximately 775 single-family homes for rent. The current supply of family-oriented housing product is expected to meet demand until 2011, when approximately 37 new units could be required. By 2012, an additional 361 family-oriented units could be required.

Location of Housing

An examination of a sample of zip code data supplied by Fort Carson housing personnel indicates that 64.5% of personnel reside in Colorado Springs, 32.7% reside within Fountain Area (including Fountain, Security, Widefield and other unincorporated areas of El Paso County), 2.4% reside in Pueblo County, and less than 0.5% live in Fremont County. These factors were taken into account when establishing the PHIA. Thus, over 97% reside in Colorado Springs or the Fountain Area. Of all residents, approximately 93% live within 20 miles of Fort Carson[7]. Table 39 presents a sample of zip code data for Fort Carson personnel.

[7] This is a preliminary estimate based on the center of zip codes, and travel distance provided by online mapping services such as Google Maps, Mapquest, etc.

Table 39. Sample of Zip Code Data for Residence of Fort Carson Personnel

Area	Sub Area	Zip	Number	Percent
Fountain / Unincorporated El Paso County				
Fountain	Fountain	**80817**	1,149	17.5%
Unincorporated El Paso County	Peyton	**80831**	102	1.6%
Unincorporated El Paso County	Widefield	**80911**	653	9.9%
Unincorporated El Paso County	Security	**80925**	238	3.6%
Unincorporated El Paso County	Security	**80928**	6	0.1%
Unincorporated El Paso County	Security	**80931**	1	0.0%
Subtotal			**2,149**	**32.7%**
Colorado Springs	Colorado Springs	**80901**	11	0.2%
Colorado Springs	Colorado Springs	**80903**	88	1.3%
Colorado Springs	Colorado Springs	**80904**	110	1.7%
Colorado Springs	Colorado Springs	**80905**	7	0.1%
Colorado Springs	Colorado Springs	**80906**	1,308	19.9%
Colorado Springs	Colorado Springs	**80907**	56	0.9%
Colorado Springs	Colorado Springs	**80908**	9	0.1%
Colorado Springs	Colorado Springs	**80909**	131	2.0%
Colorado Springs	Colorado Springs	**80910**	467	7.1%
Colorado Springs	Colorado Springs	**80914**	4	0.1%
Colorado Springs	Cimarron Hills	**80915**	159	2.4%
Colorado Springs	Colorado Springs	**80916**	731	11.1%
Colorado Springs	Colorado Springs	**80917**	120	1.8%
Colorado Springs	Colorado Springs	**80918**	171	2.6%
Colorado Springs	Colorado Springs	**80919**	84	1.3%
Colorado Springs	Colorado Springs	**80920**	173	2.6%
Colorado Springs	Colorado Springs	**80921**	45	0.7%
Colorado Springs	Colorado Springs	**80922**	353	5.4%
Colorado Springs	Colorado Springs	**80923**	139	2.1%
Colorado Springs	Colorado Springs	**80924**	12	0.2%
Colorado Springs	Colorado Springs	**80926**	11	0.2%
Colorado Springs	Colorado Springs	**80932**	1	0.0%
Colorado Springs	Colorado Springs	**80933**	1	0.0%
Colorado Springs	Colorado Springs	**80935**	4	0.1%
Colorado Springs	Colorado Springs	**80951**	44	0.7%
Colorado Springs	Colorado Springs	**80960**	1	0.0%
Colorado Springs	Colorado Springs	**80970**	3	0.0%
Subtotal			**4,243**	**64.5%**
Pueblo County				
Pueblo County	Pueblo County	**81001**	12	0.2%
Pueblo County	Pueblo City	**81003**	5	0.1%
Pueblo County	Pueblo County	**81004**	4	0.1%
Pueblo County	Pueblo City	**81005**	11	0.2%
Pueblo County	Pueblo City	**81006**	5	0.1%
Pueblo County	Pueblo West	**81007**	85	1.3%
Pueblo County	Pueblo County	**81008**	37	0.6%
Subtotal			**159**	**2.4%**
Fremont County				
Fremont County	Canon City	**81212**	9	0.1%
Fremont County	Florence	**81226**	6	0.1%
Fremont County	Penrose	**81240**	13	0.2%
Subtotal			**28**	**0.4%**
Total			**6,579**	**100.0%**

Source: Fort Carson, RKG Associates.

Historic residence data (i.e., zip code data) provides a general guide for trends in location and suggests more than 90% of personnel will want to live within 20 miles of Fort Carson.

One local economic consultant conducted a regression model and found that the two most important factors in the housing location of Fort Carson personnel were commute time and affordability. As commute time increases, desirability of a location decreases. An intuitive interpretation of this conclusion is that personnel value their time as well as the cost of commuting (e.g., fuel, auto wear and tear, etc.) when determining their residential location.

If time to work and affordability are the key drivers in location, then developers will attempt to meet demand by keeping prices affordable and as close to Fort Carson as possible. Forecasts of future housing supply indicate that within Colorado Springs and the Fountain Area, there are currently over 800 units that are given a high level of confidence of completion, and over 6,000 units with a medium level of confidence of completion. Pricing for these units also appears to be in line with affordability, and appears to be somewhat scalable.

It is expected that because Pueblo and Fremont Counties do satisfy a current market demand, they will continue to receive some portion of the housing demand. Unless housing product in the Fountain Area and Colorado Springs becomes less affordable, Pueblo and Fremont Counties will likely experience similar historic levels of demand.

E. SUPPLY AND DEMAND FOR HOUSING – ALTERNATIVE GROWTH SCENARIO

For Sale Housing

Under the Alternative Growth Scenario, demand for housing units is projected to increase to 11,038 by 2012 within the PHIA[8]. Approximately 22,634 units have been planned, have infrastructure, or will be built by 2012, with a surplus of 11,596 units with a low level of confidence. Those units with a medium level of confidence of completion appear to have demand, plus an additional 2,373 units, as presented in Table 40. Those units with a medium and high level of confidence will be mostly consumed by 2010, assuming the given rate of relocation.

[8] It should be noted that all discussions related to the forecast supply and demand for housing are limited to the PHIA unless otherwise noted.

Table 40. Supply and Demand for For-Sale Units – Alternative Growth Scenario

Supply/Demand	2007	2008	2009	2010	2011	2012
Estimated Demand for Housing						
Demand Under Expected Growth Scenario	3,006	4,110	7,301	8,661	10,028	11,038
Estimated Supply of Housing						
High Confidence of Completion [1]	1,038	1,038	1,038	1,038	1,038	1,038
Surplus/(Deficit) Capacity	(1,968)	(3,072)	(6,263)	(7,623)	(8,990)	(10,000)
Medium Confidence of Completion [2]	5,253	8,665	8,665	8,665	8,665	8,665
Surplus/(Deficit) Capacity	2,247	4,555	1,364	4	(1,363)	(2,373)
Low Confidence of Completion [3]	5,338	10,042	12,006	22,634	22,634	22,634
Surplus/(Deficit) Capacity	2,332	5,932	4,705	13,973	12,606	11,596

All values except for Surplus/(Deficit) are cumulative.

[1] Includes units that are built, under construction, or under construction w/in next year.

[2] Includes units that have infrastructure w/in next year, plus units with high confidence level.

[3] Includes units that are undergoing the planning process plus units with medium and high level of confidence.

Source: RKG Associates

Rental Housing

Supply and demand for rental housing is analyzed for the Alternative Growth Scenario. Table 41 presents rental demand by rank for military personnel through 2012. As E1 to E3 personnel are also expected to be housed primarily in barrack spaces and approximately 826 units are available barrack space begins to run out by 2009. Under the Alternative Growth Scenario, all E1 to E3 personnel should be accommodated on-post. Demand for off-post rentals for E4 to E6 personnel will be 1,655 units by 2012, with the majority of demand met off-post. E7 to Officers will also rent primarily off-post, with rental unit demand for approximately 473 units by 2012. Therefore, there will be demand for 1,840 units by 2012 under the Alternative Growth Scenario.

Table 41. Supply and Demand for On-Post Housing – Alternative Growth Scenario

Supply/Demand	2007	2008	2009	2010	2011	2012
E1-E3 Rental Demand	548	12	606	82	82	0
Cumulative Rental Demand	548	560	1,166	1,248	1,329	1,329
Less Barrack Space	1,618	1,618	1,618	1,618	1,618	1,618
Surplus or (Deficit) of On-Post Rentals	1,070	1,058	452	370	289	289
(Deficit indicates a required Off-Post Demand)						
E4-E6 Rental Demand	772	16	854	115	115	0
Cumulative Rental Demand	772	789	1,643	1,758	1,873	1,873
Less Available On Post Housing	16	122	218	218	218	218
Surplus or (Deficit) of On-Post Rentals	(757)	(667)	(1,425)	(1,540)	(1,655)	(1,655)
(Deficit indicates a required Off-Post Demand)						
E7-E9 and Officer Population Renting	285	6	315	42	42	0
Cumulative Rental Demand	285	291	606	648	691	691
Less Available On Post Housing	16	122	218	218	218	218
Surplus or (Deficit) of On-Post Rentals	(269)	(169)	(388)	(431)	(473)	(473)
(Deficit indicates a required Off-Post Demand)						
Total Off-Post Demand	**44**	**222**	**(1,362)**	**(1,601)**	**(1,840)**	**(1,840)**

Source: RKG Associates

Table 42 presents a comparison for supply and demand for off-post rental housing by military personnel. For the baseline population, an estimated 563 units will be in demand for rental units[9]. Both single-oriented units and family-oriented units will have a surplus of units through 2011, with a demand for slightly more than 100 single-oriented units by 2012.

[9] Baseline population and civilian personnel demand is the same for the Expected Growth Scenario and the Alternative Growth Scenario.

Table 42. Supply and Demand for Off-Post Rental Housing – Alternative Growth Scenario

Supply/Demand	2007	2008	2009	2010	2011	2012
Off-Post Demand - Baseline Population	(563)	(1,113)	(1,665)	(2,222)	(2,782)	(3,333)
Percent Assumed Single 41%	(232)	(460)	(688)	(918)	(1,149)	(1,377)
Percent Assumed Married 59%	(330)	(653)	(977)	(1,304)	(1,633)	(1,957)
Total Off-Post Demand E1-E3	0	0	0	0	0	0
Percent Assumed Single 80%	0	0	0	0	0	0
Percent Assumed Married 20%	0	0	0	0	0	0
Total Off-Post Demand E4-E6	(757)	(667)	(1,425)	(1,540)	(1,655)	(1,655)
Percent Assumed Single 36%	(269)	(237)	(507)	(548)	(589)	(589)
Percent Assumed Married 64%	(487)	(430)	(918)	(992)	(1,066)	(1,066)
Total Off-Post Demand E7-E9 and Officer	(269)	(169)	(388)	(431)	(473)	(473)
Percent Assumed Single 17%	(46)	(29)	(66)	(73)	(81)	(81)
Percent Assumed Married 83%	(223)	(141)	(322)	(358)	(393)	(393)
Off-Post Demand - Civilian Personnel	(30)	(30)	(30)	(30)	(30)	(30)
Percent Assumed Single 41%	(13)	(13)	(13)	(13)	(13)	(13)
Percent Assumed Married 59%	(18)	(18)	(18)	(18)	(18)	(18)
Demand for Off-Post Single Product	**(560)**	**(739)**	**(1,274)**	**(1,552)**	**(1,831)**	**(2,059)**
Supply of Off-Post Single Oriented Product	**2,191**	**2,341**	**2,321**	**2,321**	**2,321**	**2,321**
Surplus or (Deficit) of Off-Post Rentals	**1,630**	**1,602**	**1,047**	**769**	**490**	**262**
Demand for Off-Post Family Product	**(1,059)**	**(1,241)**	**(2,235)**	**(2,671)**	**(3,109)**	**(3,433)**
Supply of Off-Post Family Oriented Product	**3,566**	**3,716**	**3,697**	**3,697**	**3,697**	**3,697**
Surplus or (Deficit) of Off-Post Rentals	**2,507**	**2,475**	**1,461**	**1,025**	**587**	**263**

Source: RKG Associates

F. CONCLUSIONS

Under the Expected Growth Scenario, the demand for housing should be met by 2012 with all units given a medium level of confidence of construction, and just under 4,000 additional units currently undergoing the planning process. Thus, many projects that are currently going through the planning process will not be needed until some time after 2012. Sufficient demand is forecast for those builders who have made commitments to building either housing or infrastructure.

The current off-post rental supply, plus approximately 700 new rental units currently in the pipeline, will likely meet the housing demand from Fort Carson personnel. While the forecast supply meets the forecast demand, this assumes a minimal vacancy rate. As most communities operate with a vacancy rate over 5%, additional demand for rental units may appear as the Fort Carson population increases.

Under the Alternative Growth Scenario, demand of for-sale housing product is expected to be 11,038, which will require all units with a medium level of confidence of construction to be built, plus an additional 2,300 units in the planning stage of development. Similar to the Expected Growth Scenario, a large number of "paper lots" may not be required.

The rental demand for the Alternative Growth Scenario will not require more future units than are currently in the pipeline. Thus, demand under the Alternative Growth Scenario will decrease the vacancy rate, but will not require more approved units.

G. STRATEGIC ACTIONS FOR CONSIDERATION

Recommendation: Adequate and timely information.

The housing economy within the region has the capacity to absorb the additional demand for housing over the next few years. As the housing market has taken a prudent approach of lot approval and improvement without final structures, the current housing inventory will not meet projected demand. Instead, there may be a 3 to 6 month lag between military personnel arrival and home construction. There is also a concern that land developers may create a surplus of lots in preparation for the personnel increases at Fort Carson.

The housing market could better respond to future demand if additional and more timely information is provided by the military. Many builders interviewed for this report expressed the view that Fort Carson makes a limited effort in communicating with the building community, and would appreciate any additional data, even if it is tentative. It is recommended that the local communities work together through a regional organization to improve communication between builders and developers in the local region and Fort Carson.

Recommendation: Monitor housing trends within the region.

Several other factors that often reflect the health of the housing market should be monitored. Many of these issues, such as foreclosures and subprime lending, are periodically visited by the general media. It is important that the building community have access to consistent and reliable information on these and other related topics.

All members of the planning community, including planners, builders, developers, etc. would benefit from regional mapping of all current and proposed housing developments within the three county area. Most municipalities and counties have the data required to build a regional housing development map, but a regional organization familiar with all areas related to Fort Carson would be required to build and maintain the map.

Several data sources cited in this analysis should be periodically updated, including housing stock, lending patterns, mortgage trends, labor trends, and other housing related data, should be updated on an annual basis. Data sources, such as the Colorado Springs Chamber of Commerce, PPACG, and the Apartment Association of Colorado Springs, currently provide housing related data, but are not currently centrally located at a “one stop shop”. By providing continual updates to data covered in this report as well as other emerging trends, the building community could make the best informed decisions related to housing within the region.

One key component to the housing market that should be examined in further depth is affordability. Affordability factors such as the BAH, mortgage rates, Federal lending trends (e.g., VA loans), other sources of debt (e.g., credit card debt), and spousal employment and income should be monitored on a regular basis. By providing this information to the housing market, builders and developers can target price points for a variety of housing products.

Recommendation: The Military Community Information Forum.

Pikes Peak Area Council of Governments (PPACG) is a planning organization that functions as a "forum to discuss issues that cross their political boundaries, identify shared opportunities and challenges, and develop collaborative strategies for action"[10]. PPACG is the first likely candidate for creating the necessary link. PPACG could create a regional forum that will serve as a conduit for information between Fort Carson and regional communities, tentatively referred to in this report as the Military Community Information Forum (MCIF).

Specifically, the MCIF could provide the most recent estimate of troop relocation, deployment, and any other relevant information to the building community, so that housing construction decisions could be made on the best available information, thus reducing risk. In addition, information could provide realistic data to longer term developments (those undergoing planning or approval) and avoid an overbuilding scenario. Generally, the MCIF could also share information related to all community impacts, and would not be limited solely to housing topics.

The MCIF could also coordinate a regular update on housing conditions, including factors related to the health of the housing market. This update could be published online by the MCIF, and be presented on a consistent basis.

Currently, Pueblo County and Fremont County, which are included in the Study Area, are not members of PPACG. Communities within Pueblo County are members of the Pueblo Area Council of Governments (PACOG) and Fremont is part of the Upper Arkansas Area Council of Governments. While the direct impacts for Pueblo County and Fremont County are not expected to be at the same magnitude as El Paso County, they should be involved in the proposed MCIF.

The MCIF's mission would be to foster communication and information sharing between military installations and local communities related to impacts from troop increases or decreases. The local economy would benefit from as much foresight as possible about timing and characteristics of military changes. In addition to assisting the local economy, military installations would also benefit from a well prepared and functioning community that supplies off-post housing, shopping, schools, and other community benefits.

The MCIF would have regular and formal information sharing updates (e.g., monthly or quarterly) where representatives from the military community, MCIF, and local stakeholders could discuss expected community impacts.

In addition to working as an information sharing forum, the MCIF could be a single point of contact for Federal and State grants and loans associated with significant changes to military installations. Within the Department of Defense's *Base Redevelopment and Realignment Manual* (March 2006), it is emphasized that one formal organization is optimal for addressing funding and examination of base impacts. Simply, federal agencies prefer to work with one organized unit as opposed to several competing local governmental agencies.

In addition to addressing the impacts associated with Fort Carson, the MCIF could be used as the organizational basis for community relations related to potential expansion or contraction in

[10] Pikes Peak Area Council of Governments, 2007

other military bases, including North American Aerospace Defense Command (NORAD), the Air Force Academy, Peterson Air Force Base (AFB) and Schriever AFB[11].

[11] This report does not imply or otherwise suggest any local military installations, other than Fort Carson, will be expanding or contracting in the near future. Instead, it is stating that the MCIF could respond to any future military impacts if they were to occur at a later date.

APPENDIX A. – ALTERNATIVE GROWTH SCENARIO

In order to keep the presentation of the Alternative Growth Scenario succinct, the following tables were not included in the general body of the text. The following tables are included to show the all population, household, and demand assumptions/calculations under the Alternative Growth Scenario.

Table A.1 presents population data under the Alternative Growth Scenario. Under the Alternative Growth Scenario, military population is expected to increase by 3,525 in the 2007, 75 in 2008, 3,900 in 2009, and 525 in 2010 and 2011. Civilian population increases are defined as growth from direct on-post civilian jobs, and is separate from induced population growth. These persons typically represent skilled workers, including technology workers, managers, and other professional positions funded through appropriated and non-appropriated funds by Fort Carson. It is estimated that, similar to the Expected Growth Scenario, approximately 430 civilians will be added to Fort Carson over the next five years.

Table A. 1

Group	2007	2008	2009	2010	2011	2012
Baseline Population						
Baseline Population within Primary Housing Impact Area	201,822	205,890	209,968	214,079	218,216	222,294
Annual Population Growth (change from previous year)	4,158	4,068	4,078	4,111	4,137	4,078
Baseline Households	**1,593**	**1,559**	**1,563**	**1,575**	**1,585**	**1,562**
E7-E9 and Officers	823	18	910	123	123	0
E4-E6	2,093	45	2,316	312	312	0
E1-E3	609	13	674	91	91	0
Military Population	**3,525**	**75**	**3,900**	**525**	**525**	**0**
Civilian Personnel	**86**	**86**	**86**	**86**	**86**	**0**
Baseline Plus Expected Growth Scenario Population Impact	**5,204**	**1,720**	**5,549**	**2,186**	**2,196**	**1,562**

Source: DOLA Demography Office, RKG Associates, Inc.

Table A.2 estimates of the percent of households that will rent versus buy by each population group. Research was conducted using BAH data to estimate the number of military personnel who rent versus own for three categories: E7 to Officers, E4 to E6, and E1 to E3. For E7 to Officers, approximately 35% of personnel are expected to rent, and 65% are expected to purchase homes. For E4 to E6 personnel, 37% are expected to rent, and 62% are expected to buy. For E1 to E3, the majority of personnel, 90%, are expected to rent and only 10% are expected to buy.

For 2007, there will be a demand for 2,198 rental accommodations and 3,006 homes (including both single family homes and townhomes) under the Alternative Growth Scenario.

Table A. 2

Group	Assumption (1) (2)	2007	2008	2009	2010	2011	2012
Baseline Households		1,593	1,559	1,563	1,575	1,585	1,562
Rental Population	35% of Baseline Households	563	551	552	556	560	552
SF Home Purchase Population	65% of Baseline Households	1,030	1,008	1,011	1,019	1,025	1,010
Military Personnel (Head of Household)							
E7-E9 and Officer Population		823	18	910	123	123	0
Rental Population	35% of E7-E9 and Officer Population	285	6	315	42	42	0
SF Home Purchase Population	65% of E7-E9 and Officer Population	538	11	595	80	80	0
E4-E6 Population		2,093	45	2,316	312	312	0
Rental Population	37% of E4-E6 Population	772	16	854	115	115	0
SF Home Purchase Population	63% of E4-E6 Population	1,321	28	1,461	197	197	0
E1-E3 Population		609	13	674	91	91	0
Rental Population	90% of E1-E3 Population	548	12	606	82	82	0
SF Home Purchase Population	10% of E1-E3 Population	61	1	68	9	9	0
Civilian Households		86	86	86	86	86	0
Rental Population	35% of Civilian Households	30	30	30	30	30	0
SF Home Purchase Population	65% of Civilian Households	56	56	56	56	56	0
Total Rental Population		**2,198**	**615**	**2,358**	**826**	**829**	**552**
Total SF Home Purchase Population		**3,006**	**1,104**	**3,191**	**1,360**	**1,367**	**1,010**
Total Households/Population		**5,204**	**1,720**	**5,549**	**2,186**	**2,196**	**1,562**

[1] Percent of Baseline and Non-Military population renting vs. owning is derived from Year 2000 US Census Data.

[2] Percent of E1-E3, E4-E6 and Officer population renting vs. owning is derived from assumptions made by RKG based on Fort Carson housing and affordability data.

Source: RKG Associates, Inc.

Education Technical Report

Fort Carson Regional Growth Plan

December 15, 2007

Pikes Peak Area Council of Governments

Communities Working Together

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A. INTRODUCTION AND METHODOLOGY

New troops, civilians, and dependents are beginning to arrive at Fort Carson as a result of directives on troop movements due to Base Realignment and Closure (BRAC), Integrated Global Presence and Basing Strategy (IGPBS), and Army Modular Force (AMF). The next two sections summarize demographics and housing findings and assumptions as they relate to student forecasts.

Demographics

An estimated 12,600 military personnel were authorized for Fort Carson at the end of FY 2006, with an estimated 23,000 dependents living within the study area. Thus, the population of the Fort Carson community at the beginning of FY 2007 was approximately 36,000 persons.

A range, which establishes an "upper" and a "lower" number for the projected increase in military personnel, was established, referred to as the "Expected Growth Scenario" and the "Alternative Growth Scenario." The "Expected Growth Scenario" assumes 11,400 additional troops will be assigned to Fort Carson. A second scenario, referred to as the "Alternative Growth Scenario", assumes a reduction to 75% of the "Expected Growth Scenario" in troop assignments each year. The "Expected Growth Scenario" was based on information provided by officials at Fort Carson, and will function in this document as the projected total number of troops that will be authorized for the installation through FY 2011. Thus, total population growth associated with the troop increase at Fort Carson is expected to be roughly 33,800, consisting of approximately 11,400 newly authorized troops, 21,300 military dependents, 430 civilians, and 690 civilian dependents.

Two large surges of troop arrivals are anticipated through 2011. The first increase in troops, currently underway, is expected to add 4,700 troops by the end of Fiscal Year (FY) 2007, which is equivalent to the end of September, 2007. The second increase, expected to occur before the end of FY 2009, will add an additional 5,200 new troops. FY 2008, 2010, and 2011 are expected to add 100, 700, and 700 new soldiers, respectively.

New population growth associated with the forecast troop increases (including military personnel, civilians, and all dependents) will add approximately 33,800 new persons to the study area population, and the total Fort Carson related population will make up over 8% of the total study area population by 2011.

These new residents will impact all aspects of the regional community, including the housing market, local school systems, state and local municipal services, quality of life, etc. The "Expected Growth Scenario" demographic forecasts provide the base assumptions used to create the Fort Carson Regional Growth Plan.

Summary of Housing Impacts

New housing being built in anticipation of the increase in demand from Fort Carson troop arrivals will be the primary driver for the distribution of new K-12 school age children throughout the study area. Families living in for-sale housing will provide the largest number of new children to the local school districts. Students will also be generated from families living in rental housing and on-post housing.

Several thousand for-sale units could be built over the next few years in response to an increase in housing demand from the Fort Carson troop increase, as will several hundred new housing units on-post. By comparison, limited new multi-family product is slated for development. The local real estate market, building in anticipation of troop increases at Fort Carson, is realistic about the growth potential and has taken the conservative approach of getting development plans approved and making some infrastructure improvements, but has held off from offering final housing products. Thus, many of the new students will come from homes that are either currently under construction or will be soon. It should be noted that some military personnel may purchase existing homes within the study area; however, the majority of new students will come from new homes.

As of spring 2007, it is estimated there are approximately 800 residential units built or under construction, approximately 6,400 lots with infrastructure to be completed by end of year, and over 14,000 lots undergoing the development approval process. Thus, over 21,000 for-sale units, including both single family units and townhome units, could potentially be in the pipeline for the next decade.

For-sale unit demand is projected to be just over 12,500 homes by 2012 in the Fort Carson study area. These units will be located primarily in southern Colorado Springs, Fountain, and unincorporated El Paso County (Security and Widefield), referred to as the Primary Housing Impact Area (PHIA). It is likely that between 5,200 and 8,600 new units will be built by 2009, which would match the demand for new units. Approximately 97% of the study area's population growth due to the troop increase is forecast to occur within this limited area through 2012.

The rental market has remained relatively flat over the past few years, and forecast demand is approximately 8,700 units, which is slightly above the number of vacant units, future units, and on-post units. Thus, the majority of demand for rental product will likely be met by existing units, which are primarily located within the Colorado Springs metro area.

Student Forecast Assumptions

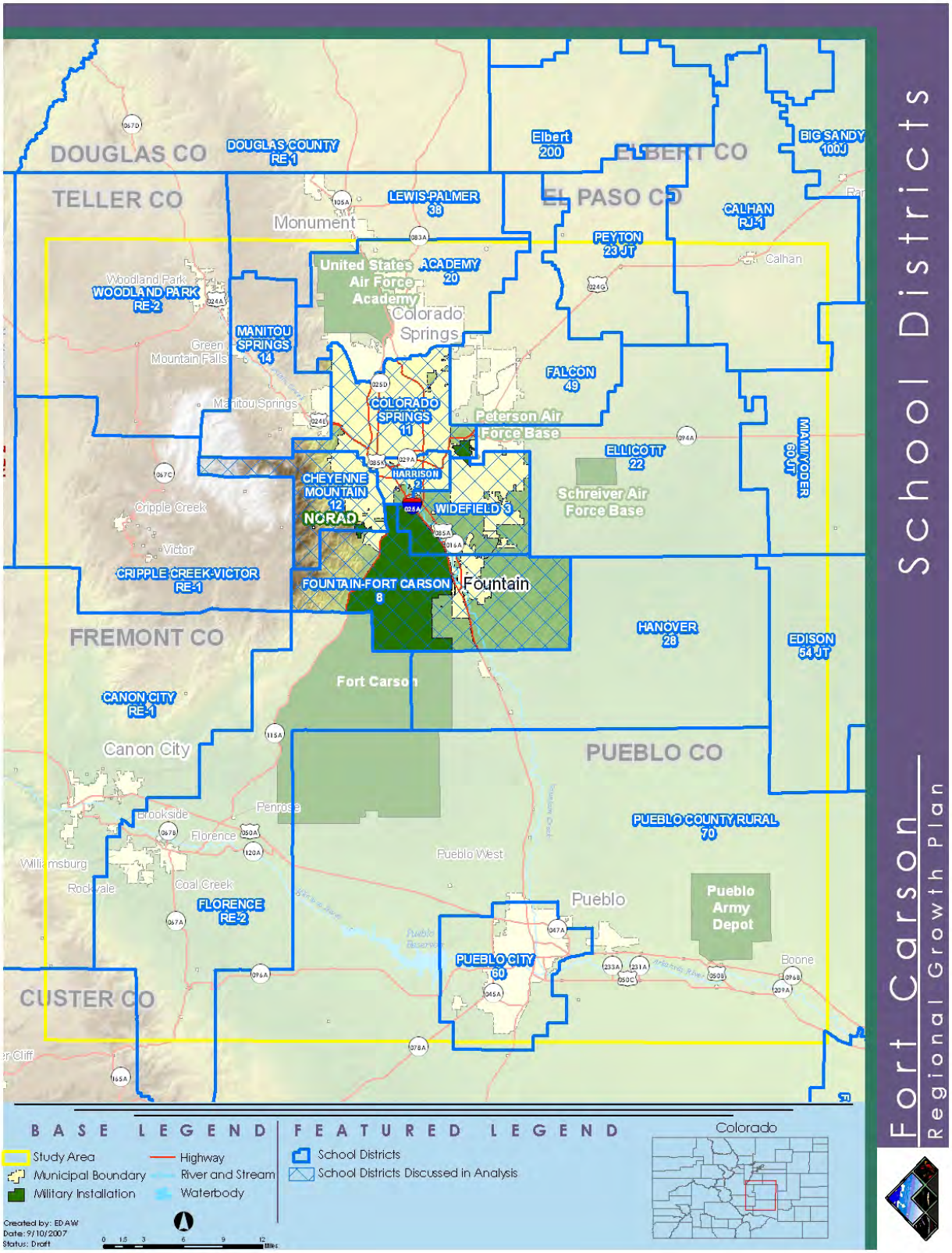
The goal of providing a forecast of school age children is to "test" each district to ensure it has space for additional children. However, the "test" is complicated by the passage of an open enrollment law in 1994 which created the opportunity for students to apply for entry in any school outside their resident school, provided they secure their own transportation and the receiving district has sufficient capacity. This creates an environment of competition for students among schools and is a factor when parents make choices about where to relocate or where to "choice in" to a school. Still, it is important to first determine if each district has capacity for its resident students. Thus, this analysis assumes that all students will first seek classroom space in the district in which they live in order to provide a regional basis for comparison and identify any potential shortfalls for the affected school districts. More information on the effects of the open enrollment policy on district enrollment is presented in the district facility capacity section.

Years in tables are shown as Federal Fiscal Years (October 1 – September 30) which approximately corresponds with the school calendar year (September 1 – August 30). It is likely children will arrive at irregular intervals. However, for modeling purposes children are assumed to be added to their school district on a Federal Fiscal Year basis.

Assumptions for the number of private school and home school children were based on information provided by the Colorado Department of Education, and a percentage of children are allocated to private school/home school from each school district.

The projection and capacity analysis focuses on the five most impacted school districts in the Fort Carson Regional Growth Plan Primary Housing Impact Area. The most impacted school districts are those within the primary housing impact area in the Housing Technical Report, and are as follows: Widefield District 3, Colorado Springs District 11, Harrison District 2, Cheyenne Mountain District 12, and Fountain-Fort Carson District 8, as shown on Map 1.

As mentioned previously, school demand and capacity projections are based on demographic data compiled in May 2007. As additional data are made available regarding incoming troops and programming changes in schools, the school capacity projections provided in this report will be revised. Capacity updates will include 2007-2008 school year enrollment data, utilization rates that more closely reflect the school districts' actual utilization numbers, school programming changes, such as implementation of full-day kindergarten, and updated demographic information regarding additional troops expected to arrive at Fort Carson by FY 2013.



Map 1. School District Boundaries in the Fort Carson study area. School districts within the Primary Housing Impact Area are highlighted in blue cross-check pattern.

In this analysis, "Other School Districts" are included to calculate the number of students going to districts in El Paso, Pueblo, and Fremont County school districts outside the five identified districts. Only 4% of new students are estimated to live outside of five school districts. "Other School Districts" values consist primarily of students attending District 20. Because some apartment complexes were on the border between District 20 and Districts 14 and 11, a certain percentage of students were allocated to the northern district (D20). This is not equivalent to students attending other schools through open enrollment.

Forecasts are calculated for new students generated from growth at Fort Carson as well as baseline growth in population that would occur regardless of Fort Carson troop increases. As with all forecasts, student enrollment forecasts are subject to change based on variable factors such as troop deployment, changes in military assignments, overseas conflicts, rebuilding of brigades, etc. Each school district should monitor enrollment trends and adjust their growth or facilities plan accordingly.

Forecasts for the number of school age children are based on demographic projections, adjusted for future housing developments, apartment locations, and input provided by local stakeholders. New students generated from growth at Fort Carson, as well as new students from baseline growth, are included in the forecasts. Baseline growth is population growth that would have occurred in the study area regardless of the troop increases related to Fort Carson, plus growth that is induced by the Fort Carson personnel increases. Baseline numbers are based on projections made by the Colorado Department of Local Affairs.

The calculation for the students of military families is derived from the number of troops and dependent multipliers and can be found in the Demographic Projections Technical Report of the Fort Carson Regional Growth Plan. Housing units and multipliers are used as the basis to estimate the number of students each district can expect.

Children will be generated from three primary areas: military personnel living on-post, personnel and civilians living off-post and renting, and military and civilians living off-post owning homes.

- Children of military personnel living on-post are assumed to attend Fountain-Fort Carson District 8. The calculation for the students of military families is derived from the number of troops and dependent multipliers.
- Off-post homeowners will contribute children primarily to school districts where new housing is being created and marketed to military personnel. The number of students is estimated by using new housing information obtained from the local development community. Each development, based on its probability and estimated date of completion, was used to allocate students among the multiple school districts. For example, because Fountain and Widefield are expected to receive the majority of new housing stock, they will receive the majority of new students. New single-family housing units will provide the majority of new students; therefore, the PHIA has the largest impacts on these local school districts.
- Off-post renters will contribute children throughout several school districts, since apartment complexes are distributed throughout the study area. RKG has used data supplied by the Colorado Springs Metro Area Apartment Vacancy and Rent Study to allocate apartment units to the different school districts. District maps were compared to apartment locations to determine allocation of students from existing apartment locations, as few apartment complexes are currently under construction or being planned. Due to the distribution of

new and existing apartment complexes, the area of new student impact is slightly larger than the primary housing impact area. Children from these units were then allocated on a percent basis to the appropriate school district.

B. SCHOOL AGE CHILDREN FORECAST

Dependent Forecast

Table 1 presents the allocation of total children dependents by housing type and the proportion of baseline and Fort Carson growth. An estimated 757 children will come from military families on-post, 5,060 from rental units, and 9,013 from single family (and townhome style) homes. Thus, an estimated 14,831 dependents will be added to the study area over the next five years due to growth in the Fort Carson study area.

Table 1. Children Dependents Generated by Fort Carson Troop Increase

Years	2007	2008	2009	2010	2011	Total
On-Post Children	266	69	423	0	0	**757**
From Rentals						
Baseline	304	298	299	301	303	**1,504**
Direct Growth from Fort Carson	1,237	0	1,706	306	306	**3,556**
Subtotal - From Rentals	1,541	298	2,004	607	609	**5,060**
From Homes						
Baseline	716	691	692	698	702	**3,489**
Direct Growth from Fort Carson	2,227	94	2,489	372	372	**5,525**
Subtotal - From Homes	2,933	784	3,152	1,070	1,074	**9,013**
Total Children	**4,740**	**1,151**	**5,579**	**1,677**	**1,684**	**14,831**

School Age Children

School age children are a subset of the total number of dependents projected from the increase in troops on Fort Carson. While over 14,800 children will be added to the local community, data from the Department of Defense suggest that over 32% of children dependents are under the age of 5, and just under 5% are over the age of 18. Therefore, the number of school age children is forecast to be 9,207.

Using data collected from current and future housing trends, demographic projections, and school boundaries, estimates of school age children have been made for Fountain-Fort Carson District 8, Colorado Springs District 11, Harrison District 2, Widefield School District 3, and Cheyenne Mountain District 12. These schools are expected to receive the majority of students from Fort Carson troop increases.

Housing units and multipliers are used as the basis to estimate the number of students each district can expect. Table 2 presents a summary of the forecast number of school age children for the Fort Carson study area through 2011.

For consistency, the following forecast tables classify elementary schools as spanning kindergarten through fifth grade, middle school as spanning grades sixth through eighth, and high school enrollment spans grades ninth through twelfth. Exceptions to this regional grade classification are noted in the facility capacity section.

Table 2. FY 2011 End-State Summary of Forecasted School Age Children by District

School District	K-5	6-8	9-12	Total
Fountain-Fort Carson District 8	1,541	679	716	**2,935**
Colorado Springs District 11	740	326	343	**1,409**
Harrison District 2	604	267	283	**1,153**
Widefield School District 3	1,277	571	609	**2,457**
Cheyenne Mountain District 12	174	77	81	**332**
Outside School Districts	189	83	87	**359**
Private School/Home School	294	130	137	**561**
Total	**4,818**	**2,132**	**2,257**	**9,207**

Source: RKG Associates, Inc.

Table 3 presents a breakdown of students by grade grouping for each school district. New students are estimated for both baseline growth and Fort Carson troop increases.

An estimated 5,991 students will be added to the school districts over the next five years from troop increases at Fort Carson, and 3,216 children will be added from baseline growth. It is estimated that the majority of the students will be attending Fountain-Fort Carson District 8 schools and Widefield District 3 schools, which will receive 32% and 27% of the influx, respectively.

Table 3. FY 2011 End-State Summary of New Students from Baseline Growth and Fort Carson Troop Increase.

School District	K-5	6-8	9-12	Total	Percent
Baseline Growth					
Fountain-Fort Carson District 8	456	237	277	970	30%
Colorado Springs District 11	217	112	132	460	14%
Harrison District 2	189	98	115	403	13%
Widefield School District 3	456	236	277	968	30%
Cheyenne Mountain District 12	53	27	32	113	4%
Outside School Districts	52	27	32	111	3%
Private School/Home School	90	46	54	190	6%
Subtotal - Baseline Growth	**1,513**	**784**	**919**	**3,216**	**100%**
Growth from Fort Carson Troop Increase					
Fountain-Fort Carson District 8	1,084	442	439	1,965	33%
Colorado Springs District 11	523	213	212	949	16%
Harrison District 2	414	169	168	751	13%
Widefield School District 3	821	335	332	1,488	25%
Cheyenne Mountain District 12	121	49	49	220	4%
Outside School Districts	137	56	55	248	4%
Private School/Home School	205	83	83	371	6%
Subtotal - Growth from Fort Carson	**3,305**	**1,348**	**1,338**	**5,991**	**100%**
Total Growth					
Fountain-Fort Carson District 8	**1,541**	**679**	**716**	**2,935**	**32%**
Colorado Springs District 11	**740**	**326**	**343**	**1,409**	**15%**
Harrison District 2	**604**	**267**	**283**	**1,153**	**13%**
Widefield School District 3	**1,277**	**571**	**609**	**2,457**	**27%**
Cheyenne Mountain District 12	**174**	**77**	**81**	**332**	**4%**
Outside School Districts	**189**	**83**	**87**	**359**	**4%**
Private School/Home School	**294**	**130**	**137**	**561**	**6%**
Total Growth	**4,818**	**2,132**	**2,257**	**9,207**	**100%**

Source: RKG Associates, Inc.

Table 4 presents a cumulative count of children matriculating by school district related to Fort Carson growth as well as baseline growth. Note that students are assumed to be added each year, and those students added from the previous year will advance one grade per year. Thus, a matriculating schedule has been created that presents the cumulative number of new matriculating students each year. Children are assumed to stay in the district where they originated.

Table 4. Annual Matriculation of New Students from Fort Carson Troop Increase

Grade	2007/08	2008/09	2009/10	2010/11	2011/12	Percent of Total
Fountain-Fort Carson District 8						
K-5	511	652	1,272	1,454	1,637	
6-8	219	289	554	644	736	
9-12	226	319	608	734	857	
Total	**956**	**1,260**	**2,434**	**2,832**	**3,230**	**32%**
Colorado Springs District 11						
K-5	231	282	579	681	783	
6-8	99	126	253	301	351	
9-12	102	140	277	343	408	
Total	**432**	**547**	**1,109**	**1,325**	**1,542**	**15%**
Harrison District 2						
K-5	192	237	473	555	639	
6-8	82	106	207	247	288	
9-12	85	118	228	282	335	
Total	**359**	**462**	**909**	**1,084**	**1,261**	**13%**
Widefield School District 3						
K-5	420	534	1,003	1,175	1,349	
6-8	181	240	443	527	613	
9-12	189	268	492	607	721	
Total	**790**	**1,043**	**1,939**	**2,310**	**2,682**	**27%**
Cheyenne Mountain District 12						
K-5	55	68	136	160	184	
6-8	24	30	60	71	83	
9-12	24	34	66	81	96	
Total	**103**	**131**	**262**	**312**	**364**	**4%**
Outside School Districts						
K-5	58	70	148	174	200	
6-8	25	31	64	77	89	
9-12	26	35	70	87	103	
Total	**109**	**136**	**282**	**337**	**393**	**4%**
Private School/Home School						
K-5	93	114	230	271	311	
6-8	40	51	101	120	140	
9-12	41	57	111	137	163	
Total	**174**	**222**	**442**	**528**	**614**	**6%**
Total School Children						
K-5	**1,559**	**1,957**	**3,842**	**4,470**	**5,103**	
6-8	**670**	**873**	**1,682**	**1,988**	**2,299**	
9-12	**693**	**971**	**1,852**	**2,271**	**2,684**	
Total	**2,922**	**3,801**	**7,376**	**8,729**	**10,086**	**100%**

Source: RKG Associates, Inc.

Note that 10,086 students will be added by 2011, which is higher than the 9,200 new students. This is due to the fact that some children added in 2007 were under the age of 5, and begin school in later years. Student matriculation will be used to estimate the demand for classroom space and as the basis to compare school capacity.

C. SCHOOL DISTRICT CAPACITY FORECAST

With the goal of comparing the FY 2011 end-state of local school districts' capacity to accommodate student forecasts, this section begins with a discussion of two primary inputs: 2006 enrollments and facility capacity. The remainder of the section compares the forecasted demand for students to the current and future capacity of the five most highly impacted school districts.

2006 Enrollment Data

The Colorado Department of Education (CDE) collects enrollment data on October 1st (the "count day") of each year for every school district in the state. House Bill 1232 adds a second student-count day so that school districts, with a large influx of military children can apply for additional per-pupil funding if their enrollments change. School districts with at least 400 military-dependent students, or at least 3 percent of all children in the district, are eligible for the Federal Impact Aid Program which provides funding for a portion of the educational costs of military-connected students. Statistics are collected for all public, private, and home schools in each district from pre-kindergarten through twelfth grade.[1] Information is reported to the public yearly on the CDE web site.

Data on overall enrollment and capacity are tabulated for each school district and are included in the discussion of the district section it pertains to. Elementary school enrollment numbers span grades kindergarten through fifth or sixth grade depending on the district; middle school enrollment spans grades sixth or seventh through eighth grade depending on the district; and high school enrollment spans grades ninth through twelfth grade. Enrollment values reflect the total number of students, as reported to CDE, who were enrolled in each district's public school system in October 2006.

Data on private schools and home schools are also included in the general enrollment tables. Private school enrollment for kindergarten through twelfth grade is listed for each district but pre-kindergarten or preschool enrollment is not included in the tables. All school districts except Fountain-Fort Carson 8 have at least one private school within their district. Home based education is reported for all districts and ranges from 20 children to 628 children per district. Private school and home school enrollments are accounted for in each district's enrollment forecast using historic percentages for each school district. For example, over 20% of students from District 1[1] attend private schools or participated in home school programs; this percentage was assumed constant through FY 2011.

Open enrollment can be a significant factor in district enrollments and open enrollment fluctuates annually. As an example, over 25% of Cheyenne Mountain D12 comes from outside the district, while less than 3% of resident students leave the district. The October 2006 total enrollment for each district is inclusive of out-of-district students enrolled within the focus district, and tables on the following pages delineate both the number of resident district children who "opt-out" (or attend school in another district), and the number of children who "opt-in" (or reside in another district but attend the focus district). As stated previously, student forecasts based on troop increases are focused on the district in which new students will reside and do not factor in open enrollment.

1 Colorado Department of Education Fall 2006 Pupil Membership, 2007.
http://www.cde.state.co.us/cdereval/rv2006pmlinks.htm

Capacity Data

Capacity is the total number of permanent or temporary (portable classroom) seats available in each grade level. Two out of five school districts utilize portable classrooms for elementary or middle schools. Information on school capacities for each district in this study was obtained from school administrators. Additional information was gained from researching publicly-available information on district and charter school web sites. Additional capacity from current and planned construction projects is included in the permanent seat capacity where applicable. Capacity does not account for district variances in all-day kindergarten or preschool programs.

With the goal of assessing total facility capacity for the district in which new students will reside, the estimate of the total number of resident district students is derived by subtracting the opt-in children from the October 2006 count and adding back in those students from the district that opted-out.

The surplus/deficit capacity tables in the following sections illustrate the point at which school districts utilize 100% of their available seats. However, most school districts plan for approximately 85% utilization; that is, out of 100 seats, 85 should ideally be occupied in order to accommodate changes in enrollment. Utilization rates above the 85% rule the 2006 October student count are noted. Negative seats are noted as deficits (in parentheses).

The number of estimated children per year is based on matriculation values, meaning the values shown for years 2008-2011 are the number of new students arriving each year plus the matriculated students from the previous year. Fort Carson student forecasts are combined with baseline student increases in the second set of estimates to indicate capacity surplus or deficit from military growth plus natural growth.

Widefield District 3

Widefield School District 3 (D3) is located in southeastern Colorado Springs, adjacent to the north-east corner of the Fort Carson installation and bordering Fountain-Fort Carson District 8. For the past three years, D3 has experienced an unusual decrease or slow-down in enrollment due to ongoing deployments and troop transfers, compared to normally high levels of general population growth. Land availability, the rural to suburban nature of the area, and housing affordability makes D3 an attractive market region-wide.

Table 5 outlines the general enrollment and capacity information for D3. D3 had an October 2006 kindergarten through twelfth grade enrollment total of 8,199 children, 506 of which came from the other four school districts in the study area. Within the district, 841 students whose resident district is D3 instead attended neighboring districts; that is, 283 more students opted-out of the district than opted-in from neighboring districts. Overall school capacity for D3 is 9,405 permanent seats with 725 temporary seats at their elementary and middle school levels. D3 utilizes temporary seats for K-6 since the district currently has a shortfall of 209 permanent seats. In 2006, D3 elementary schools had an average capacity utilization rate of 105%, which would increase as new Fort Carson students arrive.

Table 5. D3 Enrollment and Capacity Data

Widefield District 3

Grade Level	Grade Range	Oct. 2006 Enrollment Data	Permanent Capacity	Temporary Capacity
Elementary	K-6	4354	4145	425
Middle School	7-8	1305	1850	300
High School	9-12	2540	3410	No portable classrooms
Totals		**8199**	**9405**	**725**

Source: CDE, D3

Other Enrollment Information

Private school attendance		
Fountain Valley School	**9-12**	**221**
Home-based education enrollment		**118**

Number of Widefield District 3 children attending other districts' schools

District Attended	
Harrison 2	232
Fountain-Fort Carson 8	233
Colorado Springs 11	122
Cheyenne Mountain 12	168
Other Districts	86
	841

Number of other districts' children attending Widefield District 3

Source District	
Harrison 2	197
Fountain-Fort Carson 8	247
Colorado Springs 11	57
Cheyenne Mountain 12	5
Other Districts	52
	558

Enrollment and capacity data corrected for school of choice

Oct. 2006 enrollment	8199
Minus out-of-district children	558
Plus district children going elsewhere	841
In-district children	**8482**
Capacity	10130
Surplus (deficit) capacity based on in-district children only	**1648**

Source: CDE, EDAW, Inc.

Table 6 indicates the number of estimated new Fort Carson children entering the D3 education system combined with baseline projections. D3 does not currently have sufficient capacity in its elementary grades to meet the projected needs for enrollment of the estimated number of Fort

Carson students. D3 had previously identified a need for school expansions, including two K-8 schools and one additional K-6 elementary school, which is consistent with the findings of this analysis.

Table 6. D3 Surplus/Deficit Capacity Based on Military Student Projections with and without Baseline Projections. **Projected student values include matriculation for years 2008-2011.**

Widefield School District 3
New Fort Carson Students Only

Fiscal Year	**2007**	**2008**	**2009**	**2010**	**2011**
Grades K-6					
Forecasted Students	374	403	837	929	1024
Surplus/Deficit in Permanent Seats	(583)	(612)	(1046)	(1138)	(1233)
Surplus/Deficit with Temporary Seats	(158)	(187)	(621)	(713)	(808)
Grades 7-8					
Forecasted Students	87	95	197	222	247
Surplus/Deficit in Permanent Seats	458	450	348	323	298
Surplus/Deficit with Temporary Seats	758	750	648	623	598
Grades 9-12					
Forecasted Students	133	153	316	369	419
Surplus/Deficit in Permanent Seats	737	717	554	501	451

Widefield School District 3
New Fort Carson Students Plus Baseline

Projection Year	**2007**	**2008**	**2009**	**2010**	**2011**
Grades K-6					
Forecasted Students	482	616	1156	1355	1558
Surplus/Deficit in Permanent Seats	(691)	(825)	(1365)	(1564)	(1767)
Surplus/Deficit with Temporary Seats	(266)	(400)	(940)	(1139)	(1342)
Grades 7-8					
Forecasted Students	119	158	291	347	403
Surplus/Deficit in Permanent Seats	426	387	254	198	142
Surplus/Deficit with Temporary Seats	726	687	554	498	442
Grades 9-12					
Forecasted Students	189	268	492	607	721
Surplus/Deficit in Permanent Seats	681	602	378	263	149

Source: RKG, EDAW, Inc.

Colorado Springs District 11

Colorado Springs School District 11 (D11) is the oldest and largest of the study area's school districts, with a student population of almost 30,000. D11 is located directly north of the Fort Carson installation and encompasses the central city area of Colorado Springs. The district manages 57 school buildings, of which 39 were built between 1900 and 1969. It is the seventh largest school district in the state, but due to the dynamics of an aging population and fewer new single-family housing starts, it currently has excess capacity for additional students. In contrast to Widefield D2 and Fountain-Fort Carson D8 which receive students from new single-

family housing units, the majority of new D11 students will originate from apartment complexes spread throughout the central and southern Colorado Springs area.

In 2007, D11 is closing a middle school, building two new elementary schools, and putting an addition on one high school. One of the new elementary schools will be opening in the southeastern portion of the district to increase availability to Fort Carson students.

D11 has an October 2006 kindergarten through twelfth grade enrollment total of 29,512 children, 947 of which are coming from the other four school districts in the study area. Table 8 outlines the general enrollment and capacity information for D11. Within the district, 2,656 students whose resident district is D11 instead attended neighboring districts; 1,024 more students opted-out of the district than opted-in from neighboring school districts. There are several private schools located in the district with a combined enrollment of 3,540 students in grades K-12, as of October 2006. Overall school capacity for D11 is 36,518 permanent seats, and 1,270 temporary seats at their elementary level.

Table 7. D11 Enrollment and Capacity Data

Colorado Springs District 11

Grade Level	Grade Range	Oct. 2006 Enrollment Data	Permanent Capacity*	Temporary Capacity*
Elementary	K-5	13,481	17,395	1270
Middle School	6-8	6418	8428	No portable classrooms
High School	9-12	9613	10,695	No portable classrooms
Totals		**29,512**	**36,518**	**1270**

Source: CDE, D11

Colorado Springs District 11
Private school attendance, K-12 enrollment listed only

ABC Preschool	K-8	6
American Academy	4-10	4
Child Nursery Centers Day Nursery	K	15
Children Of Destiny Childcare	K-6	38
Children's Depot	K	11
Colorado Springs Christian Schools	K-12	1104
Cornerstone Baptist Academy	K-12	71
Corpus Christi Catholic School	K-8	318
Divine Redeemer Catholic School	K-8	229
Evangelical Christian Academy	K-12	338
Golden Mountain Montessori	K	5
Holy Cross Lutheran Church	K-2	28
Holy Trinity	K-8	146
Immanuel Lutheran School	K-8	104
Joseph's Montessori Inc	K	15
Jr Academy Children Center Ltd	K-4	23
Junior Academy Small Wonders	K	17
Kindercare Learning Center	K	6

La Petite Academy	K-4	41
Lil Blessings Country School	K	20
Pikes Peak Academy	9-12	45
Pikes Peak Christian School	K-12	390
Renaissance Academy	K-8	52
Salem Lutheran School	K-8	25
Springs Adventist Academy	1-10	36
St Mary's High School	9-12	387
St Stephens Episcopal Day School	K-5	38
Treetop Learning Center	K	11
West Side Academy	K	6
Young Scholars Academy	K	11
		3540
Home-based education enrollment		**628**

Number of Colorado Springs District 11 children attending other districts' schools

District attended:	
Harrison 2	523
Fountain-Fort Carson 8	59
Widefield 3	57
Cheyenne Mountain 12	381
Other Districts	1636
	2656

Number of other districts' children attending Colorado Springs District 11

Source district:	
Harrison 2	676
Fountain-Fort Carson 8	70
Widefield 3	122
Cheyenne Mountain 12	79
Other Districts	667
	1,614

Enrollment and capacity data corrected for school of choice

Oct. 2006 enrollment	29,512
minus out-of-district children	1614
plus district children going elsewhere	2656
In-district children	**30,554**
Capacity	37,788
Surplus/deficit capacity based on in-district children only	**7,234**

Source: CDE, EDAW, Inc.

*D11 capacity includes entire district.

Table 8 indicates the number of new Fort Carson students forecasted to enter D11, as well as the Fort Carson students combined with students from baseline growth. D11 currently has sufficient capacity in all its grades to meet the projected needs for enrollment of the estimated number of

Fort Carson students. D11 only reaches 85% of permanent capacity in 2011 when new Fort Carson students plus baseline growth are combined in the calculation.

Table 8. D11 Surplus/Deficit Capacity Based on Military Student Projections with and without Baseline Projections. **Projected student values include matriculation for years 2008-2011.**

Colorado Springs District 11
New Fort Carson Students Only

Projection Year	**2007**	**2008**	**2009**	**2010**	**2011**
Grades K-5					
Forecasted Students	187	195	449	507	565
Surplus/Deficit in Permanent Seats	3727	3719	3465	3407	3349
Surplus/Deficit with Temporary Seats	4997	4989	4735	4677	4619
Grades 6-8					
Forecasted Students	76	81	186	213	241
Surplus/Deficit in Permanent Seats	1934	1929	1824	1797	1769
Grades 9-12					
Forecasted Students	76	85	193	230	265
Surplus/Deficit in Permanent Seats	1006	997	889	852	817

Source: RKG, EDAW, Inc.

Colorado Springs District 11
New Fort Carson Students Plus Baseline

Projection Year	**2007**	**2008**	**2009**	**2010**	**2011**
Grades K-5					
Forecasted Students	231	282	579	681	783
Surplus/Deficit in Permanent Seats	3683	3632	3335	3233	3131
Surplus/Deficit with Temporary Seats	4953	4902	4605	4503	4401
Grades 6-8					
Forecasted Students	99	126	253	301	351
Surplus/Deficit in Permanent Seats	1911	1884	1757	1709	1659
Grades 9-12					
Forecasted Students	102	140	277	343	408
Surplus/Deficit in Permanent Seats	980	942	805	739	674

Source: RKG, EDAW, Inc.

Harrison District 2

The Harrison School District 2 (D2) is in close proximity to Fort Carson, adjacent to the installation's northern border. D2 is experiencing high population growth due to available land for development and more affordable housing prices, but currently has no plans for expansion. D2 has an October 2006 kindergarten through twelfth grade enrollment total of 10,419 children, 845 of which are coming from the other four school districts in the study area. Table 10 outlines the general enrollment and capacity information for D2. Within the district, 1657 students whose resident district is D2 instead attended school in neighboring districts; 565 more students opted-out of the district than opted-in from neighboring school districts. Overall school capacity for D2 is 16,832 permanent seats.

Table 9. Harrison District 2 Enrollment and Capacity Data

Harrison District 2

Grade Level	Grade Range	Oct. 2006 Enrollment Data	Permanent Capacity	Temporary Capacity
Elementary	K-5	5734	9341	No portable classrooms
Middle School	6-8	1755	3405	No portable classrooms
High School	9-12	2930	4086	No portable classrooms
Totals		10,419	16,832	0

Source: CDE, D2

Private school attendance, K-12 enrollment listed only

The Hillsprings Learning Center	2-9	18
Home based education enrollment		65

Number of Harrison District 2 children attending other districts' schools

District Attended	
Colorado Springs 11	676
Fountain-Fort Carson 8	171
Widefield 3	197
Cheyenne Mountain 12	424
Other Districts	189
	1657

Number of other districts' children attending Harrison District 2

Source District	
Colorado Springs District 11	523
Fountain-Fort Carson 8	80
Widefield 3	232
Cheyenne Mountain 12	10
Other Districts	247
	1092

Enrollment and capacity data corrected for school of choice

Oct. 2006 enrollment	10,419
Minus out-of-district children	1092
Plus district children going elsewhere	1657
In-district children	10,984
Capacity	**16,832**
Surplus/deficit capacity based on in-district children only	**5848**

Source: CDE, EDAW, Inc.

Table 10 indicates the number of new Fort Carson students forecasted to enter D2, as well as the Fort Carson students combined with students from baseline growth. D2 as sufficient capacity in all its grades to meet the projected needs for enrollment of the estimated number of Fort Carson students, and does not exceed 85% utilization during any year, even when baseline growth is included in the calculation.

Table 10. D2 Surplus/Deficit Capacity Based on Military Student Projections with and without Baseline Projections. **Projected student values include matriculation for years 2008-2011.**

Harrison District 2
New Fort Carson Students Only

Projection Year	2007	2008	2009	2010	2011
Grades K-5					
Forecasted Students	153	162	360	404	448
Surplus/Deficit in Permanent Seats	3454	3445	3247	3203	3159
Grades 6-8					
Forecasted Students	63	67	149	169	191
Surplus/Deficit in Permanent Seats	1587	1583	1501	1481	1459
Grades 9-12					
Forecasted Students	62	71	155	183	210
Surplus/Deficit in Permanent Seats	1094	1085	1001	973	946

Source: RKG, EDAW, Inc.

New Fort Carson Students Plus Baseline

Projection Year	2007	2008	2009	2010	2011
Grades K-5					
Forecasted Students	192	237	473	555	639
Surplus/Deficit in Permanent Seats	3415	3370	3134	3052	2968
Grades 6-8					
Forecasted Students	82	106	207	247	288
Surplus/Deficit in Permanent Seats	1568	1544	1443	1403	1362
Grades 9-12					
Forecasted Students	85	118	228	282	335
Surplus/Deficit in Permanent Seats	1071	1038	928	874	821

Source: RKG, EDAW, Inc.

Cheyenne Mountain District 12

Cheyenne Mountain District 12 (D12) is located directly northwest of Fort Carson. The housing market is relatively built out in the district, but D12 was second only to nearby Falcon District 49 in the percent of enrollment growth in 2006 due to school-of-choice immigrants. D12 currently has no plans for expansion and anticipates attracting additional students through school-of-choice. Table 11 outlines the general enrollment and capacity information for D12. Within the district, 136 students whose resident district is D12 instead attended school in neighboring districts; 1,096 more students opted-in to the district for education than opted-out to attend neighboring districts. Overall school capacity for D12 is 5,518 permanent seats. In 2006, D12 had capacity utilization rates of 90% and 92% for its middle schools and high schools, respectively, which would increase as new Fort Carson students arrive.

Table 11. D12 Enrollment and Capacity Data

Cheyenne Mountain District 12

Grade Level	Grade Range	Oct. 2006 Enrollment Data	Permanent Capacity	Temporary Capacity
Elementary	K-6	2494	3036	No portable classrooms
Middle School	7-8	802	890	No portable classrooms
High School	9-12	1462	1592	No portable classrooms
Totals		**4758**	**5518**	**0**

Source: CDE, D12

Private school attendance, K-12 enrollment listed only

Pauline Memorial Catholic School	K-8	189
The Colorado Springs School	K-12	409
		598

Home based education enrollment	**21**

Number of Cheyenne Mountain District 12 children attending other districts' schools

District Attended	
Harrison 2	10
Fountain-Fort Carson 8	6
Widefield 3	5
Colorado Springs 11	79
Other Districts	36
	136

Number of other districts' children attending Cheyenne Mountain District 12

Source District	
Colorado Springs District 11	381
Fountain-Fort Carson 8	120
Widefield 3	168
Harrison 2	424
Other Districts	139
	1232

Enrollment and capacity data corrected for school of choice

Oct. 2006 enrollment	4758
Minus out-of-district children	1232
Plus district children going elsewhere	136
In-district children	**3662**
Capacity	5518
Surplus/deficit capacity based on in-district children only	**1856**

Source: CDE, EDAW, Inc.

Table 12 indicates the number of new Fort Carson students forecasted to enter D12, as well as the Fort Carson students combined with students from baseline growth. D12 currently has

sufficient capacity in all its grades to meet the projected needs for enrollment of the estimated number of Fort Carson students, but the district has a decreasingly narrow margin of surplus capacity in its middle and high schools as 2011 is reached.

Table 12. D12 Surplus/Deficit Capacity Based on Military Student Projections with and without Baseline Projections. **Projected student values include matriculation for years 2008-2011.**

Cheyenne Mountain District 12
New Fort Carson Students Only

Projection Year	2007	2008	2009	2010	2011
Grades K-6					
Forecasted Students	50	53	120	135	151
Surplus/Deficit in Permanent Seats	492	489	422	407	391
Grades 7-8					
Forecasted Students	12	13	28	32	36
Surplus/Deficit in Permanent Seats	76	75	60	56	52
Grades 9-12					
Forecasted Students	18	20	45	53	61
Surplus/Deficit in Permanent Seats	112	110	85	77	69

Source: RKG, EDAW, Inc.

Cheyenne Mountain District 12
New Fort Carson Students Plus Baseline

Projection Year	2007	2008	2009	2010	2011
Grades K-6					
Forecasted Students	63	78	157	185	213
Surplus/Deficit in Permanent Seats	479	464	385	357	329
Grades 7-8					
Forecasted Students	15	20	39	47	54
Surplus/Deficit in Permanent Seats	73	68	49	41	34
Grades 9-12					
Forecasted Students	24	34	66	81	96
Surplus/Deficit in Permanent Seats	106	96	64	49	34

Source: RKG, EDAW, Inc.

Fountain-Fort Carson District 8

Fountain-Fort Carson District 8 (D8) serves as the on-post district and is located east and west of Fort Carson. D8 is the only district that manages schools on-post, and as a result, new on-post housing will create demand for spaces within Fountain-Fort Carson District 8. D8 recently completed an addition to the on-post middle school and is currently building a new on-post elementary school that can accommodate 600 students. D8 anticipates reaching its middle school capacity with additional Fort Carson students and baseline population increase. Table 13 outlines the general enrollment and capacity information for D8. Within the district, 594 students whose resident district is D8 instead attended school in neighboring districts; 60 more students opted-out of the district than opted-in from neighboring school districts. There are no private schools in the school district, and very few students are home schooled. Overall school capacity for D8 is 7,814 permanent seats. In 2006, Fountain-Fort Carson High School had a capacity utilization rate of 89%, which would increase as new Fort Carson students arrive.

Table 13. D8 Enrollment and Capacity Data

Fountain-Fort Carson District 8

Grade Level	Grade Range	Oct. 2006 Enrollment Data	Permanent Capacity	Temporary Capacity
Elementary	K-6	3137	4054	No portable classrooms
Middle School	7-8	1285	2066	No portable classrooms
High School	9-12	1503	1694	No portable classrooms
Totals		**5925**	**7814**	**0**

Source: CDE

Fountain-Fort Carson District 8

Private school attendance, K-12 enrollment listed only

Home based education enrollment	**20**

Number of Fountain-Fort Carson District 8 children attending other districts' schools

District Attended	
Harrison 2	80
Cheyenne Mountain 12	120
Widefield 3	247
Colorado Springs 11	70
Other Districts	77
	594

Number of other districts' children attending Fountain-Fort Carson District 8

Source District	
Colorado Springs District 11	59
Cheyenne Mountain 12	6
Widefield 3	233
Harrison 2	171
Other Districts	65
	534

Enrollment and capacity data corrected for school of choice

Oct. 2006 enrollment	5925
Minus out-of-district children	534
Plus district children going elsewhere	594
In-district children	**5985**
Capacity	7814
Surplus/deficit capacity based on in-district children only	**1829**

Source: CDE, EDAW, Inc.

Table 14 indicates the number of new Fort Carson students forecasted to enter D8, as well as the calculations for Fort Carson students combined with students from baseline growth. D8 currently does not have sufficient capacity in its high school grades to meet the projected needs for

enrollment of the estimated number of Fort Carson students in the first year of troop expansion when baseline growth is included. Elementary schools will be impacted in 2009 with a predicted deficit of 355 permanent seats. D8 had previously identified a need for school expansions, including an additional elementary school should Fort Carson choose to build out single-family on-post housing, which is consistent with the findings of this analysis.

Table 14. D8 Surplus/Deficit Capacity Based on Military Student Projections with and without Baseline Projections. **Projected student values include matriculation for years 2008-2011.**

Fountain-Fort Carson District 8
New Fort Carson Students Only

Projection Year	2007	2008	2009	2010	2011
Grades K-5					
Forecasted Students	419	470	999	1089	1177
Surplus/Deficit in Permanent Seats	498	447	(82)	(172)	(260)
Grades 6-8					
Forecasted Students	171	194	413	457	503
Surplus/Deficit in Permanent Seats	610	587	368	324	278
Grades 9-12					
Forecasted Students	170	204	431	496	556
Surplus/Deficit in Permanent Seats	21	(13)	(240)	(305)	(365)

Source: RKG, EDAW, Inc.

Fountain-Fort Carson District 8
New Fort Carson Students Plus Baseline

Projection Year	2007	2008	2009	2010	2011
Grades K-5					
Forecasted Students	511	652	1272	1454	1637
Surplus/Deficit in Permanent Seats	406	265	(355)	(537)	(720)
Grades 6-8					
Forecasted Students	219	289	554	644	736
Surplus/Deficit in Permanent Seats	562	492	227	137	45
Grades 9-12					
Forecasted Students	226	319	608	734	857
Surplus/Deficit in Permanent Seats	(35)	(128)	(417)	(543)	(666)

Source: RKG, EDAW, Inc.

D. STAFFING CAPACITY ANALYSIS

The need for additional full time employed (F.T.E.) teachers will be an integral part of accommodating new students from the troop reassignments to Fort Carson. The average pupil to teacher ratio across all grades, for all five focal school districts, is 16.4 students per teacher[2]. The ratio for the individual school districts varies from a low of 14.6 in Harrison D2, to a high of 17.4 in Fountain-Fort Carson D8. As shown in Table 15, 370 new FTE teachers will be needed for the five most impacted school districts by year 2011-12 as a result of new, matriculating Fort Carson students. Fountain-Fort Carson D8 is predicted to have the greatest need for additional full time staff.

[2] Colorado Department of Education, Summary of District Data 2005-2006, http://www.cde.state.co.us/index_stats.htm

Table 15. End-State Demand for New Full Time Employed Teachers

Potential F.T.E. Teacher Increases, by 2011

	Widefield D3	Colorado Springs D11	Harrison D2	Cheyenne Mountain D12	Fountain-Fort Carson D8
Forecasted new Fort Carson Student enrollment, including matriculation	1690	1071	849	248	2236
Pupil to Teacher Ratio, Oct. 2006	16.8	16.1	14.6	17.1	17.4
New F.T.E. teachers based on current Pupil to Teacher Ratio	**101**	**67**	**58**	**15**	**129**

Source: CDE, RKG, EDAW

Similar to national trends, potential shortages in teachers will be most pronounced in the areas of science, math, and special education (occupational therapy, physical therapy, speech language pathologists), school counselors, and languages (esp. Spanish), due in part to salary competition. For more details on school counselor needs, refer to the Social Services Technical Report. Fountain-Fort Carson D8 also serves as the Compassionate Assignment school district for troops stationed at Fort Carson, which means that personnel with students needing special education can be stationed at Fort Carson to use the school's highly regarded program. However, the compassionate assignment policy may result in larger-than-normal concentrations of military special needs children. Funds should continue to be allocated to districts which provide additional programs and facilities for the education of special needs children.

E. ADULT EDUCATION

Introduction and Methodology

This section describes adult education issues relating to the Fort Carson troop increase and estimates of demand and capacity for adult education opportunities from soldiers, civilian employees, and dependents stationed at Fort Carson. Data and anecdotal information provided by Fort Carson were utilized to assess the installation's capacity to accommodate adult education demands resulting from the troop increase. The analysis also includes the results of a review of adult educational programs in the study area. The PPACG team continues to conduct interviews with local leaders in the adult education field to understand current community efforts and practices.

The Army Continuing Education System (ACES) works through the Mountain Post Training and Education Center (MPTEC) at Fort Carson. The MPTEC provides degree programs, enrichment, resource learning centers, counseling, bookstore services, registration, and many other services to Fort Carson soldiers, veterans, civilian employees, and dependents and serves as the remote education hub for Army adult education services in five states and the eastern half of Nevada. The majority of adult education programs occur in the evening, as MPTEC is utilized for professional military training during the day.

The mission of the Mountain Post Training and Education Center's (MPTEC) is "to improve the combat readiness of the Total Army by planning, resourcing, and implementing educational programs and services to support the professional and personal development of quality soldiers, adult family members, and DACs (Department of the Army Civilians)." Specialized military training is mandatory for all soldiers, and lifelong learning opportunities enhance performance and advancement in employment during and after military service, build self-confidence and allow for personal growth, and provide for a flexible, knowledgeable work force.

Unfortunately, Fort Carson has not had adequate facilities to fully implement ACES's mission due to lack of adequate facilities. For over ten years, the demand for education opportunities on Fort Carson has outpaced the availability of space to hold classes, and funding for additional capacity or a new facility is currently on hold. A concern on Fort Carson, and nationwide, is the ability to provide adequate training for troops, both before and during deployment breaks.[3]

The ability of MPTEC to meet growing demands for adult education, in addition to military training, has been identified by stakeholders as a vital need for soldiers, civilian employees, and dependents stationed at Fort Carson. Analysis of long-term trends indicate that enrollment in accredited college degree and adult education programs has increased annually since 1992, despite short-term enrollment fluctuations due to military missions and the fact that the active-duty population has remained generally level (Figures 1 and 2). For example, 1,000 active-duty soldiers took an average of 420 college classes annually between 2002 and 2006, up from 259 classes between 1992 to 1996. The increase in enrollment is due primarily to increased availability of Distance Learning programs. Participation in college programs by activated Reservists and National Guard member has also increased. Deployed troops are accessing education opportunities through distance-learning courses but also seek classroom-based courses when they are on-post. It is anticipated that similar future gains in enrollment may be restricted due to the insufficient size and number of MPTEC classrooms and other facility constraints, as described in the following sections. The availability of additional on-post classroom space for adult education should be included in facility expansion plans.

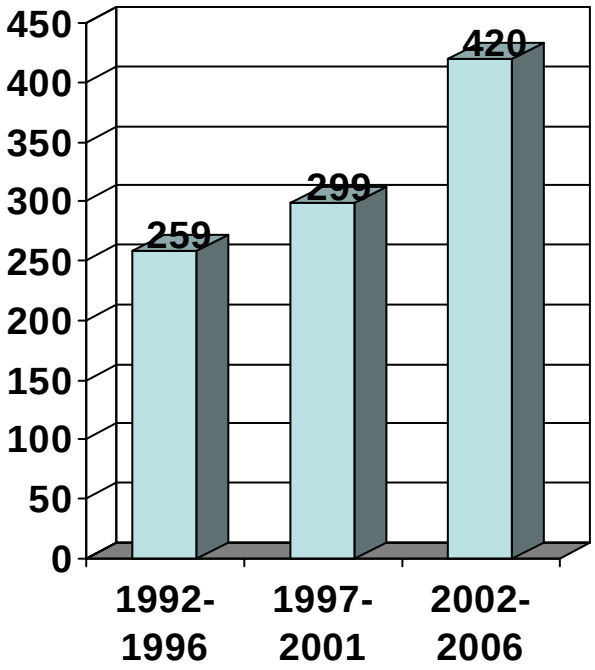


Figure 1. Average Yearly College Enrollments per 1,000 Soldiers within Serviced Population

[3] James Kitfield, National Journal, *Army troops, budget stretched to the limit*, Sept. 8, 2003.

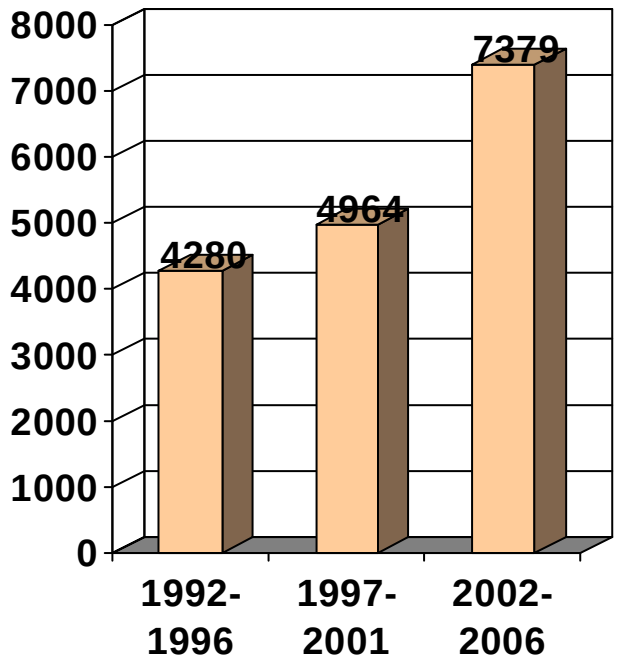


Figure 2. Average Yearly Total Adult Education Class Enrollments

Key Findings

Proximity of Regional Adult Education Opportunities

There is a premium to offering classes on base, due in large part to the time constraints of active-duty soldiers and their families. Travel time from on-post housing and the proximity and ease of on post child care and Fountain-Fort Carson D8 schools were acknowledged by many stakeholders as a soldier's most important considerations in pursuing a degree program. The MPTEC is one of only two facilities in southern Colorado Springs that provides higher education programs.

A selection of adult education opportunities is available at the MTPEC as described below, but the majority of adult or continuing education programs and classes that students participate in are held off-post. MTPEC also directs students to numerous on-line and distance-learning programs which are not listed here. There are many colleges and universities in the Fort Carson study area. However, the majority of off-post locations for in-person adult education programs are a minimum of 45 minutes away in northern Colorado Springs or to the south in Pueblo. It should be noted that the general public can enroll in courses and complete degrees at the MPTEC if space is available after active-duty soldiers have enrolled.

The other facility in southern Colorado Springs is Pikes Peak Community College (PPCC) Centennial Campus located off South Academy Boulevard, adjacent to Fort Carson but outside the Gates. PPCC offers a wide range of degree programs and student services, but only at the lower level (i.e. Associates Degree). The Centennial campus is the main campus of the PPCC system which also has a downtown facility and a northern campus.

Adult education programs exist within the public school systems for GEDs, English as a second language, or literacy. The extended driving distances to college campus sites may impede students' willingness to travel to attend classes and pursue diverse degree programs.

On-post Programs

Undergraduate Programs

- Pikes Peak Community College
- University of Colorado at Colorado Springs
- Embry-Riddle Aeronautical University
- Colorado State University, Pueblo

Graduate Programs

- Embry-Riddle Aeronautical University
- Troy State University
- Colorado State University, Pueblo

Off-post Programs in the Colorado Springs Area

Undergraduate Programs

- Colorado Christian University at Colorado Springs
- Colorado Technical University
- University of Colorado at Colorado Springs
- DeVry University
- National American University
- Regis University
- The Colorado College
- University of Phoenix, Colorado Springs Campus
- Colorado State University, Pueblo
- Pikes Peak Community College

Graduate Programs

- University of Colorado at Colorado Springs
- Webster University
- University of Phoenix, Colorado Springs Campus
- Regis University
- University of Northern Colorado
- Colorado Christian University at Colorado Springs
- Colorado Technical University
- Keller Graduate School of Management of DeVry University
- National American University
- Colorado State University, Pueblo

DOE and DOD Joint Programs

- Troops to Teachers Program, University of Colorado at Colorado Springs

Quality and Capacity of Educational Facilities on Base

On-post adult education programs are constrained by an inadequate size, type, and number of classroom, lab, and administrative office space. The primary MPTEC building (Building 1117) is housed in a former men's barracks building, which was converted in the 1990's for use as an education and training facility. The MPTEC has remained in this building since that time, and the facility has deteriorated due to normal wear and deferred maintenance. It is inadequate as the installation's long-term training and education facility: students are using the kitchen area as classroom and study spaces, the dormitory structure results in oversized restrooms of little use, insufficient storage requires that classrooms be taken out of circulation to support special missions, restroom plumbing sometimes leaks into study areas, and a lack of adequately sized counseling and registration waiting areas force students to stand in long lines down narrow hallways during times of peak usage.

Table16. MPTEC Facilities at Fort Carson

Building	Use	Gross Sq Ft
1117	ACES Programs & Admin, TADLP classrooms, Installation Classroom facility, HAZMAT Training, CPO Training courses, College Programs & Offices	54,142
1361	Contracted IMT courses such as ULLS, Unit Armor, Commander & First Sergeant Orientation, NBC Defense, Unit Movement Officer, Air-Load Planner…	13,280
2792	Contracted IMT courses: Generator Operator, Fuel Handler	5,894
Total:		**73,316**

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Facility deficiencies are most acutely felt during the limited time that units are home between deployments and training. In FY 2007, there was an estimated 50% shortage of classrooms for Individual Military Training (IMT) programs. Space constraints do not accommodate all troops who may need, or are required to take, education or military training courses in a compressed time frame.

ADA Accessibility

Another significant deficiency is ADA accessibility. The 2nd and 3rd stories of the MPTEC are not ADA accessible, as well as many restrooms and offices. Only two classrooms on the 1st floor can accommodate persons with disabilities. This results in last-minute scheduling and room changes, should a person with disabilities need to attend a given course. With many veterans and troops returning from deployment with disabilities desiring to complete their education, ADA accessibility will become a critical issue in the near future.

Inadequate Offering of On-post Education Opportunities

The insufficient size and number of MPTEC classrooms hinders the center's offerings of diverse adult education programs on-post. The current building lacks specialized classrooms such as

laboratories for nursing, criminal justice, or electronics programs, sufficient administrative and counseling offices, adequate space for students in independent study areas and computer terminals, a fully-stocked and accessible book store, and mid- to large-sized auditoriums with adequate seating for lecture-style courses. These space limitations in turn limit the number of courses that can be offered concurrently, the number of students that can attend classes at any one time, the number of regional education providers that can be accommodated, and ultimately, the selection of courses that can be offered on-post.

Accessibility of On-line or Distance-learning Education Opportunities

Although on-line or distance learning opportunities are available for troops, employed civilians, and family members, insufficient independent study areas and computer terminals at the MPTEC may impact the accessibility of these programs for students who do not have equipment at home or who lack a quiet place to study.

Adult Education Forecast

It is anticipated that the increase of 11,400 additional troops, 21,287 military dependents, 430 civilian personnel, 692 civilian dependents coming to Fort Carson will exacerbate current facility constraints as the demand for adult education opportunities and required military training increases. The troop increase will affect the number of classroom spaces needed for Individual Military Training (IMT) between deployments. It will also increase the number of troops, dependents, and civilian contractors who desire access to the educational opportunities offered by MPTEC. With military training a mandatory requirement for active-duty troops and a 50% shortage of classrooms for IMT programs in FY 2007, the MPTEC facility will not be able to support increased demands for both military training and adult education at the existing level of service. While it is difficult to predict which specific programs or services may not be available, it is anticipated that adult education programs will be substantially reduced in order to accommodate military training programs.

F. RECOMMENDATIONS

Enrollment and Capacity Recommendations

ISSUE: CAPACITY VARIES ACROSS SCHOOL DISTRICTS IN THE REGION, AND THE MOST HEAVILY-IMPACTED DISTRICTS ANTICIPATE SHORTFALLS BASED ON FORT CARSON GROWTH.

Over half of new students are forecasted to reside within Fountain-Fort Carson District 8 (33%) and Widefield School District 3 (25%), two of the school districts with high baseline growth and relatively little capacity for new students. One-third of new Fort Carson students are forecasted to reside within Colorado Springs District 11 (16%), Harrison District 2 (13%), or Cheyenne Mountain District 12 (4%); these three districts have relatively more capacity for new students. Ten percent of new Fort Carson students are forecast to reside in Outside School Districts (4%) or attend private schools and home schools (6%). While the most highly impacted school districts have been planning to accommodate forecasted students, some school districts and schools near the post will experience capacity deficits, notably D3 (elementary) and D8 (elementary and high school), shown in Table 17. D3, D12, and D8 exceeded 85% utilization of capacity in 2006 or will exceed this rate early in the troop increase process.

Table 17. End-State Capacity Analysis for Impacted School Districts, FY 2011-12

New Fort Carson Students Only

	Widefield D3	Colorado Springs D11*	Harrison D2	Cheyenne Mountain D12	Fountain-Fort Carson D8
Elementary					
Forecasted Students	1024	565	448	151	1177
Surplus/Deficit in Permanent Seats	(1233)	3349	3159	391	(260)
Surplus/Deficit in Temporary Seats	(808)	4619	n/a	n/a	n/a
Middle School					
Forecasted Students	247	241	191	36	503
Surplus/Deficit in Permanent Seats	298	1769	1459	52	278
Surplus/Deficit in Temporary Seats	598	n/a	n/a	n/a	n/a
High School					
Forecasted Students	419	265	210	61	556
Surplus/Deficit in Permanent Seats	451	817	946	69	(365)
Surplus/Deficit in Temporary Seats	n/a	n/a	n/a	n/a	n/a

Source: RKG, EDAW, Inc.

New Fort Carson Students Plus Baseline

	Widefield D3	Colorado Springs D11*	Harrison D2	Cheyenne Mountain D12	Fountain-Fort Carson D8
Elementary					
Projected Students	1558	783	639	213	1637
Surplus/Deficit in Permanent Seats	(1767)	3131	2968	329	(720)
Surplus/Deficit in Temporary Seats	(1342)	4401	n/a	n/a	n/a
Middle School					
Projected Students					
Surplus/Deficit in Permanent Seats	403	351	288	54	736
Surplus/Deficit in Temporary Seats	142	1659	1362	34	45
High School	442	n/a	n/a	n/a	n/a
Projected Students					
Surplus/Deficit in Permanent Seats	721	408	335	96	857
Surplus/Deficit in Temporary Seats	149	674	821	34	(666)
	n/a	n/a	n/a	n/a	n/a

Source: RKG, EDAW, Inc.

*D11 capacity includes entire district.

Student forecasts include matriculation for years 2008-2011

RECOMMENDATION: Widefield D3 and Fountain-Fort Carson D8 have anticipated the troop increase since 2005 and have plans to construct additional facilities to meet demand. However, additional funding will be necessary to meet the increased demand of Fort Carson students. These districts with anticipated capacity shortfalls will need to obtain funding and construct additional facilities based on continually updated student projections.

One solution for those school districts with underutilized facilities may lie with open enrollment, which is already a significant factor in district enrollments. School districts with excess capacity can, to a degree, attract students from other school districts. In addition to proximity and

academic performance, the ability of districts to attract new students may be influenced by how well a district markets itself as "military-friendly" by providing programs such as all-day kindergarten, early education, before- and after-school activities, and special need programs such as speech, occupational therapy, and other family support systems. Best practices and proposed programs evaluated by D11 may be applicable to other districts, such as military-family welcoming websites, a single point-of reference website for new arrivals, informational/recruitment materials to market schools to new military families that may not live within District boundaries, satellite registration offices, and a "School Transition Workbook."

Accurate forecasts and enrollments are critical to school districts' three "B" responses: boundary adjustments, bonding, or building. Each school district should also continue to regularly conduct its own student forecasts as demographic and housing development trends evolve and change annually. Most school districts evaluate boundary adjustments annually, and all school districts similarly monitor their bonding capacity (tax caps and political will) and building needs.

Another solution for under- or over-utilized facilities may lie in charter schools. Where extra capacity exists, charter schools can re-use surplus facilities. Where insufficient capacity exists, some charter schools can fund the capital construction of new facilities. For example, Harrison School District 2 and Cheyenne Mountain School District 12 saw large increases in enrollments in 2004 and 2006, respectively, due to charter schools that attracted students from outside the district.

Lastly, as troops increase at Fort Carson, School Districts, Fort Carson, municipalities, child care providers, and community groups alike will all face facility constraints. This provides an opportunity for creative facility partnerships, as has been demonstrated by the Lifelong Learning Center at Offutt AFB in Bellevue, Nebraska. Built on a 26-acre campus owned by Bellevue Public Schools, the Lifelong Learning Center hosts four buildings offering resources from Bellevue Public Schools, Offutt AFB, Bellevue Senior Citizens Center, Metropolitan Community College, and various governmental agencies. The Center is a one-stop for all families in the District where they can register for school, apply for employment, attend the Early Childhood Center, Lied Activity Center, a computer-based library, Adult Education, and Metropolitan Community College. It has been recognized by the State of Nebraska for putting military resources to work in the classroom - such as Offutt linguists providing instruction to fifth-grade students in Arabic, Chinese and Spanish; Offutt computer programmers providing technology instruction in CISCO; junior officers providing tutoring to middle school students; military musicians working with Bellevue bands; and military personnel working with JROTC cadets.

ISSUE: STAFFING SHORTAGES. Nearly 400 new FTE teachers, including special needs instructors, will be needed to staff the five most impacted school districts by year FY2011 solely as a result of the Fort Carson troop increase. This number will be higher based on projected baseline growth.

RECOMMENDATION: School districts and Fort Carson can work together to fill school positions by encouraging military spouses and former service members to seek employment in schools. Fort Carson, adult education providers, and school districts should aggressively promote Troops-to-Teachers, managed by the Defense Activity for Non-Traditional Education Support (DANTES) and funded by the U.S. Department of Education and the Department of Defense, and other alternative certifications programs to recruit former military personnel or spouses. These types of programs have the added benefit of promoting the hiring of staff with personal military

experiences (as a former active duty member, a spouse, or as a military child), who are able to relate to the life of the mobile child as well as provide insights to colleagues.

Rapid certification and placement of teachers can be accomplished through several mechanisms, including: 1) American Board for Certification of Teacher Excellence (ABCTE) certification programs, 2) alternative licensing programs available through the Colorado Department of Education, and 3) obtaining a Colorado license with proof of a license or certification in another state or country. If spouses who arrive with the troop increase are current or potential teachers, their quick inclusion into the education system in the area will help to reduce the impact of the predicted shortfall.

Coordination Recommendations

ISSUE: COORDINATION BETWEEN EDUCATION PROVIDERS AND FORT CARSON. The five most highly impacted school districts are accustomed to high baseline growth and shifting demographics and are sophisticated in predicting changes in development patterns and updating their programming accordingly. These districts are also experienced in working with military dependent children and have been preparing staffing, programming, and facilities for the increase in Fort Carson troops. District preparations have been evident since districts learned about BRAC-recommended increases at Fort Carson in 2005. For example, Colorado Springs D11 hired a consultant to evaluate its enrollment and marketing procedures for military families, and Fountain-Fort Carson D 8 immediately began planning for a new elementary school.

However, while there is a pronounced commitment to supporting military-dependent students and an attitude of acceptance towards changes resulting from Fort Carson growth in the school districts, there is a general feeling of uncertainty and a need for timely, clear communication to plan for necessary funding, resources, and adequate space. Districts have been planning for adequate capacity, yet the real question is timing; when will military students arrive? The timing issue affects adequate preparation in staffing, adequacy of services and creating a smooth transition depending on date in the school year of arrival. Timing is most acute in capital construction efforts, as a lengthy time frame for planning and voter approved bond measures and construction can take up to 7-10 years before occupancy. Given the delay in troop movements, several interviewees expressed a conservative approach to any further preparations. For instance, Fountain-Fort Carson D 8 overstaffed in FY 06-07 in anticipation of troop movements that did not occur.

School districts regularly need the most up-to-date information available from Fort Carson, no less than quarterly. Similarly, Fort Carson needs current information on school district enrollment requirements, calendars, specialized programs (e.g., magnet or special admission requirements, timelines, and pre-requisites) and specific graduation requirements (credits, state testing, and diploma options). The Fort Carson School Liaison Office serves as a point-of-contact for 17 local school districts, however, not all districts fully participate, communicate with one another, or coordinate with other installation changes in the study area. The Garrison Commander's Office now provides monthly updates to PPACG for distribution, and information should be tailored to the many and varied stakeholder groups interested in Fort Carson activities. A related challenge is to move beyond information-sharing protocols to achieve formal, long-term partnerships and support mechanisms such as time off for soldiers for parent-teacher conferences, adopt-a-

school programs, internship opportunities on Fort Carson, and vocations exchanges with school districts.

RECOMMENDATION: Some of the solutions offered include a focus on timely and consistent distribution of information to school districts to aid in preparation for the influx of students. The lessons learned from Fort Carson's growth could similarly benefit Peterson AFB, the U.S. Air Force Academy, and other installations and school districts in the study area.

In order to address challenges related to the increase of troops to Fort Carson, local school districts should create a working group consisting of key stakeholders throughout the study area. This working group, referred to in this document as the Military Impact School District Coalition (MISDC), should be formed to deal specifically with military troop expansions, contractions, or other military changes that affect student populations. The working group should include representatives from Fort Carson, including both military planning personnel and education related personnel (i.e. the School Liaison Officer), and all local school districts.

The mission of the MISDC should be to monitor impacts of military dependents on local school districts, offer opportunities for information exchange between districts that are affected by military impacts, and provide a unified organization that could pursue grant funding and other publicly-available monies. This coalition should be formed as soon as possible so that the next few surges of military-related dependents are as well planned for as those that have recently begun to arrive.

This type of intentional, carefully cultivated partnership between Fort Carson, local school districts and other military installations in the study area can make an additive difference for both military and school organizations. For instance, the coalition could organize meaningful joint installation and school district professional development. It could also solicit and include senior level military representation from Fort Carson when making school district policies, such as in the form of an ex-officio member or advisor to the school board or Parent-Teacher Association (PTA) leadership board. Senior level military representation could attend the regular Superintendents Roundtable meetings in the study area. This type of coalition may also be able to provide more influence regarding Army policies that affect school districts, such as encouraging, to the extent possible, family transitions during summer months, before the school year, to facilitate school district budget and staffing plans.

As the Fort Carson troop increase continues, federal and state funds could be pursued to offset impacts from the population increase. The MISDC could identify specific education related needs and make recommendations on how to best address military related impacts. School districts outside of those examined in this analysis should be invited to participate in the MISDC as well. For example, District 20, which is adjacent to the Air Force Academy, could hypothetically see increases or decreases in military dependents in the future and would likely benefit from being a part of the working group.

The need for physical space would be relatively limited; however, communications infrastructure and meeting space could be made available through a regional planning organization, such as the Pikes Peak Area Council of Governments, or through one of the key school districts. It is advisable to meet periodically on-post as well as at different school sites, for networking opportunities.

ISSUE: COORDINATION WITH PARENTS AND STUDENTS. Similar to the previous recommendation, parents and students need the most up-to-date information available from Fort Carson and school district (enrollment requirements, calendars, specialized programs, and specific graduation requirements). Regular communication already exists between Fort Carson and school districts through the School Liaison Office, but information could be made more accessible to parents and students. An orientation to local school districts is now part of in-processing requirements, and anecdotal evidence suggests that smoother transitions have resulted from the new requirement.

RECOMMENDATION: A hub for communication, such as a central website similar or in addition to the current PPACG website or School Liaison Office website would provide centralized, easy to access information for the districts. Information should include an interactive map of all school district boundaries, CSAP scores, school calendars, special programs, assessments, and open enrollment procedures, among other data and statistics.

Student Transitions and Achievement Recommendations

The research team found strong evidence of the outstanding efforts by school programs, District officials, and Fort Carson to "go the extra mile" for military students. Fort Carson School Liaison Officers and their school district counterparts communicate openly as a team to share ideas and information. Most importantly, joint attention to student transition has resulted in cooperative efforts becoming institutionalized in the form of a Memorandum of Agreement (MOA) between school districts. The purpose of the MOA is to make possible reciprocal practices, open conduits for information about requirements, and accelerate the exchange of best practices. With facilitation from the Fort Carson School Liaison Office, all but three Districts that serve Fort Carson have signed the MOA.

Notwithstanding these successes, there remain some areas where alliances, respect, and information can maximize smooth transitions for new military students and parents; the student, Fort Carson, and school officials all share this responsibility. This section focuses on the role of Fort Carson and local school districts on improving the educational experience for each student. The following recommendations are based on interviews with local school districts, the Fort Carson School Liaison Office, and the U.S. Army Secondary Education Transition Study (2001).

ISSUE: VARIATIONS IN SCHOOL CALENDARS. Variations in school calendars add to the challenges of transition. Calendar dates for the first day of school in fall 2007 range from the 9th of August to the 21st for the five districts analyzed. There are no state mandates for synchronizing start dates among schools.

RECOMMENDATION: At a minimum, school calendars should be clearly posted, similar to school district postings, on all appropriate Web sites and provided in other sources of information for parents. Scheduling implications, such as excessive (discretionary) absences, should be explained to parents and the student upon enrollment. Significant gains could further be accomplished between school districts, higher educational institutions, and Ft. Carson if start-and-end date calendars were synchronized. For instance, child care programs could anticipate the beginning and end of school year, and stay-at-home spouses could attend adult education classes while their children are at school. Such a coordination effort could begin with the five most impacted school districts in the region.

ISSUE: FACILITATING NEW STUDENT TRANSITIONS. Military students experience more transition issues than other students. The average military-connected student moves from school system to school system about three times more often than other students.[4] In addition to changing schools, family stability can be challenged during deployments. School programs are often the only source of both stability and achievement for students.

RECOMMENDATION: EXPECT EXCELLENCE IN STUDENT ACHIEVEMENT AND PROVIDE MULTIPLE ROUTES TO SUCCESS. Ensuring that military students take high level courses of study can assist them in obtaining course reciprocity and graduation approvals at subsequent schools. Academic programs such as Advanced Placement (AP) courses and International Baccalaureate (IB) programs can be an asset to transferring students.

"New kid" adjustments take time and attention, especially during the first day and during the first two weeks. School districts should review their systems to initially assess each new student during week one, and thereafter monitor students after week two, four, and six, changing instruction or environments if needed to improve performance.

School districts and Fort Carson should encourage and support military student networking organizations, such as a Fort Carson Student Service Club or Junior Reserve Officer Training Corps. Teachers and counselors should receive relevant professional development on the life of the military family and how that relates to the school experience. School districts should collaborate with Fort Carson to provide a community orientation program for new military families. Lastly, Fort Carson should formally recognize outstanding efforts or effective programs, and possibly eventually hold them up as models for other school districts in the study area.

Adult Education Recommendations

Recommendation: Construct a New Multi-use General Instruction Building and Education Center at Fort Carson.

The new facility should contain the following resources that are not currently available at the MPTEC:

- Adequate sized and attractive counseling offices
- Appealing and functional college office space
- Science laboratories
- Space for a health care program
- An auditorium for soldier briefings, large lecture courses, and training support
- Adequate parking
- Functional and appealing student study areas
- A Learning Resource Center to support all student needs, with an adequate number of workstations
- Adequate & pleasant restroom facilities
- Vocational-technical Classrooms
- Pleasant, clean, and adequately sized student break area

[4] U.S. Army Secondary Education Transition Study, 2001.

- Outside break area
- Student bookstore

In essence, a new facility should be a quality place that soldiers and family members enjoy learning in. A new facility would allow the number of enrollees, degree programs, and participating universities to increase, thereby ultimately fulfilling the MPTEC mission.

A new facility has been in various capital improvement plans since the 1970s. Detailed planning began in 2002, and the Corps of Engineers completed an initial plan dated August 25, 2003. It was slated for construction in FY 2007 with 104,285 usable sq ft or 120,000 total sq ft at a cost of $19.2 million. To meet demands resulting from the troop increase through FY 2011, the facility would need to be expanded to 122,565 usable or 141,000 total sq ft. With inflation plus the additional space required, the estimated cost for construction in 2011 is $27 million.

Due to other capital and operational needs, the new facility is on a validated needs list of the Major Construction Authority (MCA) in FY 2011. However, it is not on the essential needs list, it is not funded, and likelihood of funding is very low. Available land within the cantonment area needed to site the project is highly constrained. If funding were available, a decision might be required regarding building-site priority.

In addition to a new multi-use education center, the MPTEC should continue to increase university participation in credit banking, or credit transfers, where course credits, certificates, or current professional licenses can "count" towards a degree program's requirements.

RECOMMENDATION: Explore congressional appropriations, private-public partnerships, and other funding sources in addition to Major Construction Authority funds.

Funding a new multi-use education center of such scale and community reach will require commitment, creativity, and collaboration. Public universities have had to increasingly rely on private donations and endowments to fund capital improvements and program expansions. Fort Lewis, Fort Campbell, and Fort Hood each have constructed new education centers in the last 5 years through congressional appropriations, rather than through MCA funds. As the demand for increased access to higher education programs in southern Colorado Springs continues to mount, so too will opportunities arise to generate community support, partnerships, and donations. With recognition of the role a new facility could play in the lives of Fort Carson soldiers, veterans, civilian employees, their spouses and dependents, and the general public, local and regional education providers should collaborate to jointly invest in and advocate for Congressional appropriations, state support, enhanced use leasing, and/or private endowments to develop a new education facility on post.

APPENDIX

Websites

State and Federal Government

- Colorado Department of Education, Adult Education and Family Literacy, http://www.cde.state.co.us/index_adult.htm
- Colorado Department of Education, Alternative Licensing Programs, http://www.cde.state.co.us/cdeprof/Licensure_alt1_info.asp
- Colorado Department of Education, Fall 2005 Staff Data, http://www.cde.state.co.us/cdereval/rv2005staffdatalinks.htm
- Colorado Department of Education Home Page, http://www.cde.state.co.us/index_home.htm
- Colorado Department of Education, Information for parents and the community, http://www.colorado.gov/colorado-learning-education/parents-community-info.html
- Colorado Department of Education, Routes to Licensure in Colorado, http://www.cde.state.co.us/cdeprof/Licensure_outstate_info.asp
- Department of Defense, Defense Activity for Non-Traditional Education Support, http://www.dantes.doded.mil/dantes_Web/troopstoteachers/index.asp
- Department of Defense, U.S. Army, MyArmyLifeToo – Lifelong Learning, https://www.myarmylifetoo.com/skins/malt/home.aspx?mode=user
- Department of Defense, U.S. Army, The Army Continuing Education System Homepage and GoArmyEd, https://www.hrc.army.mil/site/education/index.html, https://www.earmyu.com/Login.aspx
- Mountain Post Training and Education Center, Fort Carson, http://www.carson.army.mil/education/
- U.S. Army, Military Personnel Service Center, Compassionate Assignment program, http://www.hqda.army.mil/MPSC/compassionate_assignment.htm

School Districts and School Facilities

- Cheyenne Mountain School District 12, http://www.cmsd.k12.co.us/
- CMCA Home School Connection, http://www.cmcahomeschoolconnection.com/pgs/Home.php
- Colorado Springs School District 11, http://www.cssd11.k12.co.us/
- Colorado Springs School District 11, Division of Operations & Instruction, Adult & Family Education, http://www.d11.org/DOI/adult_family/index.htm
- Colorado Springs School District 11 – James Irwin Charter Schools, http://www.jamesirwin.org/info/staff.asp
- Fountain-Fort Carson School District 8, http://www.ffc8.org/
- Harrison School District 2, http://www.harrison.k12.co.us/
- Harrison School District 2, Student Services, http://www.harrison.k12.co.us/studentservices/statistics.htm

- Harrison School District 2, Title I Family Literacy, Harrison Adult and Family Education Program, http://www.harrison.k12.co.us/curr-inst/title1/famlit/familyliteracy.html
- Pikes Peak Community College, SOCMAR for Marine Corp., http://www.ppcc.cccoes.edu/OurCampuses/MilitarySites/SOC/SOCMAR.cfm
- Widefield School District 3 , http://www.wsd3.org

Non-Profit & Advocacy

- American Board for Certification of Teacher Excellence, http://www.abcte.org/
- Military Child Education Coalition, http://militarychild.org/Index.asp
- Pikes Peak Board of Cooperative Educational Services, http://www.ppboces.org/

Reports and Articles

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Transportation Technical Report

Fort Carson Regional Growth Plan

April 14, 2008

Pikes Peak Area Council of Governments

Communities Working Together

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A. INTRODUCTION AND METHODOLOGY

Regional Growth

The following tables present the projected population growth expected for the troop increases at Fort Carson from federal fiscal year (FY) 2006 through 2011, and Table 1 shows the historic and forecast population figures for the three counties. Between 2006 and 2011, population growth resulting from projected troop increases at Fort Carson is expected to account for over one third of the total population growth in the three-county area. The tables show, that between 2006 and 2011, people attributable to Fort Carson increase from 4.57% of the three-county total to 8.00% of the three-county total.

Table 1. Fort Carson Expected Growth Scenario FY 2006-2011

	FY 2006	FY 2011	Increase
Troops	12,600	28,003	15,403
Dependents	23,000	42,565	19,565

Source: Fort Carson and RKG Associates *Does not include DOD Civilians

Table 2. Three County Population

County	2006 Estimated	2011 Projected	Increase
El Paso	578,336	661,539	83,203
Pueblo	153,243	167,721	14,478
Fremont	48,117	52,414	4,297
Total	779,696	881,674	101,978

Source: Department of Local Affairs 2007

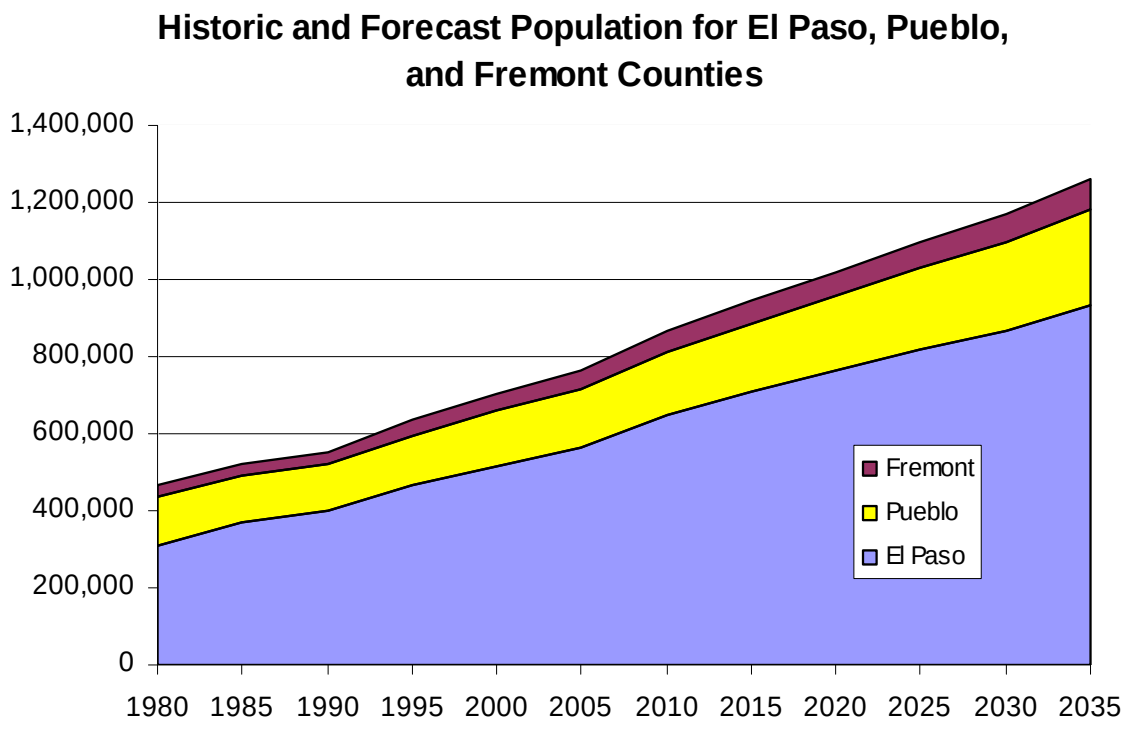
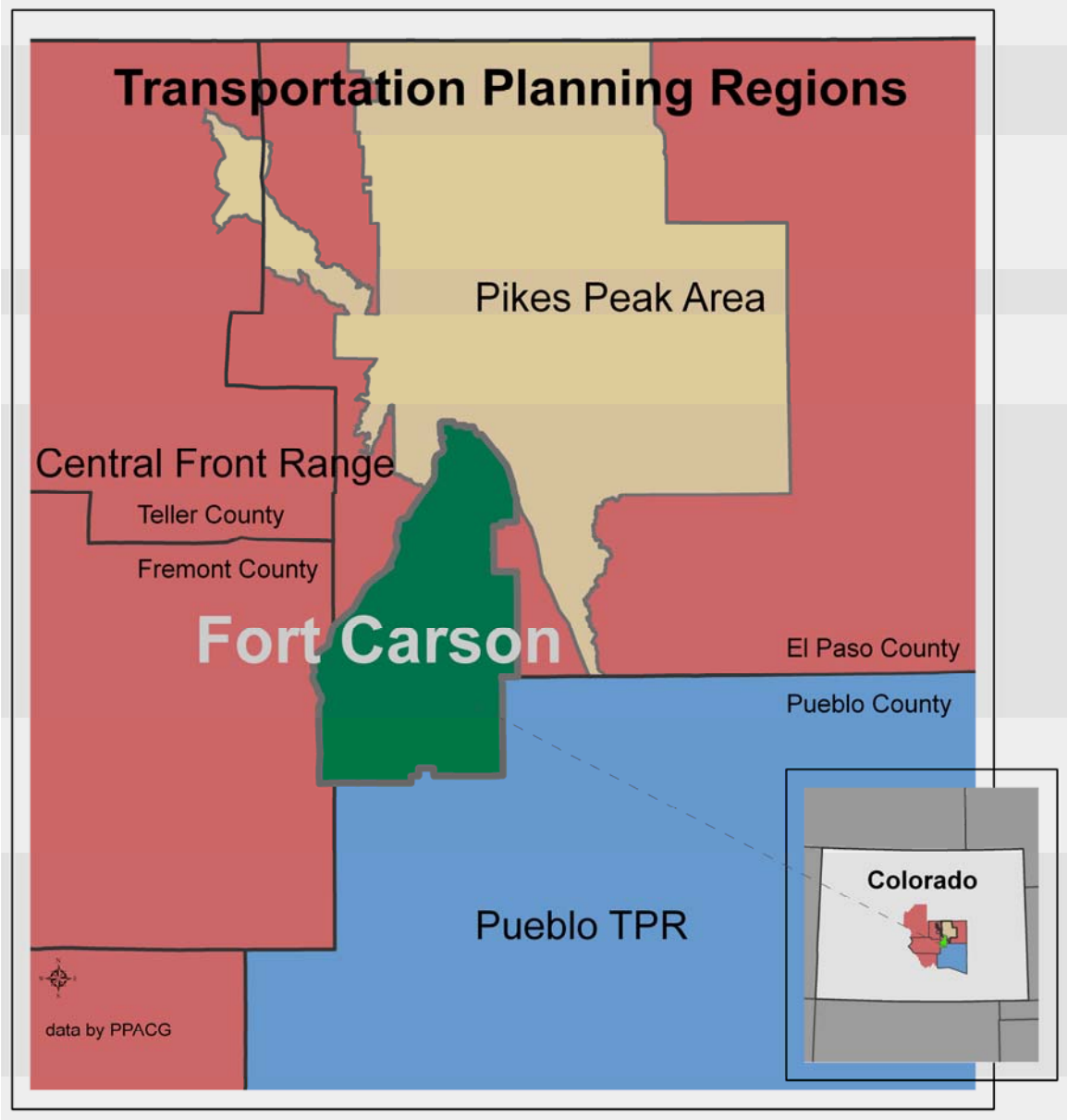


Figure 1. Population Growth Trends

Regional Context and Transportation Planning

The specific long-range transportation plans that are impacted by the growth of Fort Carson are *Moving Forward*, the Pikes Peak Area's *2035 Regional Transportation Plan*, the *Central Front Range 2035 Regional Transportation Plan*, and the *Pueblo Area 2035 Long Range Transportation Plan*. The study areas for each of the regional long range transportation plans coincide with their respective Metropolitan Planning Organizations (MPO's) and Transportation Planning Regions (TPR's). Sections of these three regional transportation plans that specifically relate to corridors and facilities serving Fort Carson are highlighted below. The corridors are shown in Map 2.

With respect to statewide transportation planning, Fort Carson lies within the boundaries of three distinct planning areas: the Pikes Peak Area Metropolitan Planning Organization (MPO), the designated urban area surrounding the City of Colorado Springs; the Central Front Range rural Transportation Planning Region (TPR), which includes rural areas of El Paso and Teller counties, as well as all of Fremont, Park and Custer counties; and the Pueblo Area TPR which incorporates both the urban and rural areas of Pueblo County (see Map 1.) Transportation plans for these areas were developed by the Pikes Peak Area Council of Governments (PPACG), the Central Front Range Regional Planning Commission, and the Pueblo Area Council of Governments (PACOG) respectively.



Map 1. Transportation Planning Regions Surrounding Fort Carson

B. REVIEW OF REGIONAL TRANSPORTATION PLANS

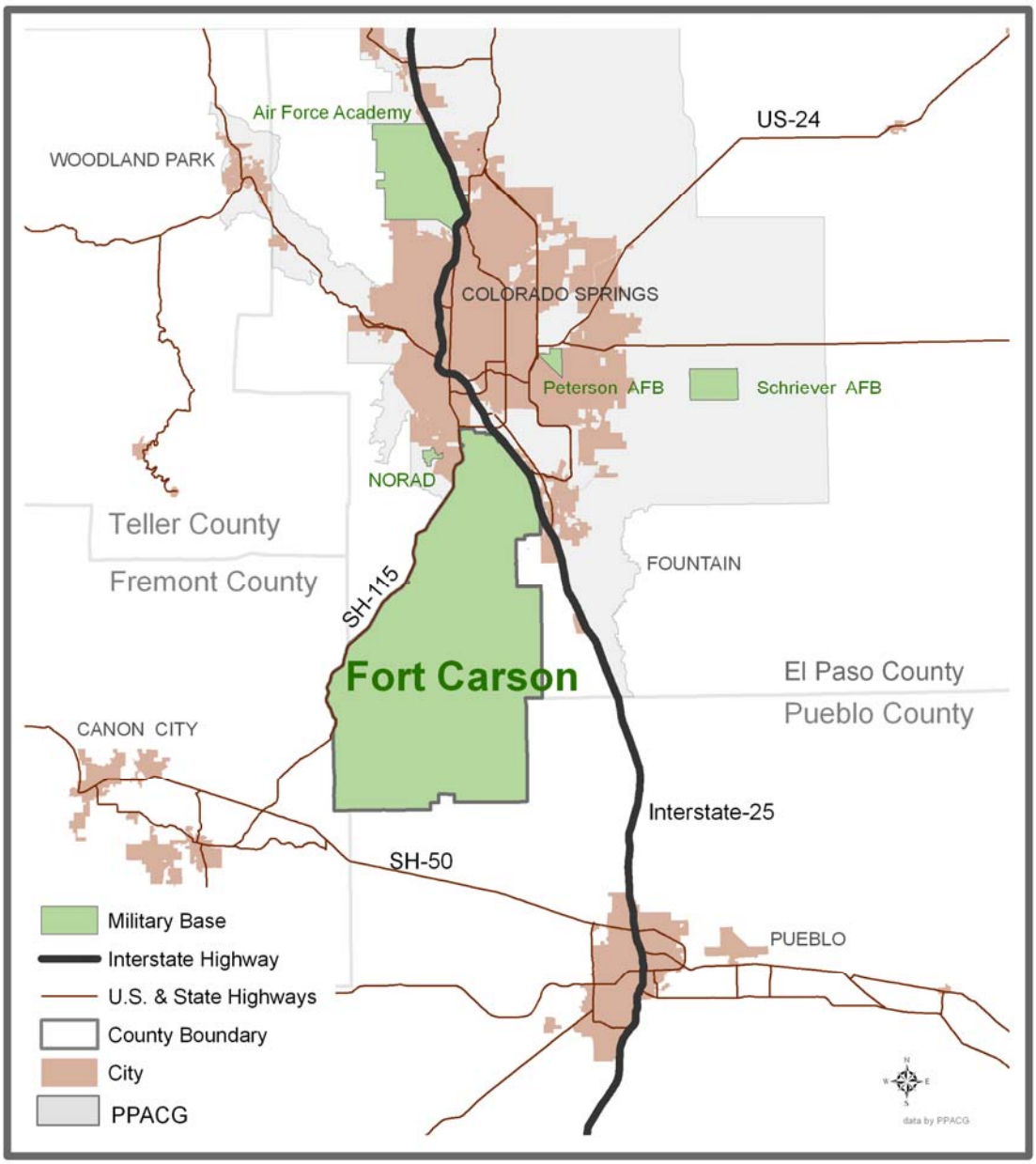
Moving Forward, the PPACG 2035 Regional Transportation Plan

The Colorado Springs Metropolitan Area is experiencing tremendous growth both in population and employment that contributes to a large increase in travel demand.

Many of the key transportation corridors in the region are being studied to determine the most effective strategies to accommodate increases in traffic. These corridor studies are being coordinated through joint agency committees that include PPACG, the Colorado Department of Transportation (CDOT), Federal Highway Administration (FHWA), Environmental Protection Agency (EPA), City of Colorado Springs, El Paso County, City of Fountain, Fort Carson, Air Force Academy, Peters0n Air Force Base, Mountain Metropolitan Transit and the Colorado Springs Airport. The intent of the joint collaboration is to exchange information and to coordinate regional solutions for the transportation system.

Central Front Range 2035 Regional Transportation Plan

State Highway 115 from US 50 north to the Colorado Springs city limit is designated as a high priority regional corridor in this plan. The corridor forms the western boundary of Fort Carson, providing access to Gates 1, 2, and 5. (See Map 2).



Map 2. Major Corridors in the Vicinity of Fort Carson

The vision for the corridor is primarily to increase mobility, as well as to maintain system quality and to improve safety. This corridor provides commuter access and makes north-south connections within the southern foothills between the Florence/Penrose/Cañon City and Colorado Springs areas. The route was a popular segment for interregional bicycling, but has fallen into disfavor because of its lack of continuous, safe shoulders to separate bicyclists from motorized vehicles. Future travel modes to be served include passenger vehicle, bus, truck freight, bicycle and pedestrian. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase significantly. The communities along the corridor, including Fort Carson, value high levels of mobility. They depend on commercial activity for economic activity in the area. Users of this corridor want to preserve the rural character of the area while supporting the movement of commuters, freight, and tourists.

Pueblo Area 2035 Long Range Transportation Plan

This plan specifically addresses I-25 improvements to improve mobility and safety along I-25 through Pueblo County. Planned improvements include reconstruction of I-25 through the City and improvements to interchange geometry north and south of the City limits.

Other Studies

In addition to the regional plans, three other studies relating to local transportation systems and Fort Carson were drawn upon to analyze existing transportation facilities and improvements in this assessment. They are the *I-25/SH 16 East Entrance to Fort Carson Environmental Assessment* (June 2007), the *Fort Carson Transformation Environmental Impact Statement* (June 2007), and the *Fort Carson Transportation Study* (original September 2005 and updated in March 2008). The following corridors serving Fort Carson are currently under study or undergoing improvements:

- I-25 through the Colorado Springs Metropolitan Area;
- Powers Boulevard from I-25 north (exit 156) through SH 16 (exit 132);
- Milton Proby Parkway (formerly Drennan Road) from Powers Boulevard to I-25 and SH 115.
- State Highway 115 (SH-115)

Off-Post Road Network Serving Fort Carson

The three regional transportation corridors presented above that directly serve as entrance/egress to Fort Carson are described below in more detail.

- SH 16, which accesses Fort Carson at Gate 20 on the east,
- Interstate 25, which borders Fort Carson on the east,
- SH 21 (Powers Blvd), which accesses Fort Carson on the east,
- SH 115, which forms the western boundary of the installation, and
- South Academy Boulevard, which runs along its north edge.

SH 16 Vision Statement – I-25 to Powers (Mesa Ridge Parkway)

The Vision for the SH 16 – I-25 to Powers (including Mesa Ridge Parkway) corridor is primarily to increase mobility, as well as to improve safety and to maintain system quality. This corridor serves as a multi-modal regional facility, provides commuter access, and makes east-west connections within the Fountain Valley area. Future travel modes include passenger vehicle and truck freight. The transportation system in the area primarily serves towns, cities, and destinations within the corridor. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase while freight volume will remain constant. The communities along the corridor value high levels of mobility and safety. They depend on commercial activity and the military for economic activity in the area. Users of this corridor want to preserve the character of the area while supporting the movement of commuters in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

Goals/Objectives

- Increase travel reliability and improve mobility
- Reduce traffic congestion and improve traffic flow
- Support commuter travel
- Reduce fatalities, injuries and property damage crash rate
- Preserve the existing transportation system

Strategies

- Add general purpose lanes
- Construct, improve and maintain the system of local roads
- Improve ITS incident response, traveler information and traffic management
- Improve geometrics
- Construct intersection/interchange improvements
- Add surface treatment/overlays
- Bridge repairs/replacement
- Add interchange reconstructions
- Promote environmental responsibility

I-25 Vision Statement – South Powers to Douglas County Line

The Vision for the I-25 - South Powers to Douglas County Line corridor is primarily to increase mobility, as well as to improve safety and to maintain system quality. This corridor serves as a multi-modal interstate facility, connects to places outside the region, and makes north-south connections within the Colorado Springs and El Paso County area. Future travel modes include passenger vehicle, commuter bus service, intercity passenger rail, streetcar service, truck freight, rail freight, bicycle and pedestrian facilities, aviation, and Transportation Demand Management (telecommuting and carpooling). The transportation system in the area primarily serves towns, cities, and destinations within the corridor as well as destinations outside of the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. The communities along the corridor value high levels of mobility and connections to other areas. They depend on tourism, high-tech, and commercial activity for economic activity in the area. Users of this corridor want to preserve the character of the area while supporting the movement of tourists, commuters, and freight in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

Goals/Objectives

- Increase travel reliability and improve mobility
- Expand transit usage
- Increase Transportation Demand Management (carpool, vanpool, telecommute, etc.)
- Reduce fatalities, injuries and property damage crash rate
- Preserve the existing transportation system

Strategies

- Add general purpose lanes
- Provide and expand transit/commuter bus, street car service and freight and passenger rail services
- Provide inter-modal connections
- Promote carpooling and vanpooling
- Improve ITS traveler information, traffic management and incident management
- Improve geometrics
- Construct intersection/interchange improvements
- Bridge repairs/replacement
- Reconstruct roadways
- Promote environmental responsibility

SH-21 (Powers Blvd.) Vision Statement – Mesa Ridge Parkway to I-25

The Vision for the Powers - Mesa Ridge Parkway to I-25 (Northgate) corridor is primarily to increase mobility, as well as to improve safety and to maintain system quality. This corridor serves as a multi-modal local facility, provides commuter access, and makes north-south connections within the Colorado Springs area. Future travel modes include passenger vehicle, bus service, and bicycle and pedestrian facilities. The transportation system in the area primarily serves towns, cities, and destinations within the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to increase. This corridor is anticipated to be a primary focus of higher density land uses in the region. The communities along the corridor value high levels of mobility and safety. They depend on commercial activity for economic activity in the area. Users of this corridor want to preserve the character of the area while supporting the movement of commuters and freight in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

Goals/Objectives

- Reduce traffic congestion and improve traffic flow
- Support commuter travel
- Reduce fatalities, injuries and property damage crash rate
- Preserve the existing transportation system
- Support economic development while maintaining environmental responsibility
- Provide access to airport

Strategies

- Add general purpose lanes
- Add new interchanges/intersections
- Construct, improve and maintain the system of local roads
- Provide and expand transit bus and rail services
- Construct and maintain Park and Ride facilities
- Provide inter-modal connections
- Synchronize/interconnect traffic signals
- Consolidate and limit access and develop access management plans
- Add surface treatment/overlays

SH 115 Vision Statement – US 50 to Fort Carson Gate 5

The Vision for the SH 115 - US 50 to Fort Carson South Gate corridor is primarily to increase mobility and to improve safety, while maintaining system quality. This corridor is a multi-modal regional facility that serves as the primary connection between Freemont County and the El Paso County metropolitan area and is an important scenic and tourist corridor. Future travel modes include passenger vehicle and bicycle. The transportation system in the area primarily serves destinations outside of the corridor. Based on historic and projected population and employment levels, passenger traffic volumes are expected to increase while freight volume may increase particularly with respect to hauling aggregate. The communities along the corridor value high levels of mobility, connections to other areas, and safety. They depend on the military for economic activity in the area. Users of this corridor want to preserve the character, and the unique scenic, environmental and economic and social needs of the area while supporting the movement of commuters in and through the corridor.

Goals/Objectives

- Increase travel reliability and improve mobility
- Support commuter travel
- Reduce fatalities, injuries and property damage crash rate

- Preserve the existing transportation system
- Promote transportation improvements that are environmentally responsible

Strategies

- Improve geometrics
- Construct intersection/interchange improvements
- Add passing lanes
- Add/improve shoulders
- Add surface treatment/overlays
- Bridge repairs/replacement
- Promote environmental responsibility

SH 115 Vision Statement – Fort Carson Gate 5 to Lake Ave (US 85)

The Vision for the SH 115 - Fort Carson South Gate to Lake Ave (US 85) corridor is primarily to improve safety, as well as to increase mobility and to maintain system quality. This corridor serves as a multi-modal local facility, acts as Main Street, and makes north-south connections within the southwest Colorado Springs area. Future travel modes include passenger vehicle, bus service, fixed guideway/bus rapid transit and bicycle and pedestrian facilities. The transportation system in the area primarily serves towns, cities, and destinations within the corridor. Based on historic and projected population and employment levels, both passenger and freight traffic volumes are expected to stay the same. The communities along the corridor value high levels of mobility and safety. They depend on commercial activity for economic activity in the area. Users of this corridor want to preserve the character of the area while supporting the movement of commuters in and through the corridor while recognizing the environmental, economic and social needs of the surrounding area.

Goals/Objectives

- Reduce traffic congestion and improve traffic flow
- Support the function of Fort Carson and the development and use of Cheyenne Mountain State Park
- Reduce fatalities, injuries and property damage crash rate
- Provide for safe movement of bicycles and pedestrians
- Preserve the existing transportation system

Strategies

- Provide and expand transit bus and rail services including fixed guideway/bus rapid transit
- Provide bicycle/pedestrian facilities
- Improve geometrics
- Construct intersection/interchange improvements
- Consolidate and limit access and develop access management plans
- Add surface treatment/overlays
- Add Interchange ramps

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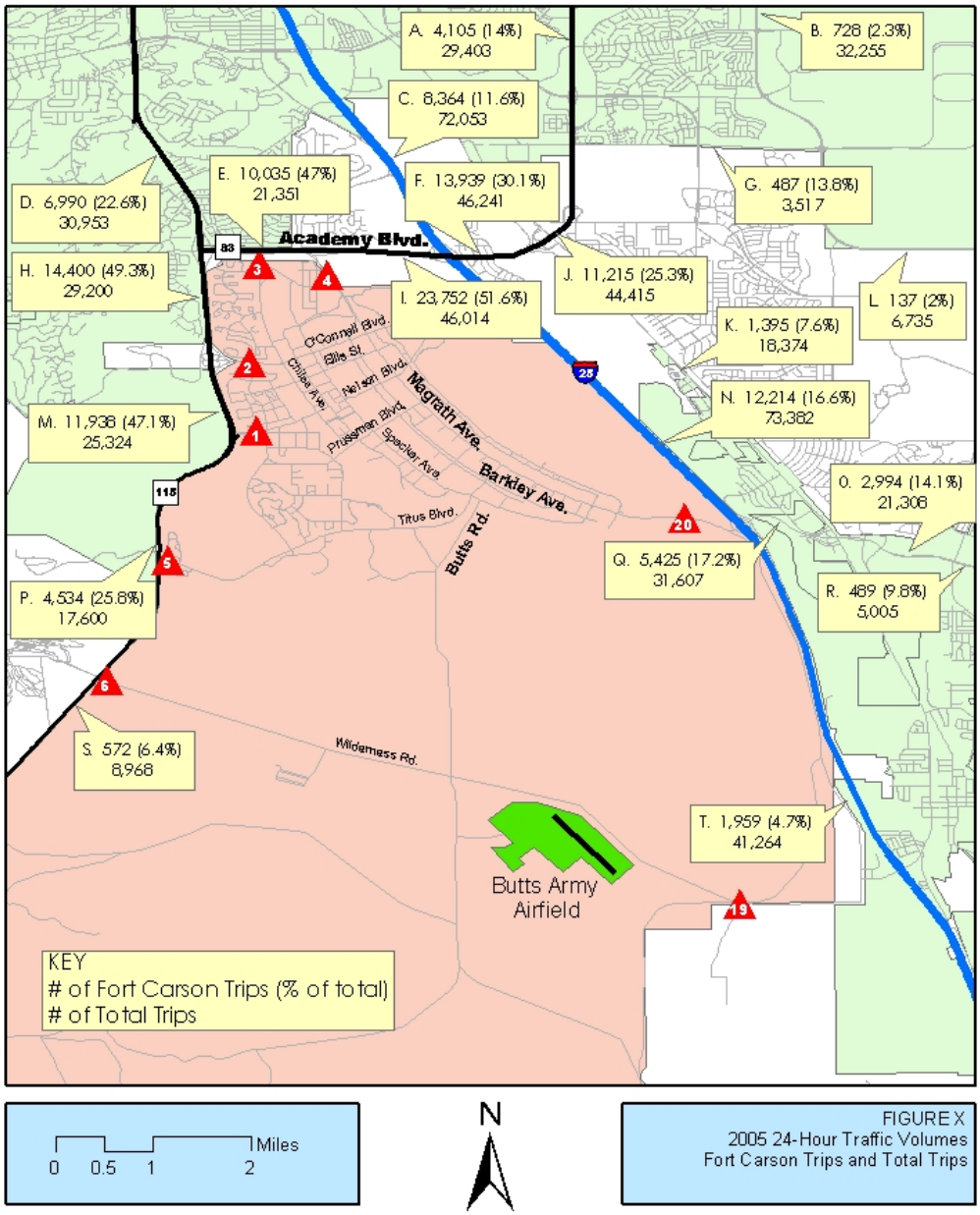
C. GROWTH IMPACTS TO THE REGIONAL TRANSPORTATION SYSTEM

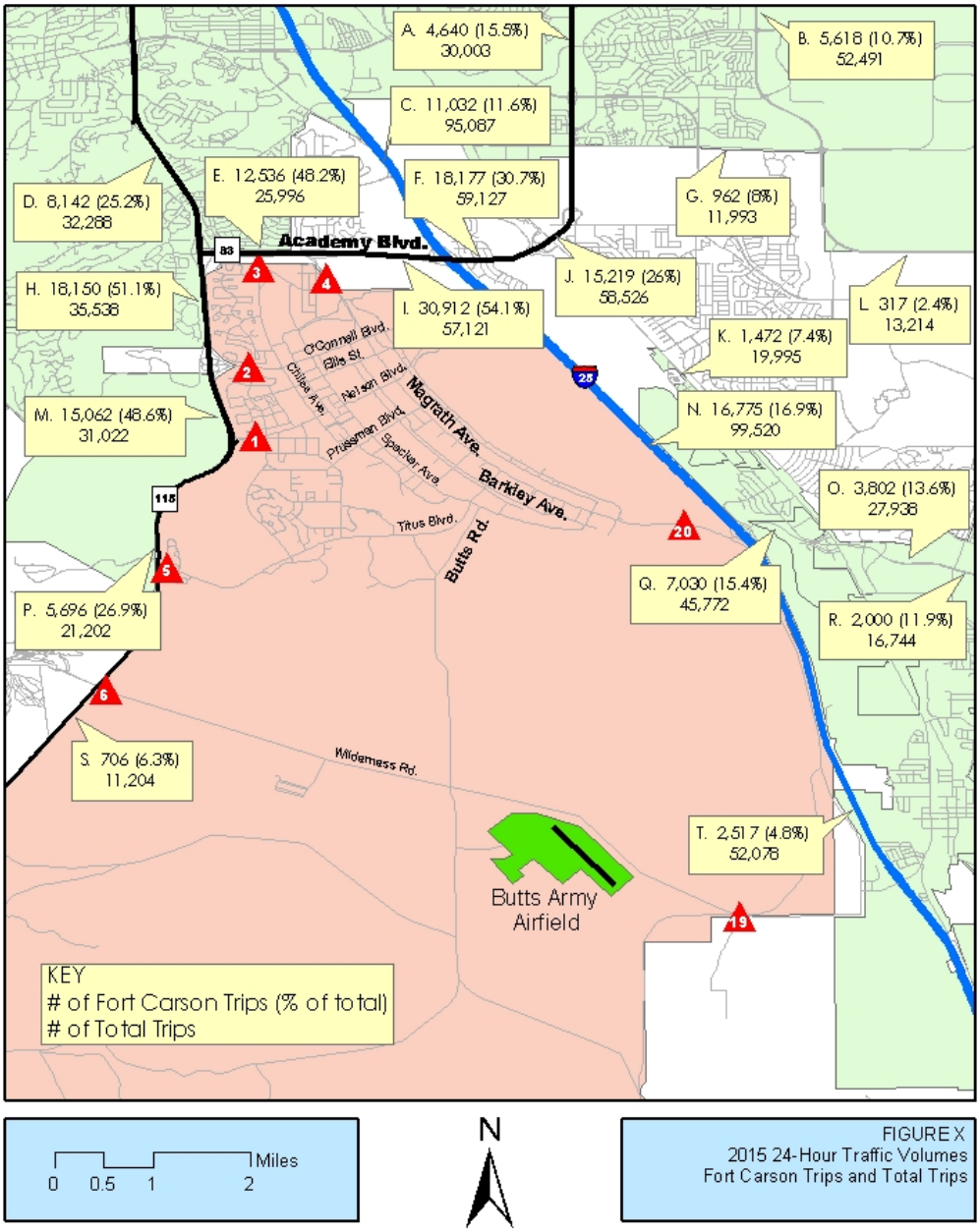
Traffic Increases for Regional Roadways

Regional traffic growth is attributable to population and employment growth in the Pikes Peak Region, including Fort Carson. The additional soldiers and their dependents at Fort Carson are included in the three regional transportation plans encompassing Fort Carson, described above. Approximately 18,000 soldiers were assigned to Fort Carson during July 2005, at which time approximately 55% to 60% of active duty military personnel were deployed. As such, existing traffic volumes as counted on the installation were found to be significantly less when compared to a pre-deployment or "normal" condition. Existing (July 2005) volumes were, therefore, adjusted for each study intersection to represent "normal" pre-deployment volumes.

The PPACG Regional Travel Demand Model is used to forecast traffic volumes on roadways in the Colorado Springs area out to the year 2035. The purpose of this forecast is to assist with future infrastructure and environmental analyses and planning. Maps 3 and 4 depict modeled volumes on roadways around Fort Carson in years 2005 and 2015. Results from the PPACG regional travel demand model can estimate traffic growth caused by the additional troops plus their dependents relocating to Fort Carson. PPACG's analysis used an increase of 10,000 troops plus dependents to estimate the increase in trips resulting from additional troops at Fort Carson. The impacts stated below reflect PPACG's 10,000 troop scenario. As represented on the following graphics, the volume of traffic around Fort Carson will increase by at least twenty percent between 2005 and 2015, with the majority of these increases directly attributable to Fort Carson. The PPACG base-year model (year 2005) indicates that Fort Carson contributes approximately 50,000 trips to the regional roadway network on a daily basis. For year 2015 there are approximately 63,250 trips attributable to Fort Carson.



Map 3. Modeled Daily Road Volumes and Fort Carson Share for 2005.



Map 4. Modeled Daily Road Volumes and Fort Carson Share for 2015.

Table 3. Off-Post 24-hour Traffic Volumes; Existing and Forecast.

24-Hour Traffic Volumes

		2005			2015		
Identifiers	Data Collection Points	Ft Carson Trips	Total Trips	Percent of Total	Ft Carson Trips	Total Trips	Percent of Total
A	Academy Blvd. - north of Astrozon Blvd.	4,105	29,403	14.0%	4,640	30,003	15.5%
B	Powers Blvd. - north of Astrozon Blvd.	728	32,255	2.3%	5,618	52,491	10.7%
C	Interstate 25 - north of B St.	8,364	72,053	11.6%	11,032	95,087	11.6%
D	SH 115 - north of Chey. Meadows Rd.	6,990	30,953	22.6%	8,142	32,288	25.2%
E	Academy Blvd. - east of SH 115	10,035	21,351	47.0%	12,536	25,996	48.2%
F	Academy Blvd. - east of Interstate 25	13,939	46,241	30.1%	18,177	59,127	30.7%
G	Drennan Rd. - east of Hancock Expy.	487	3,517	13.8%	962	11,993	8.0%
H	SH 115 - south of Academy Blvd.	14,400	29,200	49.3%	18,150	35,538	51.1%
I	Academy Blvd. - west of Interstate 25	23,752	46,014	51.6%	30,912	57,121	54.1%
J	Academy Blvd. - east of US 85-87	11,215	44,415	25.3%	15,219	58,526	26.0%
K	US 85-87 - south of Main St.	1,395	18,374	7.6%	1,472	19,995	7.4%
L	Powers Blvd. - east of Grinnell Blvd.	137	6,735	2.0%	317	13,214	2.4%
M	SH 115 - north of Nelson Blvd.	11,938	25,324	47.1%	15,062	31,022	48.6%
N	Interstate 25 - north of SH 16	12,214	73,382	16.6%	16,775	99,520	16.9%
O	Mesa Ridge Pkwy. - west of Fountain Mesa Rd.	2,994	21,308	14.1%	3,802	27,938	13.6%
P	SH 115 - north of Pine Oaks Rd.	4,534	17,600	25.8%	5,696	21,202	26.9%
Q	SH 16 - east of Interstate 25	5,425	31,607	17.2%	7,030	45,772	15.4%
R	Mesa Ridge Pkwy. - east of Fountain Mesa Rd.	489	5,005	9.8%	2,000	16,744	11.9%
S	SH 115 - north of Old Canon City Rd.	572	8,968	6.4%	706	11,204	6.3%
T	Interstate 25 - north of Sante Fe Ave.	1,959	41,264	4.7%	2,517	52,078	4.8%

The area in which traffic is attributable to a particular source results in a noticeable increase is defined as the traffic "area of influence." Fort Carson's traffic area of influence extends to Constitution Avenue to the north, the southern boundary of Fort Carson, Marksheffel Road to the east, and approximately one mile west of SH 115 to the west.

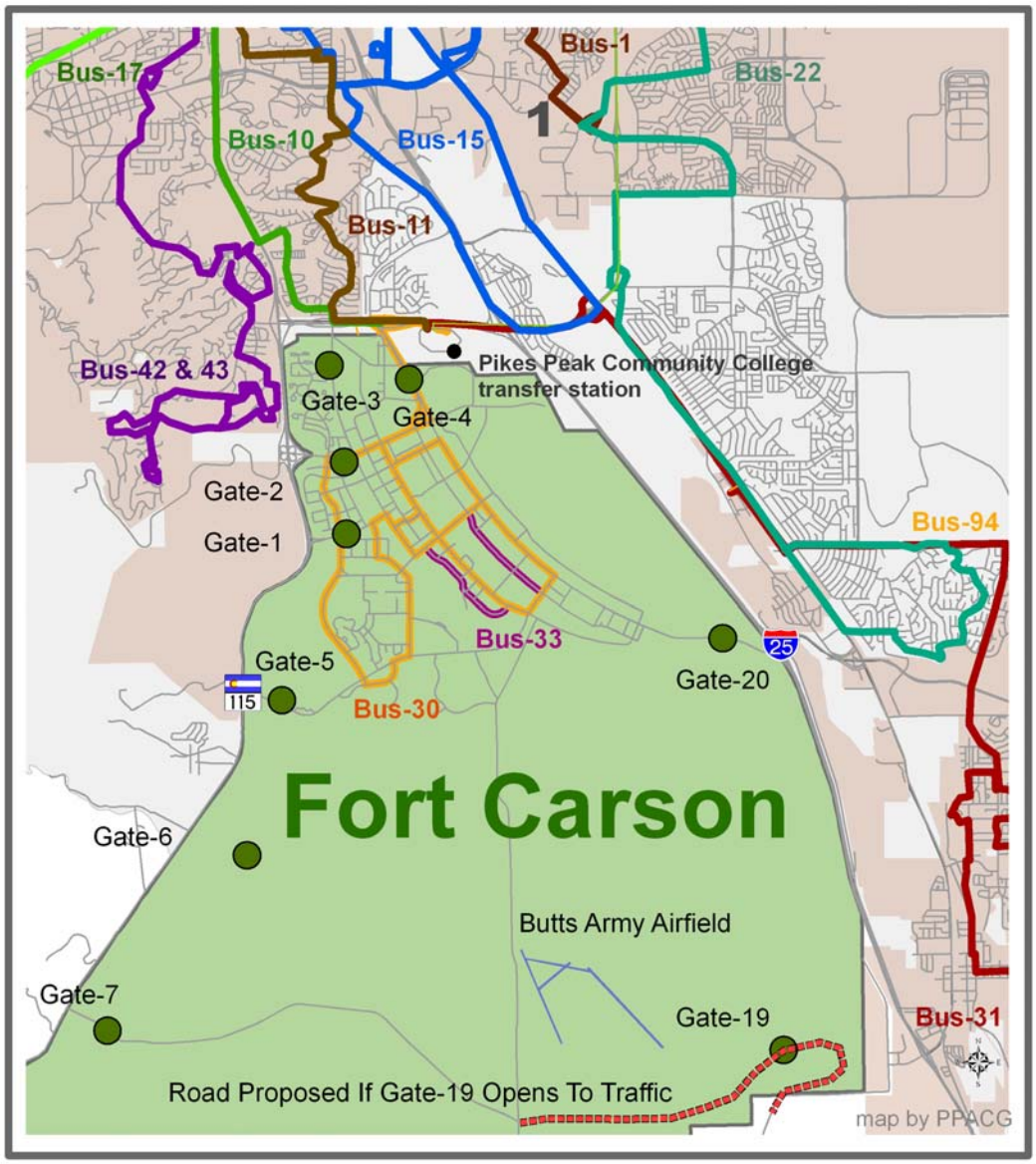
In general, the traffic increases on the major roadways are larger closer to Fort Carson and smaller farther away as people filter to minor arterials and collectors to enter their neighborhoods. Since access to Fort Carson is provided off of I-25, Academy Boulevard, and SH 115, the segments adjacent to the installation experience the largest daily traffic volume increases. These roadway segments, however, do not necessarily have the largest rate of daily traffic volume increases. The daily traffic volume increases on the higher volume roadways result in smaller percentage increases. Likewise, lower volume roads experience a higher percent increase in daily volume due to the additional troops, even though the actual volume increase is not as great as on the major roadways. Maps 3 and 4 depict both the absolute and percent growth in the daily traffic volume attributable to Fort Carson in 2005 and 2015.

Improvements to the regional roadway network programmed in the 2008-2013 Transportation Improvement Program are currently underway and include provisions to accommodate the traffic growth resulting from Fort Carson growth. Traffic impacts resulting from the projected troop increases could be lessened by encouraging ridesharing and transit use. Fort Carson should continue to coordinate with state and local agencies to plan for future transportation improvements needed because of anticipated growth at the base.

Fort Carson Transit

Public transit on Fort Carson is provided by Mountain Metropolitan Transit, which also serves the Colorado Springs metropolitan area. Several routes operate around Fort Carson, but only Routes 30 and 33 provide service within the cantonment area. Routes 30 and 33 connect to the regional transit system at the Pikes Peak Community College Transfer Station, immediately north of Fort Carson. Bus service is offered Monday through Friday from 8:15 a.m. to 6:15 p.m., and Saturday from 7:05 a.m. to 6:15 p.m. Transit service operates on 70-minute intervals. These routes are shown in Map 5.

The projected troop increase will not affect transit services at Fort Carson, although the realignment of troops to Fort Carson may minimally increase transit ridership on post and region-wide. The current transit system is not compatible with troops' schedules, such as morning physical training. Therefore, it is unlikely that future transit ridership will increase until a system based on troops' needs is implemented. Ongoing coordination with Mountain Metropolitan Transit to assess Fort Carson's transit needs as additional troops arrive should focus on meeting the needs of troops and their dependents in order to minimize use of single occupant vehicles. Additional bus routes with more frequent service could be implemented if the service meets these needs.



Map 5. On- and Off-Post Transit Services

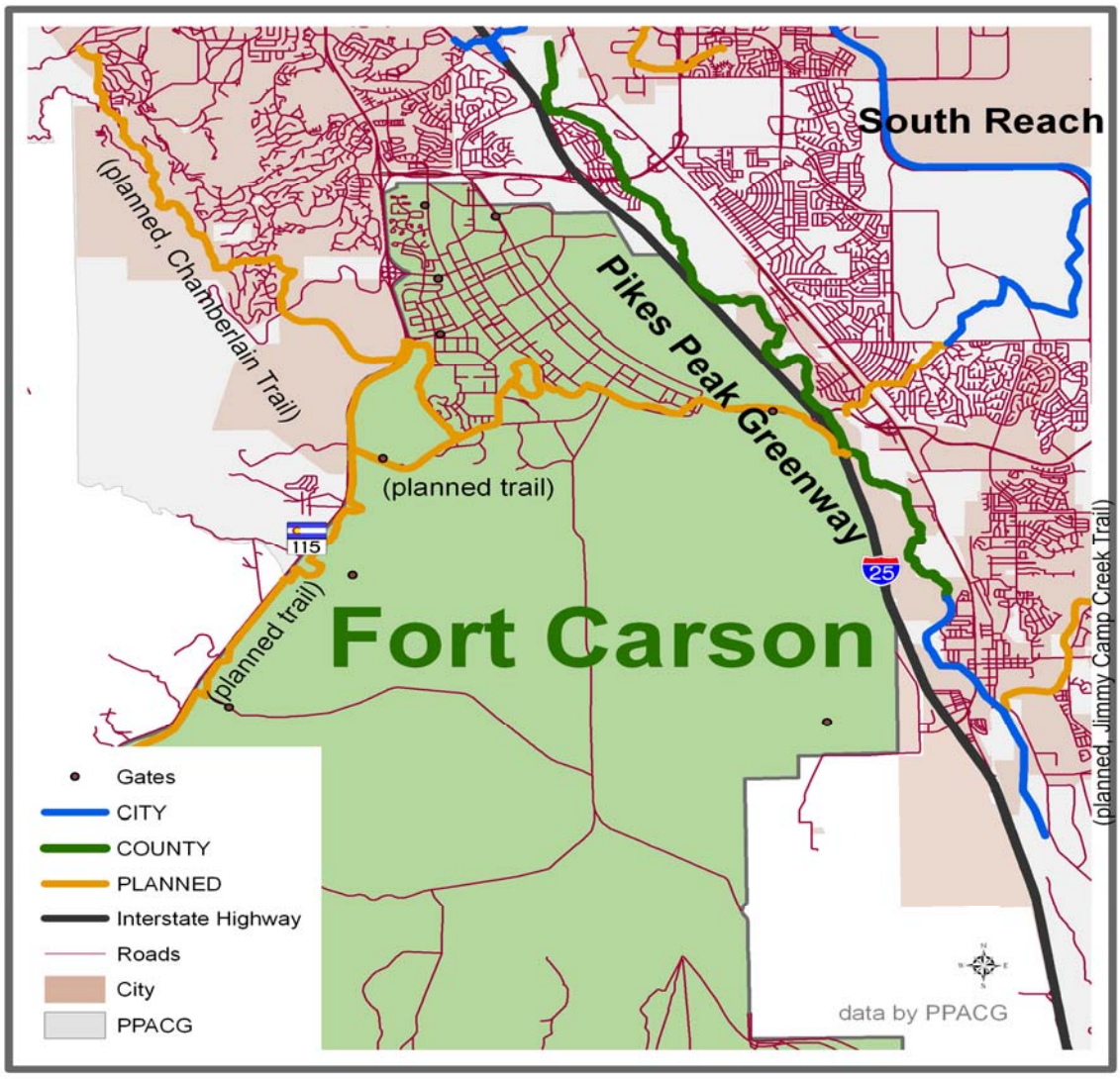
Bicycle and Pedestrian Facilities

Off Post

Pedestrian and bicycle facilities surrounding Fort Carson consist of the available sidewalk systems and off-street trails systems (Map 6). There are no designated on-street bicycle facilities directly serving the active entry points to the installation.

On-Post

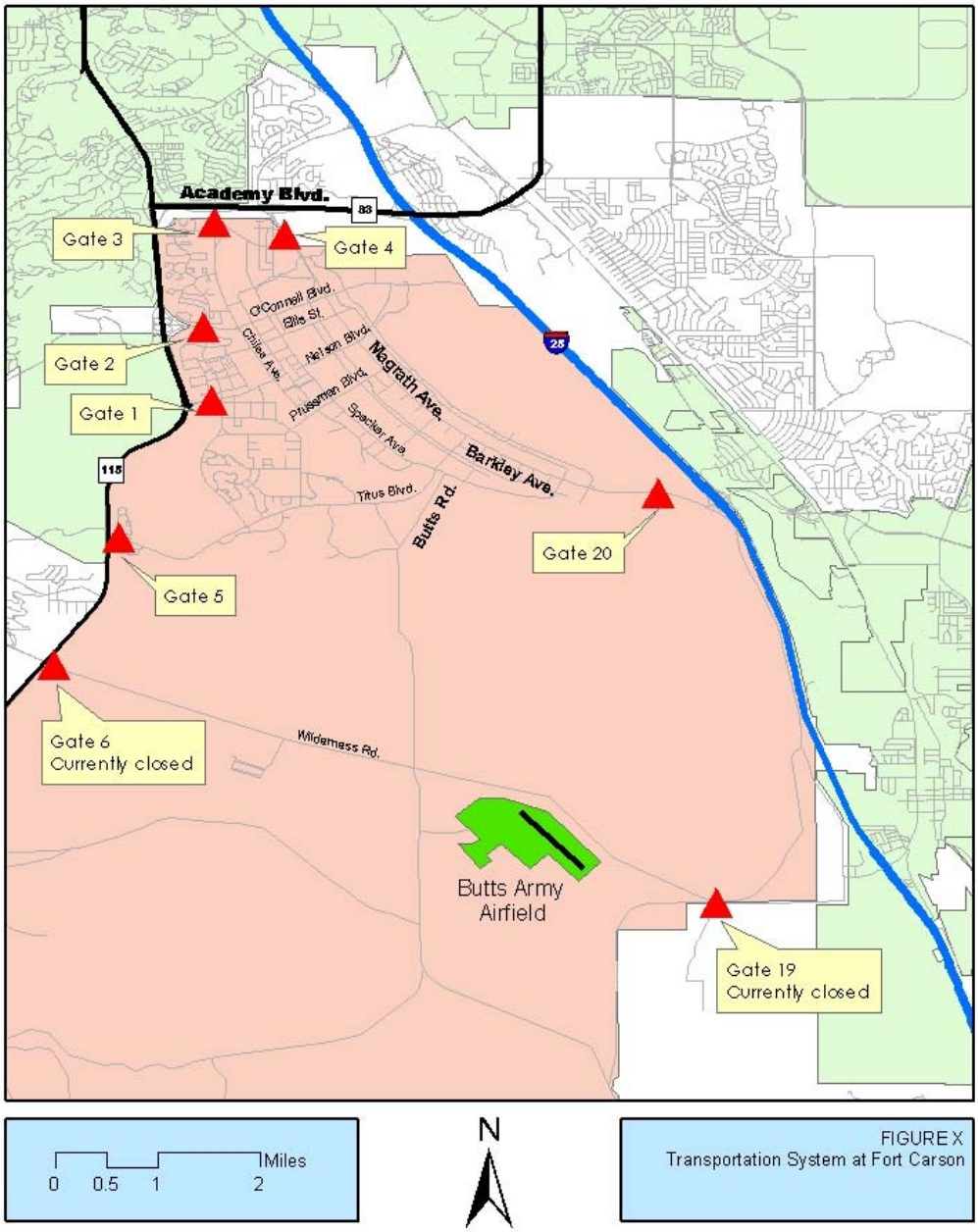
Pedestrian and bicycle facilities on Fort Carson consist of the sidewalk system for pedestrian travel and the roadway system for on-street bicycle travel. There are urgently no facilities for pedestrian or bicycle access through the six active gates on-post. However, Fort Carson is currently developing a pedestrian and bicycle plan to identify future improvements and facilities.



Map 6. Off-Post Bicycle and Pedestrian Facilities.

Access to Fort Carson and On-Post Internal Road Network

The purpose of an Access Control Point (gate) is to secure the installation from unauthorized access and intercept contraband while maximizing vehicular traffic flow. Gate priorities include security, safety (motorists and guards), traffic flow and aesthetics. Fort Carson constructed gate upgrades in FY 03. This encompassed the design of a new Visitor Control Center, gatehouses, and canopies. As shown below, access to Fort Carson is currently provided through the following six active entry control points: Gates 1, 2, and 5 on SH 115; Gates 3 and 4 on Academy Boulevard; and Gate 20 on I-25.



Map 7. Fort Carson Cantonment Area.

Table 4. Design Traffic Volumes at Fort Carson Gates

DESIGN TRAFFIC VOLUME DEMAND										
	ACP 1	ACP 2	ACP 3	ACP 4	ACP 4*	ACP 5	ACP 6	ACP 19	ACP 20	ACP 20*
DESIGN DEMAND	884	307	996	1678	1678	624	249	161	1731	1731
TOTAL EXISTING LANES	4	2	4	3	4	2	1	1	3	4
PLANNED AIE LANES	2	1		2	2	1	1	1	2	2

Fort Carson Cantonment Area Roadway Network

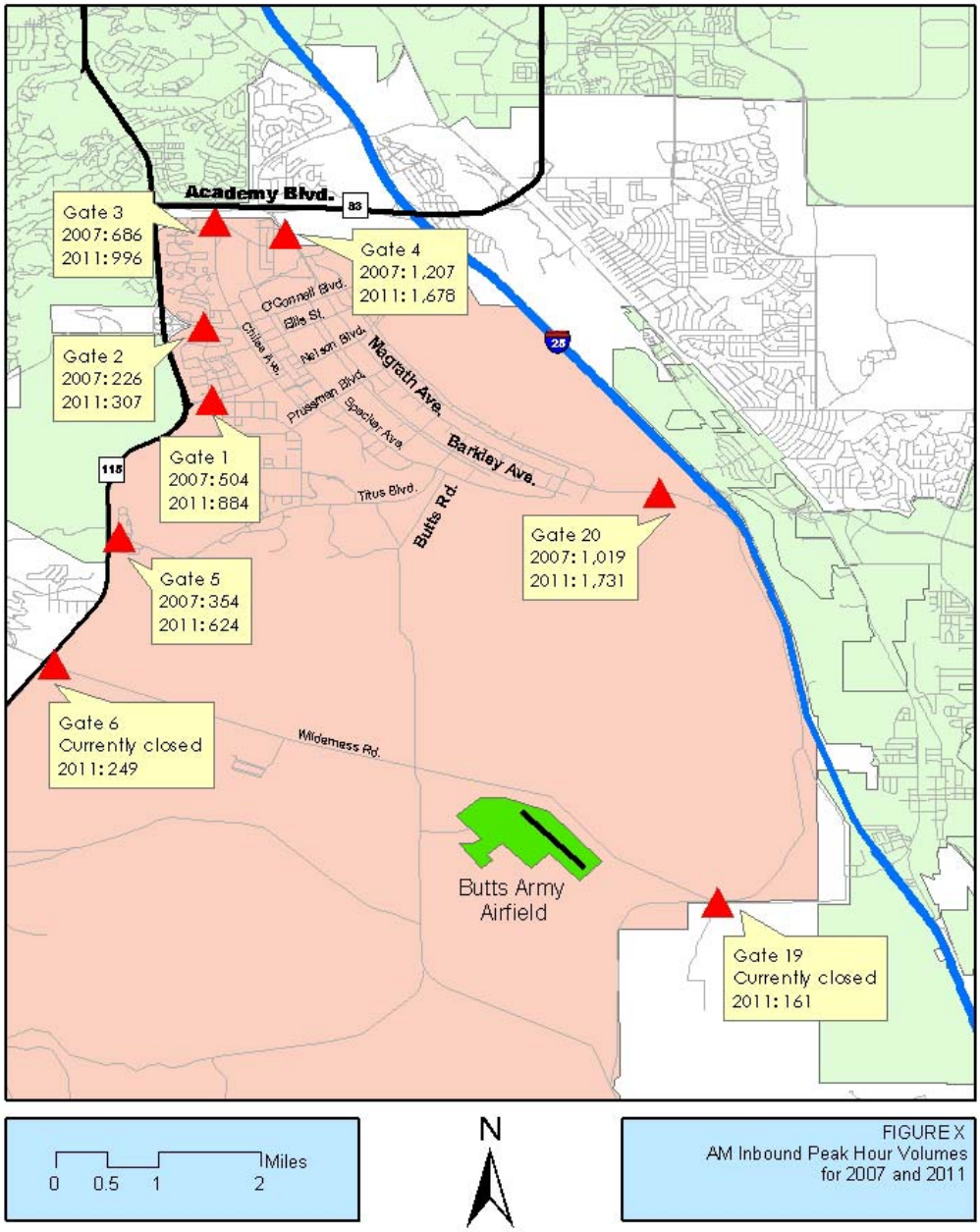
The internal roadway network on Fort Carson consists of 696 miles of roads, 266 miles of which are paved. A map of the cantonment area roadways is shown on Map 7**.** Cantonment area roadways generally form a grid pattern that is laid out in a crescent shape from northwest to southeast. Primary east-west access within the cantonment area to SH 115 is provided by O'Connell Boulevard and Titus Boulevard, while primary north-south access within the cantonment is provided by one-way roads (Magrath Avenue and Barkeley Avenue). With the exception of Magrath Avenue and Barkeley Avenue, all installation roadways have one lane for each direction of travel. Magrath Avenue and Barkeley Avenue have two lanes in each direction. The posted speed limit throughout the cantonment area is generally 30 mph, although some cantonment area and downrange roadways have posted speed limits of 40 mph. Butts Road provides access from the cantonment to areas downrange.

The road network in the cantonment area is generally well maintained and adequate for supporting assigned mission activities. Nearly all major roads within the cantonment area have bituminous surfaces and are capable of accommodating all types of wheeled vehicles. The main roads downrange are unpaved and reasonably well maintained, while secondary downrange roads are maintained to varying degrees.

The cantonment area roadway facilities can be classified as arterials, collectors, or local roadways. Butts Road, Magrath Avenue and Barkeley Avenue are classified as arterials. Collector roadways within Fort Carson include O'Connell Boulevard, Ellis Street, Nelson Boulevard, Prussman Boulevard, Titus Boulevard, Specker Avenue, Chiles Avenue, and Wilderness Road. Local roadways throughout Fort Carson serve as the direct connections to parking lots and adjacent properties.

Existing 2007 and Forecast 2011 Peak Hour Gate Traffic

Traffic volumes at the six active gates were collected in 2005 and updated in 2007. Map 8 below shows the 2007 distribution of traffic to each gate. The distribution indicates that the morning peak-traffic demand on Gate 4 is the highest, followed by Gate 20. Forecast gate traffic for Year 2011, assuming full troop levels, is also shown.



Map 8. Existing 2007 and Forecast 2011 Peak Hour Gate Traffic.

If Gate 20 is built to four lanes, as is currently planned, forecast demand exceeds capacity even if Gate 6 is constructed. Constructing a fifth lane at Gate 20 would accommodate traffic without the construction and activation of a new gate and improvements to associated roadways. As stated on page 6-17 of the *Fort Carson Comprehensive Transportation Study 2008 Update,* the calculated traffic demands for planned Gates 6 and 19 are relatively low, and opening these gates is not necessary to accommodate traffic. Each gate would require one lane based on traffic demands. However, per U.S. Army standards, a minimum of two lanes should be provided at each gate.

In 2008, Fort Carson is planning to add active vehicle barriers and automated installation entry (AIE) systems to two lanes at Gates 1, 4, and 20. Gates 2 and 5 are also planned to have one automated lane. All gates will have conduit installed to allow for future AIE at all lanes.

Existing traffic data indicate that congestion exists on select installation roadways during peak periods. Some signalized intersections may not operate at acceptable levels of service in 2011. Traffic volumes on select cantonment area roadway segments are summarized in Table 5 below.

Traffic volume data was collected in 2005 when approximately 55 to 60 percent of the active duty military personnel stationed at Fort Carson were deployed. As such, existing traffic volume counts on the installation were found to be noticeably less compared to a normal pre-deployment condition. The volumes in Table 5 reflect an adjusted Average Daily Traffic (ADT) count to represent normal pre-deployment volumes. The amount of use of downrange roadways fluctuates due to the nature of maneuver training and variations of training mission requirements. Therefore, it is not possible to determine the volume of traffic on any given section of downrange road with accuracy.

Table 5. Existing and Forecast On-Post 24-hour Traffic Volumes

Roadway Class	Roadway	2005 Average Daily Traffic	2011 Average Daily Traffic	Average Daily Traffic Growth (%)
Arterials	Magrath Avenue (between Prussman Blvd. and Yano St.)	2,450	9,343	381.3%
	Barkley Avenue (between Hogan St. and Khe Sahn St.)	2,970	7,277	245.0%
	Butts Road (near Mates Facility Access	2,040	3,645	178.7%
Collectors	Ellis Street (between Wallace St. and Pershing Dr.)	2,270	4,682	206.3%
	Nelson Boulevard (between Barkley Ave. and Pershing Dr.)	2,110	4,755	225.4%
	Prussman Boulevard (between Iron Fighter Dr. and Specker Ave.)	5,610	14,570	259.7%
	Titus Boulevard (at Sheridan Ave.)	6,800	N/A	N/A
	Specker Avenue (between Ellis St. and Evans St.)	7,570	16,220	214.3%
	Chiles Avenue (between Ellis St. and O'Connell Blvd.)	8,520	21,656	254.2%
	New Collector for Gate 19	0	2,487	N/A
	Wilderness Road (west of Butts Rd.)	620	8,210	1324.2%

Sources:

DPW, 2005 (2005 ADT)

Gannett Fleming, Fort Carson, Colorado Comprehensive Transportation Study, 2008 Update (2011 ADT)

Impacts on Fort Carson Internal Traffic

Peak commuting periods on U.S. Army installations differ from traditional morning, afternoon, and evening peaks on off-post roadway systems. At Fort Carson, inbound peaks occur prior to morning physical training (usually before 6:00 a.m.), during morning commuter times for the on-post civilian workforce, mid-morning as troops return to the installation for the day, and prior to the lunch hour. Outbound peaks generally occur in the morning after physical training, around the lunch hour, and again at the end of the day.

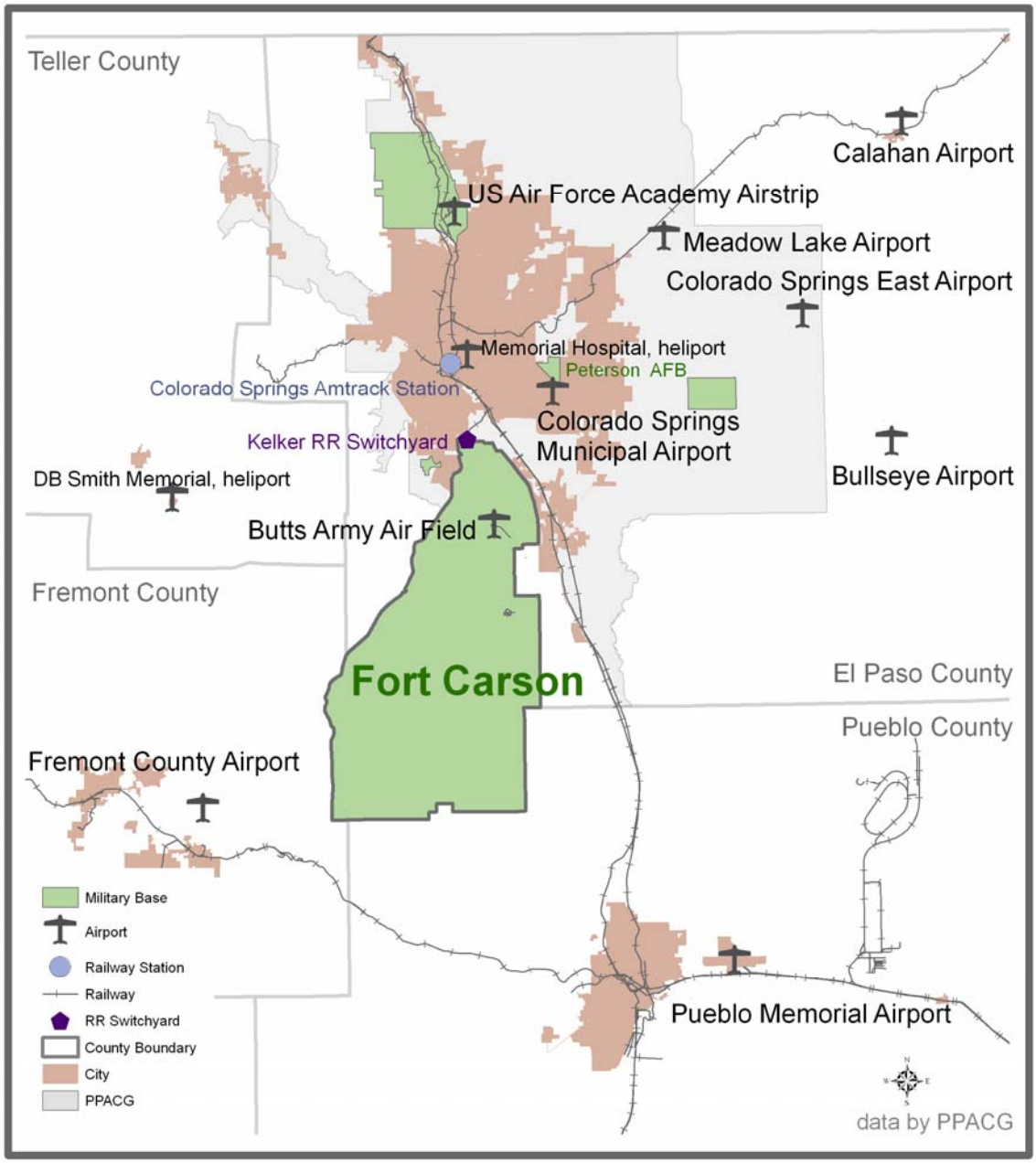
Traffic volumes on Fort Carson's roadway system will increase from the added troops and their dependents. Additionally, the facilities that would be constructed to accommodate the new troops will change travel patterns around the installation. Impacts caused by an increase in traffic volumes on Fort Carson could be mitigated by implementing the suggested roadway improvements outlined in the *Fort Carson Comprehensive Transportation Study* (DPW, 2005).

Traffic growth rates will be the greatest on roadways that run through the less densely-developed areas of Fort Carson (Map 8) while the actual growth increases will be highest on the arterials. A sharp increase is expected on Wilderness Road, which has low existing traffic volumes. The increase in traffic on Wilderness Road may require additional entry control point access onto Fort Carson. Gates 6 and 19 could be opened to accommodate the additional traffic demand. The change in travel patterns to and on Fort Carson would make traffic volumes at Gate 20 the highest (DPW, 2005).

Fort Carson Rail

Fort Carson is served by a freight rail line, located between Gates 3 and 4, in the northern portion of the cantonment area. The access railroad is 2.1 miles in length and connects Fort Carson to the main line of the Denver and Rio Grande Western Railroad at Kelker Junction in Colorado Springs, with cross connection facilities to the Atchison, Topeka, and Santa Fe Railroad at the same location. Fort Carson is responsible for 7.1 miles of rail track and has a total loading footage availability of 2.8 miles of track. The railhead area has sufficient capacity to move 270 rail cars per day.

Use of the rail system will increase to accommodate increased troop training at the Piñon Canyon Maneuver Site (PCMS). A typical Brigade Combat Team (BCT) requires four train shipments to the PCMS (one per day for 4 days) consisting of 225 cars total. All vehicles shipped by train are shipped back to Fort Carson at the conclusion of the training rotation. Rail shipments to and from the PCMS and Fort Carson would not exceed one shipment per day for a total of 40 days per year for BCT training rotations. Shipments of vehicles for battalions occur over the course of 1 to 2 days. These shipments would not exceed one shipment per day for a total of 60 days per year for battalion training rotations. It is assumed that all company operations would take place in conjunction with BCT or battalion training deployments. All rail shipments to the PCMS would be scheduled through the Installation Transportation Officer at least 60 days in advance of the training rotation in order to file a movement request. This allows the Installation Transportation Officer to complete adequate coordination with the rail lines prior to any convoy movement. With proper coordination, the increased use of rail would not burden the rail system. Map 9 shows airports and rail facilities in proximity to Fort Carson.



Map 9. Airports and Rail Lines in the Vicinity of Fort Carson.

Fort Carson Aviation

Aviation facilities at Fort Carson are located at Butts Army Air Field (BAAF), approximately four miles south of the cantonment area and immediately south of the small-arms impact area along Butts Road.

First established in 1949, the Butts Army Air Field (BAAF) houses operations and administrative functions for several units, contractor maintenance and support personnel, and rotary-wing aircraft. The existing permanent aircraft population in 2005 was 68, none of which was fixed-wing aircraft. Nearly all fixed-wing aircraft that land at Fort Carson are C-130s, C-12s, or USAFA training aircraft. The landing strip is not sufficient in length to accommodate larger types of aircraft.
As a result of BRAC 2005, there will be no additional aircraft assigned to Fort Carson and no increase in the number of aviation training missions. Therefore, at this time, there are no anticipated impacts to aviation.

Fort Carson Temporary Construction Traffic

During construction, traffic on roads on Fort Carson and surrounding the post would increase temporarily. Construction traffic would consist of construction vehicles and equipment, including bulldozers, graders, backhoes, excavators, dump trucks, cement trucks, and hoe-ram excavators. Transport vehicles would move the construction equipment to and from work sites.

Construction traffic would be routed through Gate 3, Fort Carson's primary commercial traffic gate, and continue south on Chiles Avenue. This is similar to current construction traffic patterns. Construction traffic would pass by a school at Chiles Avenue and Burris Street. Crossing guards are currently used and speed zones are enforced to ensure safety of school children in the area. Chiles Avenue is presently the primary route for commercial and construction traffic, and the introduction of minimal amounts of additional traffic for temporary construction purposes would not negatively affect school children. If needed, construction traffic can be rerouted onto Specker Avenue to avoid sensitive resources. On-post roadways may need to be temporarily closed during construction activities. Use of traffic control procedures, including flaggers and posted detours, would minimize impacts to traffic flow. Other Best Management Practices (BMPs) to address potential traffic impacts include minimizing construction vehicle movement during peak rush hours on the installation and placing construction staging areas in locations that would minimize construction vehicle traffic within administrative, housing, and school areas.

Funded and Planned Transportation Improvements

Fort Carson Interchange (I-25/SH 16/Gate 20)

Fort Carson estimates that daily traffic volumes at Gate 20 using the I-25/SH 16 interchange will be over 24,000 by the year 2010. This is an increase of 150 percent or 14,600 vehicles per day using Gate 20 and the currently congested interchange. The obvious concern is the increased traffic congestion and decreased safety at the I-25/SH 16 interchange due to cars having to stop on I-25 waiting to exit to SH 16 and Gate 20, as well as increased driver frustration with excessive wait times in this location.

As Fort Carson grows in this expansion, other gates and the associated state highways and local roadways will be impacted. The $60 million South Academy Boulevard/Milton Proby Parkway /B-Street improvements along Fort Carson's northern boundary is the other high priority project and is being funded by the Pikes Peak Rural Transportation Authority. Other projects, including improvements to State Highway 115 and more southerly access points to Fort Carson along I-25 are lower cost projects and further out on the overall timeline.

Rapid Deployment Route to A/DACG

The current bridge on SH 16 over I-25 is not able to adequately support the future level of equipment and personnel required to travel to the A/DACG facility at Peterson Air Force Base and the Colorado Springs Airport. The bridge structure will be rebuilt under the Fort Carson Interchange Project to accommodate the needs of Fort Carson for this particular deployment function. The A/DACG is scheduled for completion in early 2009 and the roadway connection would be most effective if completed by the end of calendar year 2008. CDOT is programmed to the bridge improvements if the funding for the project becomes available in the FY 2007 through FY-2009 time frame.

Project Funding

The transportation improvements required by Fort Carson have been discussed over the last several years. The initial phases of improvements have been included in the PPACG Transportation Improvement Program (TIP) and State TIP (STIP) and long-range transportation plan (2035 Plan). The continuing efforts include the following:

- Inclusion of reconstruction of the I-25/SH16 interchange in the PPACG and CDOT 2035 Long-range Transportation Plans.
- Inclusion of widening SH 16/Mesa Ridge Parkway/Powers Boulevard from a two lane to a four lane facility between Fort Carson and SH 85/87 in the PPACG and CDOT 2035 Long-range Transportation Plans.
- Inclusion of the funding necessary for the reconstruction of SH 16 bridges in the PPACG 2008-2013 TIP and CDOT 2008-2013 STIP.
- Allocating $30 million for the SH 83/South Academy Boulevard/Drennan Road widening and interchange reconstruction in the area of Fort Carson through the recently created Pikes Peak Rural Transportation Authority (PPRTA).

Project Funding Status

Funds for the SH 16, SH 115 and Academy Blvd projects that have been or are programmed in the PPACG and CDOT TIPs are shown in Table 6.

Table 6. Programmed Funding Allocations

	Funds Programmed in ($1000s)								
	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	Total
SH16									
Federal	3,233		1,399						4,632
State	1,920	65,085							67,005
Local	220								220
Total	5,373	65,085	1,399						71,857
SH115									
Federal			828			828	166	1,656	3,477
State			172			172	34	344	723
Local									
Total			1,000			1,000	200	2,000	4,200
Academy Blvd									
Federal									
State									
Local		5,225	20,892	3,556	1,891	1,891	1,891		35,348
Total		5,225	20,892	3,556	1,891	1,891	1,891		35,348

The total required funding for the SH 16 project is $65-68 million. Almost all funds necessary for this project have been identified and programmed.

SH 115 improvements have a current estimated cost of $88,000,000. PPACG's 2008-2013 TIP has $4,200,000 programmed for this project. The remaining $83,800,000 will be programmed in future years.

The Academy Blvd improvements along the north side of Fort Carson are part of Phase 1 of the City of Colorado Springs' Southeast Corridor Extension. This phase will cost $30,000,000. Phase II, which will widen Drennan Road and complete access improvements to the airport, will cost another $30,000,000 which will be programmed in future years.

During development of the *2035 Regional Transportation Plan*, PPACG and CDOT prepared a joint estimation of the anticipated revenues that can reasonably be expected to be available from all sources for transportation projects. The estimates reflect funding from a variety of sources, including federal, state, local and private funding sources.

Table 7 below illustrates the revenue anticipated to be available through 2035 to implement the fiscally constrained *2035 Regional Transportation Plan* projects, including SH 16, SH 115 and Academy Blvd.

Table 7. Projected Revenue 2008-2035 Federal, State and Local Sources (Includes Local Matches as Required)

	TIP (2008-2015) Funding Level ($1,000s)	LRTP (2008-2035) Funding Level ($1,000s)	Notes (Total Funds In ($1,000s)
CDOT Strategic Projects: SB-1 Funds	$221,000	$2,000,000	CDOT State Strategic Corridors funded through 7th Pot and Senate Bill 97-01 funding mechanisms. TIP years based on OSPB June 2007 estimate of transferred funds ($1.2 billion) and CDOT using half for debt service (600 million) and half for construction. PPACG has one third of ready to go projects' remaining balance.
Surface Treatment Program	$51,700	$279,900	Projects are selected on the basis of performance factors as determined by CDOT Region 2. The estimate for the 2035 Plan was developed by CDOT Region 2.
Bridge Program	$12,100	$51,890	Projects are selected on the basis of need as determined by CDOT Region 2. The estimate for the 2035 Plan was developed by CDOT Region 2. Estimate composed of CDOT estimated portion of Region 2 coming to PPACG plus 9.48% of statewide pool.
Surface Quality Maintenance Program	$16,900	$77,500	Projects are selected on the basis of need as determined by CDOT Region 2.
Congestion Relief	$5,500	$31,600	New Funding Category based on lane miles of congestion above the 0.85 volume-to-capacity ratio.

	TIP (2008-2015) Funding Level ($1,000s)	LRTP (2008-2035) Funding Level ($1,000s)	Notes (Total Funds In ($1,000s)
Enhancements	$7,000	$30,000	Based on historic allocation (1983-2001) estimate. PPACG receives 45% of CDOT Region 2 Enhancement Program total. Forecast assumes that beginning in year 2012 the funding level returns to SAFETEA-LU levels and increases using CDOT's Federal Growth Rate by year. This category also includes TOPS/GOCO/Colorado Springs Bike Tax funds.
Metro	$56,600	$251,300	CDOT and PPACG revenue estimates based on formula. Funds for local roadway system projects to help achieve 2035 plan and air quality goals as determined by the MPO. Forecast assumes that beginning in year 2012 the funding level returns to SAFETEA-LU levels and increases using CDOT's Federal Growth Rate by year.
CMAQ	$37,100	$166,600	Colorado Transportation Commission Allocation of 18.13% to PPACG Non-Attainment (Maintenance) Area. Federal Formula determines Colorado allocation of national CMAQ program. Forecast assumes that beginning in year 2012 the funding level returns to SAFETEA-LU levels and increases using CDOT's Federal Growth Rate by year.
Snow & Ice Maintenance	11,600	$53,500	Projects are selected on the basis of need as determined by CDOT Region 2. The estimate for the 2035 Plan was developed by CDOT Region 2.
Safety – Rockfall Mitigation	$2,066	$7,982	Projects are selected on the basis of need as determined by CDOT Region 2.
Safety – Hazard Elimination Program	$13,500	$46,394	Projects are selected on the basis of need as determined by CDOT Region 2.
Safe Routes to Schools	$1,186	$4,635	Projects are selected on the basis of need as determined by CDOT. The estimate for the 2035 Plan was developed by CDOT. Forecast assumes that beginning in year 2012 the funding level returns to SAFETEA-LU levels and increases using CDOT's Federal Growth Rate by year. State law specifies distribution based on percentage of K-8 school age children.
Safety - Traffic Operations	$20,450	$82,509	Projects are selected on the basis of need as determined by CDOT Region 2.
Metro Planning (PPACG)	$8,400	$37,100	PPACG Federal allocation of funds for regional transportation planning.
Regional Priority Programs	$21,600	$49,422	PPACG receives 45% of the funding of the CDOT Region 2 allocation from Colorado Transportation Commission.

	TIP (2008-2015) Funding Level ($1,000s)	LRTP (2008-2035) Funding Level ($1,000s)	Notes (Total Funds In ($1,000s)
CDOT Maintenance Incentive Program	$6,636	$6,636	Projects are selected on a competitive basis by CDOT. Forecasts use 9.48% of total pool.
Public Transportation Programs	N/A	N/A	Colorado Springs Transit's estimated revenue. Capital: N/A; Operations: N/A
Department of Defense/ Defense Access Road, TEA/Fed Discretionary	$20,000	$85,000	$20 million construction priority military bases funding. 3 allocations of $15 million for Defense Access Roadway funding 2 allocations of $10 million other military construction funding
Local/Private Capital Project Funding	$505,000	$1,999,000	Includes local member government projects, private developer funds and local ballot initiatives. Also includes revenues from the Pikes Peak Regional Transportation Authority (RTA) and private developer commitments.
Local Government Maintenance & Operations Funding	$300,000	$2,000,000	Local government estimated outlay for operations and maintenance of transportation systems including roadway maintenance, bridge repair, restriping, curb and gutter, paving, snow removal, etc. Also includes revenues from the Pikes Peak Regional Transportation Authority (RTA) and private developer commitments. Excludes Transit Maint. & Operations (see public Transportation line item above).
TOTAL			

Notes:

1. *Known Allocation. Funding is based on formula.*
2. *Estimated funds based on historic success in obtaining funds from this category. Projects identified in 2035 Regional Transportation Plan are likely to be funded.*
3. *Operating Funds for CDOT and local governments to maintain the transportation system. No specific projects identified in the 2035 Regional Transportation Plan.*

Planned transportation improvements include both fiscally constrained projects and proposed projects for which no funding source is identified through 2035. A summary of the fiscally constrained projects that will affect Fort Carson is provided in the following table:

Table 8. Fiscally Constrained Transportation Projects Affecting Fort Carson

Project Name	Sponsoring Entity	Total Cost (in $1,000s)	Project Description	Funding Source
Bradley Rd Extension: Grinnell St to Powers Blvd	El Paso County	$4,202	Construct 4-lane major arterial.	Local/ Private
Fontaine Blvd Extension	El Paso County	$9,000	Construct a 4-lane principal arterial from Marksheffel Rd to Meridian Rd.	Local
Hancock Expressway	Colorado Springs	$10,340	Construct street and drainage improvements by extending Chelton Rd south to Drennan Rd and realigning Hancock Expressway east from Monica/Claredon to new Chelton Rd. and then east to Powers Blvd.	Local, Private
Mesa Ridge Pkwy Extension	El Paso County	$4,149	Construct 4-lane principal arterial from Powers Blvd to Marksheffel Rd.	Local
Powers Blvd: Mesa Ridge Pkwy to I-25 (at Northgate Rd)	CDOT	$1,107,500	Complete studies to determine needed corridor improvements and implement them. Construct new facility from SH 83 to I-25. Upgrade the corridor to a grade separated freeway from Barnes Rd to Platte Ave. This will include roadway construction and new interchanges and grade separations at 25 locations.	Strategic (7th Pot), CDOT Regional Priorities, Local, Private
SH 16: I-25 to Powers Blvd (including Mesa Ridge Pkwy)	CDOT	$55,930	Complete needed studies for improvements along this corridor. Expand from 2-lane to 4-lane facility from I-25 to SH 85 including reconstruction of I-25/SH 16 interchange and SH 16/SH 85 Interchange. Improve geometrics and intersections along Mesa Ridge Pkwy from SH 85 to Powers Blvd.	Bridge-On State Highway, Congestion Relief, Discretionary, Strategic (7th Pot)

Project Name	Sponsoring Entity	Total Cost (in $1,000s)	Project Description	Funding Source
SH 85: SH 16 to Academy Blvd (SH 83)	CDOT	$5,624	Widen to 4 lanes.	CDOT Regional Priorities
SH 115 Widening and Safety Improvements	CDOT	$88,000	Widen to four lanes from Nelson Blvd to Rock Creek Canyon Rd.	CDOT Regional Priorities
Southeast Corridor Extension, Phase 1	Colorado Springs	$30,122	Widen to 4 lanes between SH 115 and B St; interchange improvements at SH 115 and I-25; construction of a 4-lane expressway between Academy and Powers; construction of a new road 600 feet south of existing Drennan between Academy and Hancock and a widening of existing Drennan between Hancock and Powers; and purchase of right-of-way for the ultimate project, with interchanges at Academy and Hancock.	Local

D. RECOMMENDATIONS

Continue planning and secure funding for the construction of improvements to state highways and access roads to support activation of Gates 6 and 19.

This recommendation includes continuing planning, programming, and funding efforts through the Federal Highway Administration, Department of Defense, Colorado Department of Transportation, and the Pikes Peak Area and Central Front Range Metropolitan Planning Organizations to construct the needed off-post improvements.

Continue planning efforts to develop and enhance non-motorized transportation on- and off-post.

In addition to completing a non-motorized transportation plan that focuses on the bicycle and pedestrian facilities within Fort Carson and between the surrounding communities, it is important to coordinate planned bicycle and pedestrian improvements to support transit service and parking management.

Develop strategies on- and off-post to increase transit ridership.

Strategies include utilizing federal programs for free transit passes for on-post personnel, developing a mix of incentives and disincentives to encourage transit ridership, educating post employees regarding opportunities to use transit, and establishing an on-post shuttle service system

Develop a travel demand management (TDM) program for Fort Carson.

Strategies include exploring options for priority parking and ridesharing; developing a mix of incentives and disincentives for access and parking to encourage ridesharing; and coordinating the time frame for travel demand strategies and improvements for parking and each mode of transportation.

Include TDM strategies in land use planning on- and off-post.

These two recommendations include a program and strategies to improve parking and access management at the gates and on-post, coordinating parking locations with shuttle service, and encouraging ridesharing.

Continue to convene the Transportation Partnership Group on a regular basis to address transportation issues related to Fort Carson's Growth.

As transportation plans and improvements go forward, and transportation issues related to Fort Carson's growth continue to evolve, it is important to maintain the communication and coordination necessary to address ongoing impacts.

Public Utilities and Infrastructure Technical Report

Fort Carson Regional Growth Plan

May 20, 2008

Pikes Peak Area Council of Governments

Communities Working Together

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A. UTILITY PROVIDERS

The provision of utilities – water, wastewater, natural gas, and electric power – to the Fort Carson area is a combination of systems serving incorporated and unincorporated El Paso County, and those utilities services supplied wholesale directly to the installation. The installation is supplied with water, natural gas, and electricity by Colorado Springs Utilities (CSU). Fort Carson provides its own wastewater treatment facilities. The post also owns, maintains, and extends all its own distribution lines for on-post service. While CSU provides utility services within the City of Colorado Springs and immediately adjacent areas, there are also a number of smaller utility districts that serve incorporated and unincorporated areas around Fort Carson. The utility providers serving the Fort Carson area are listed in Table 1 below and illustrated in Maps 1 through 3:

Table 1. Utility Providers and Services for Fort Carson Area

Utility Provider	Utility Service
Colorado Springs Utilities	Water, Wastewater, Electric, Natural Gas
City of Fountain	Water, Electric
Widefield Water and Sanitation District	Water and Wastewater
Colorado Centre Metropolitan District	Water and Wastewater
Security Water and Sanitation District	Water and Wastewater
Stratmoor Hills Water District	Water
Rock Creek Mesa Water District	Water
Fountain Sanitation District	Wastewater
Fort Carson	Wastewater
Mountain View Electric Association	Electric

The following is a review, by utility service, of the existing systems and includes planned improvements that are relevant to meeting the demands of Fort Carson's projected growth.

B. WATER

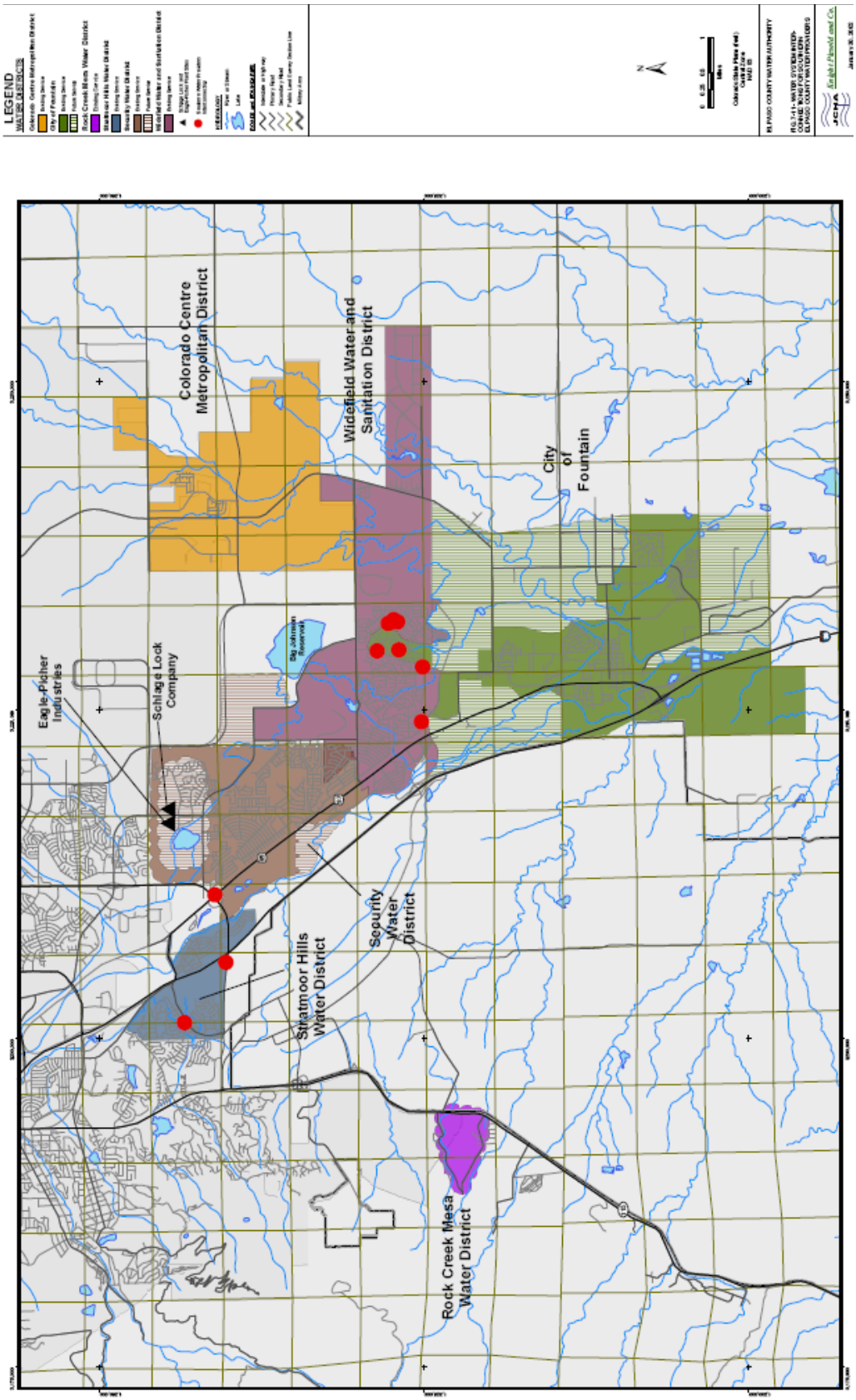
Colorado Springs Utilities

Colorado Springs Utilities' water service area covers 184 square miles and includes Colorado Springs, Green Mountain Falls and Chipita Park. In addition to Fort Carson, CSU provides water to Peterson Air Force Base, the North American Air Defense Command, the United States Air Force Academy, the Cascade Metropolitan District and supplemental water to Security Water District.

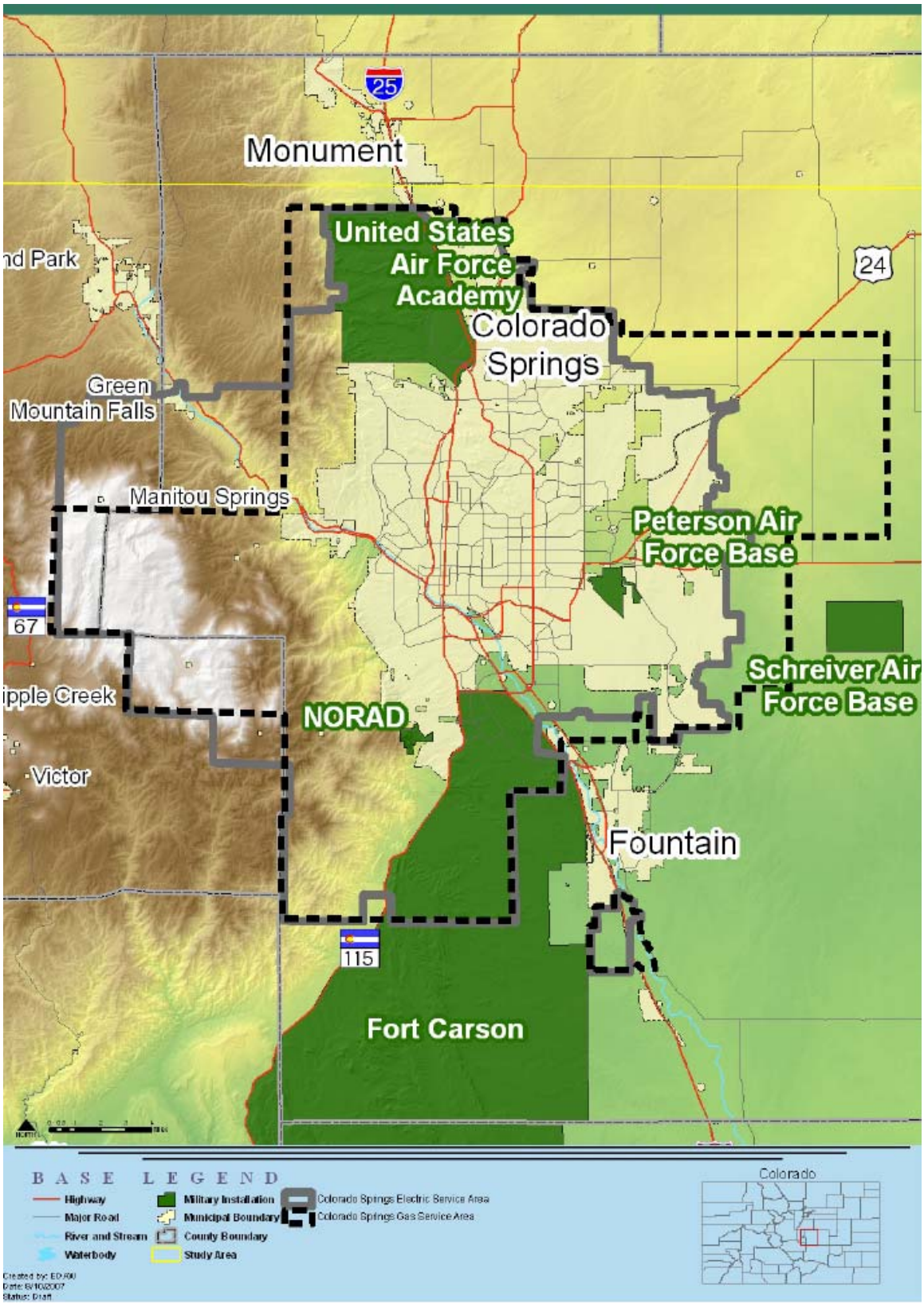
In 2006, CSU delivered 26 billion gallons of water to approximately 417,000 people through 129,000 meters. Ninety percent of the meters are single-family residential. Single family residential use comprises almost half (44%) of annual use. The other half (56%) is comprised of commercial, military, multi-family, wholesale and other uses.
From 1990 through 2006, system-wide water use averaged 186 gallons per capita, per day. During the same period, single-family residential water use averaged 112 gallons

per capita, per day. From 2002 through 2005, water use declined due to mandatory water restrictions, and this usage has remained relatively low since water restrictions were lifted in late 2005.

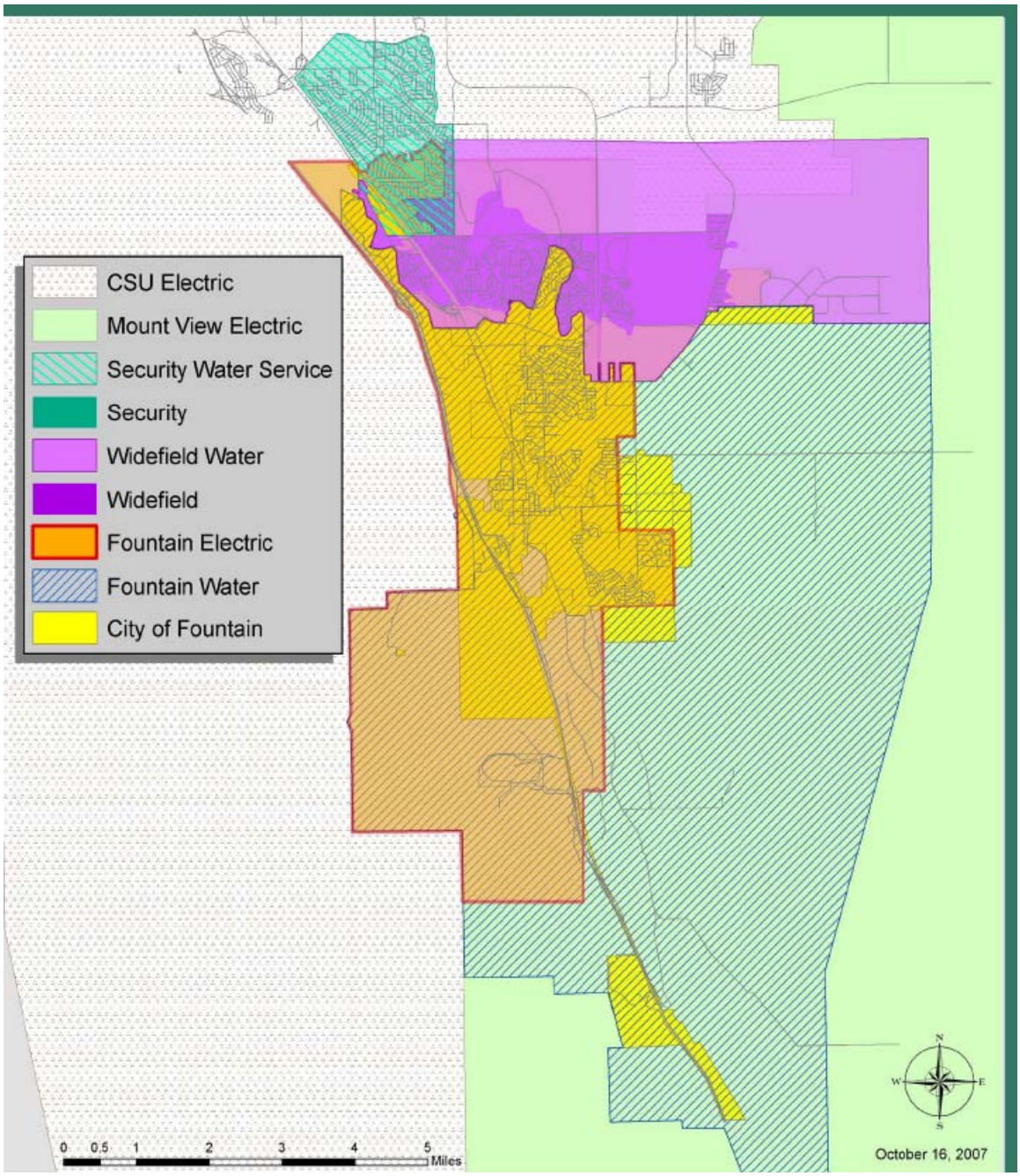
Given the demand forecast, Colorado Springs Utilities has adequate water supplies to meet projected needs through 2046. However, raw water delivery systems will be at capacity as early as 2012.



Map 1. Water and Wastewater Districts



Map 2. Colorado Springs Utilities Service Areas



Map 3. Electric and Water Utility Providers East of Fort Carson

As such, Colorado Springs Utilities is working with regional partners to develop an additional 76,000 acre-feet of raw water delivery capacity to the community. A proposed delivery system, commonly referred to as the Southern Delivery System (SDS), is currently undergoing the National Environmental Policy Act (NEPA) Environmental Impact Statement (EIS) process. The EIS is evaluating seven alternatives for the SDS project. A Record of Decision is due by the end of 2008. Phase 1 construction is scheduled for completion by 2012.

Potable water is supplied to Fort Carson by Colorado Springs Utilities through two 20-inch pipes on the north side of the installation. Colorado Springs Utilities is capable of supplying 14 million gallons per day (MGD) to Fort Carson which far exceeds the 2005 peak day demand of 5.5 MGD.

Colorado Springs Utilities has included consideration of the impacts of Fort Carson's growth in its *Finished Water Distribution Planning Study*, a comprehensive master plan to address near- and long-term needs for the water system through 2030. Demand forecasts for the plan are updated periodically as new population information becomes available.

City of Fountain Utilities

The City of Fountain Water Department serves approximate 21,600 people, including almost 14,000 outside the city, in Widefield. Fountain distributes about 4.1 MGD of water to its residents.

In 2007 the Fountain completed an update to its Water Master Plan which provides an assessment of the City's water supply needs through the year 2046. It also takes into account the projected BRAC growth at Fort Carson and its impact on Fountain's water system. In conjunction with its Water Conservation Plan, Fountain has mapped out a strategy to meet its forecasted demand through 2046.

Water Districts

Several smaller water districts also supply the needs of unincorporated communities surrounding Fort Carson. These include Widefield, Security, Stratmoor Hills, Rock Creek Mesa, and Colorado Centre. (See Table 1 and Maps 1 and 3.)

C. WASTEWATER

Colorado Springs Utilities

Colorado Springs Utilities (CSU) completed a Sewer System Capacity Evaluation in 2006. Based on that report, it has programmed over $9.4 million in capital improvements to its sanitary sewer system. In addition, CSU is planning the construction of the Clear Spring Water Reclamation Facility. This is a new wastewater treatment plant with the initial to capacity treat 8 million gallons per day (MGD) and a build-out capacity of 30 million MGD designed to serve a population of 114,290. Construction of the facility has recently been put on hold pending a resurgence of housing development and future demand.

Lower Fountain Metropolitan Sewage Disposal District (LFMSDD)

The LFMSDD, which consists of Fountain Sanitation District and Colorado Centre Metropolitan District, is also planning a wastewater treatment plant expected to have a build-out capacity of 6 MGD. The LFMSDD will provide service to Fountain Sanitation

District, Colorado Centre Metropolitan District and Vintage Development Company. It is anticipated that the facility will be operational by 2010.

Widefield Water and Sanitation District

The Widefield Wastewater Treatment Facility is an activated sludge facility rated at 2.50 MGD hydraulic capacity. The plant is master planned and partially plumbed to accommodate expansion to 5.0 MGD. Overall plant capacity will handle expected five year growth. It is estimated that the District will need to begin planning for plant expansion between 2012 and 2013, with the need of having expanded capacity online between 2016 and 2018.

Fort Carson

Fort Carson's existing wastewater treatment facility is currently rated for 3.02 million gallons per day (MGD) wastewater flow. Due to population growth and construction of new facilities on the installation, design work is underway for modifications to expand the facility to 4.0 MGD.

D. ELECTRIC

Colorado Springs Utilities

CSU is planning upgrades to two substations which serve the southwest area of Colorado Springs, including Fort Carson. CSU recently completed a 34.5 kV System Study for the Southwest Area detailing the recommended improvements to meet increased loads in that part of their service area. Fort Carson's peak demand is projected to increase from 24 megawatts (MW) to 34 MW by 2011.

Fort Carson

Fort Carson has completed a 19-acre photovoltaic solar array capable of generating 2 MW of electricity. Excel energy will purchase the energy credits.

E. NATURAL GAS

Colorado Springs Utilities has developed a master plan for the natural gas system to supply Fort Carson's expected growth demands based on information and estimates compiled in the study done by Black & Veatch. Colorado Springs Utilities currently supplies natural gas to Fort Carson through a meter station located near Gate 4. Representatives from both Colorado Springs Utilities and Fort Carson have agreed that a second natural gas source to Fort Carson would be the best solution to meet the need of future infrastructure and increased load. Designs are underway for a gas main extension along Hwy 115 to provide a second natural gas source at Gate 5. Construction is expected to begin in June and finish by the end of 2008. In addition to the capacity delivered to Fort Carson, the proposed main will also supply load to future developments in the surrounding areas west of Fort Carson (JL Ranch).

F. RECOMMENDATIONS

- Maintain and update as needed the projected increase in demand from growth at Fort Carson, both on-post and off-post, in all utilities planning.
- Follow the lead of Fort Carson's Sustainability Program, to build, support, and coordinate sustainability efforts in the surrounding communities.

Health Care and Behavioral Health Technical Report

Fort Carson Regional Growth Plan

December 15, 2007

Pikes Peak Area Council of Governments

Communities Working Together

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A. INTRODUCTION AND METHODOLOGY

Introduction

Communities surrounding Fort Carson will experience significant population growth through FY 2011 as a result of the Department of Defense's implementation of the Base Realignment and Closure (BRAC) initiative of 2005. This component of the Fort Carson Regional Growth Plan addresses the incremental health care and mental health care infrastructure requirements necessary to meet this increased demand.

The quality of life of these communities depends in large part upon the availability of quality health care services to promote wellness, treat and cure illnesses, and manage chronic and debilitating conditions. Accurately assessing and then successfully providing the right amount of service coverage is therefore essential to maintaining a healthy, prosperous and sustainable community in general, and to providing quality healthcare for Fort Carson military personnel and their families in particular.

The scope of this technical report is to:

- Identify the current inventory of services available for the study population, including behavioral health providers;
- Project service needs for the growing population; and,
- Discuss service distribution options available to ensure care to military personnel and their families.

Methodology

The respective roles of the firms and organizations involved in the project are as follows:

- Navigant Consulting (NCI)
  - Collection of local, state and national data from reliable sources
  - Inform decisions with external perspectives
  - Perform projected resource gap analysis
- Pikes Peak Area Council of Governments (PPACG)
  - Local contact with hand on the "community pulse"
  - Assist in interviews and data collection from local sources
  - Facilitate conversation at Fort Carson
  - The "go-to" team for local leaders and interested parties
  - Overall project management and plan coordination
- EDAW
  - Assist in identifying key stakeholders
  - Assist in data collection and identifying key trends
  - Consultant team project manager

The process conducted by Navigant Consulting consisted of the sequence of activities shown in Figure 1. The study's foundation consists of an inventory of current resources informed by stakeholder interviews to obtain a picture of the current situation.

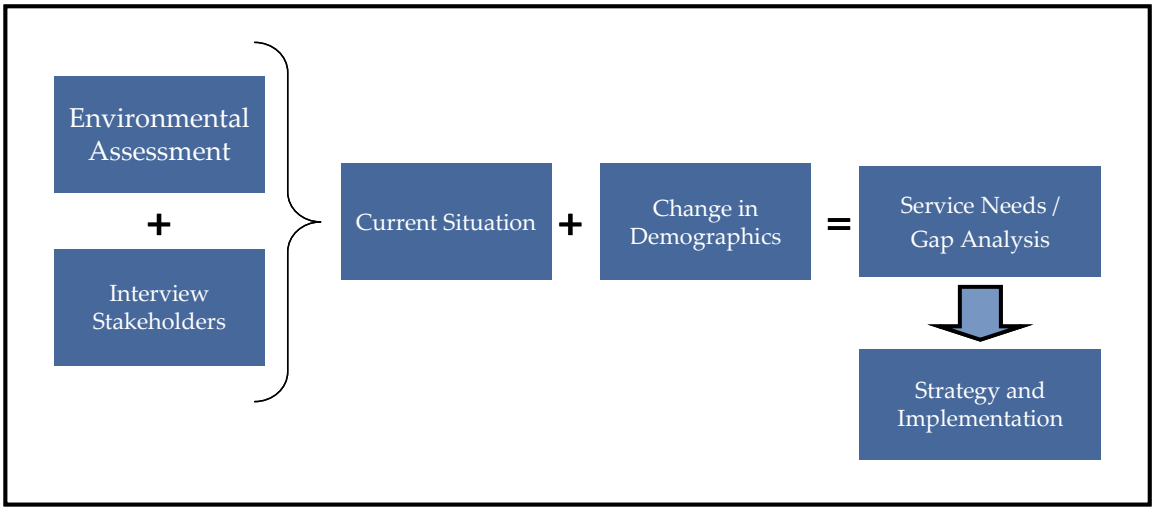


Figure 1. Project Process Diagram

The conceptual approach adopted for the study is to identify gaps in the provision of health care services. Norms from national and state data were applied to the study area's level of resources and services. The presumption is that meeting or exceeding average levels indicates a high level of certainty that needs are being met. The focus is therefore on the adequacy of resources, rather than on achieving standards of expertise or outcomes.

Compiling data and performing an analysis of the health care environment requires the assistance of informed providers from the Fort Carson study area and beyond. The consulting team gathered information in face-to-face and phone interviews and from publicly available databases and Navigant Consulting's proprietary data-sets. TriWest, the private company that is contracted to administer TRICARE programs in the western region of the country, also generously provided data on local healthcare utilization. Acquiring reliable data laid the foundation for the analysis of health care utilization trends, the assessment of any current gaps in service provision, and prediction of future needs (Figure 2).

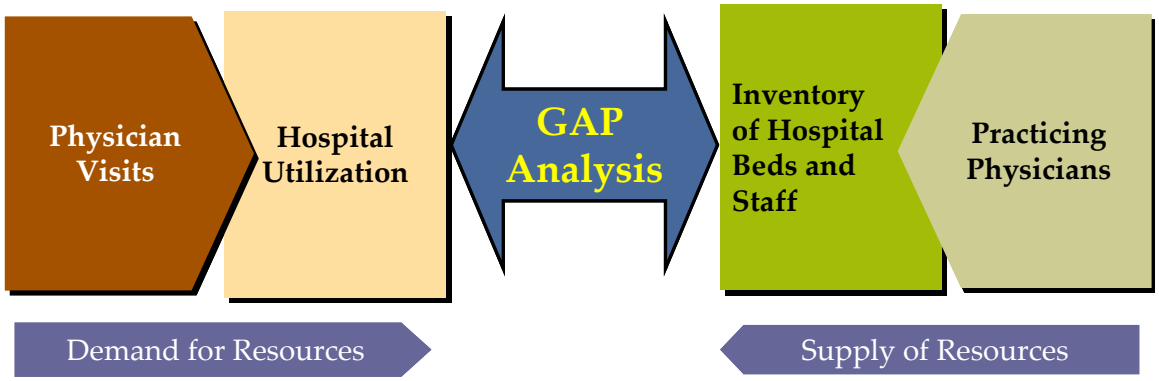


Figure 2. Gap Analysis

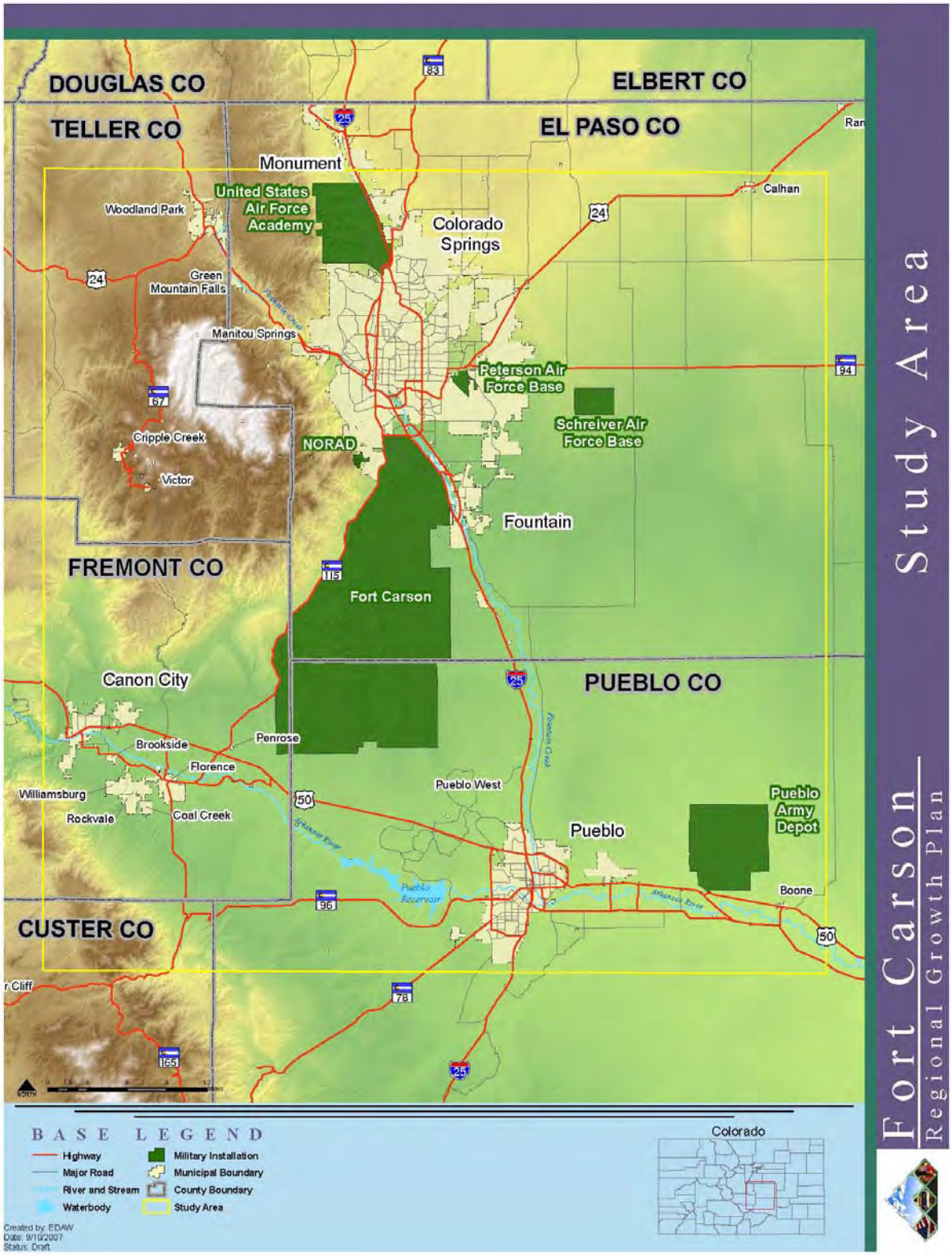
In February 2007, NCI participated in a series of stakeholder sessions to discuss the impacts of population growth over the next five years. Over a dozen face-to-face interviews gave an overview of current or planned service delivery resources. (See the Stakeholder Interview Report.)

Subsequent interviews explored health care provider capacity limits, as well as planned expansion projects intended to accommodate the population growth.

B. BASELINE ANALYSIS AND BACKGROUND

Study Area

For purposes of assessing health care infrastructure, this analysis will focus on the three-county area (hereinafter referred to as the "study area") of Fremont, El Paso, and Pueblo, with a total of 767,450 persons in 2006. Seventy-four percent of the study area's population or 565,341 persons inhabit the 5,513 square miles of El Paso County, where the city of Colorado Springs is located. Pueblo County, consisting of 6,200 square miles, holds 20 percent of the study area's population or 154,383 persons, while Fremont County, with 3,970 square miles, has only 6 percent of the population or 47,726 persons. The City of Fountain, population 15,197 in 2000, is the nearest community to the base, running along the eastern side of I-25 (see Map 1).



Map 1. Fort Carson Study Area

Within the study area, Fort Carson itself occupies approximately 216 square miles and straddles El Paso and Pueblo counties. An estimated 12,600 military personnel were authorized for Fort Carson at the end of FY 2006, with an estimated 23,000 dependents living within the region. Thus, the population of the Fort Carson community, including those living on and off the post, at the beginning of FY 2007 was approximately 36,000 persons.

C. RELATIONSHIP TO PREVIOUS AND CURRENT PLANS

The pertinent plans that antecede this technical report by the military consist of the responses by Fort Carson, the Air Force Academy, and Peterson Air Force Base. Fort Carson is currently implementing its master facilities plan in which the planned construction and renovation projects related to the provision of healthcare are described, among other projects. The BRAC construction projects are described as costing a total of $526 Million and will be implemented from June 2006 to September 2009. The projects include the following:

- Division HQ Complex ($104 Million),
- Heavy Brigade Facilities ($341 Million); and,
- Evans Army Community Hospital Alteration and Consolidated Clinic ($81 Million).

The Air Force Academy will close its hospital to inpatient services and continue as an outpatient facility. The clinic at Fort Peterson will be renovated to improve the level of service.

The community health care providers in the study area are organizationally separate and operate independently. Even though there is a degree of competition among them, they formed some ten years ago a cooperative planning organization called the Community Health Partnership, in order to work together to improve the healthcare of the community. CHP's approximately 50 members include the top executives of the major providers; resources are provided on a voluntary basis.

The CHP has identified such areas of concern as: mental health, education of medical professionals, long-term care, public health, inpatient care and nursing. Funded by a grant, it created Health Track, a database of the uninsured. Health Track makes it possible to coordinate resources; it helps patients secure the care they need by assisting in qualifying for payment programs. CHP has been successful also in coordinating faith-based providers in establishing small clinics staffed by voluntary nurses and physicians. These clinics triage the patients for referral to other providers for episodic and chronic conditions.

D. KEY ISSUES AND ASSUMPTIONS

Key Issues

Health care and mental health care services in the Fort Carson study area must both expand and adapt to meet future levels of demand. A variety of factors will continue to

affect the delivery capacity of providers and the ability of residents to access needed care, including the following:

- Supply of physicians and other care providers;
- Availability of behavioral and mental health services, especially for troops returning from conflict zones in Iraq and Afghanistan and their families;
- Number of inpatient facilities and inpatient beds;
- Distribution of resources within the study area;
- Increases in service utilization and/or demand;
- Level of health insurance coverage;
- Quantity and availability of providers accepting TRICARE coverage from military personnel and their dependents; and,
- Lifestyle issues associated with young populations, including binge drinking, STDs, and access to pre-natal care.

It is this technical report's objective to identify the degree to which clinical personnel and capital resources will be able to meet the additional demand for medical, surgical and mental health care associated with the troop increases at Fort Carson. This demand will be added to that generated by the baseline population growth in the Fort Carson study area, so that it is recognized that both populations will be seeking access to the community's health care resources

Population Assumptions

Announced Troop Realignments

New troops, civilians, and dependents are beginning to arrive at Fort Carson as a result of directives on troop movements due to Base Realignment and Closure (BRAC), Integrated Global Presence and Basing Strategy (IGPBS), and Army Modular Force (AMF).

A range, which establishes an "upper" and a "lower" number for the projected increase in military personnel, was established, referred to as the "Expected Growth Scenario" and the "Alternative Growth Scenario." The "Expected Growth Scenario" assumes 11,400 additional troops will be assigned to Fort Carson. A second scenario, referred to as the "Alternative Growth Scenario", assumes a reduction to 75% of the "Expected Growth Scenario" in troop assignments each year. The "Expected Growth Scenario" was based on information provided by officials at Fort Carson, and will function in this document as the projected total number of troops that will be authorized for the installation through FY 2011 the next five years. Thus, total population growth associated with the troop increase at Fort Carson is expected to be roughly 33,800, consisting of approximately 11,400 newly authorized troops, 21,300 military dependents, 430 civilians, and 690 civilian dependents.

Two large surges of troop arrivals are anticipated through 2011. The first increase in troops, currently underway, is expected to add 4,700 troops by the end of FY 2007. The second increase, expected to occur before the end of FY 2009, will add an additional

5,200 new troops. FY 2008, 2010, and 2011 are expected to add 100, 700, and 700 new soldiers, respectively. (See Demographic Projections Technical Report.)

Population

New population growth associated with the forecast troop increases (including military personnel, civilians, and all dependents) will add approximately 33,800 new persons to the study area population as shown in Table 1, and the total Fort Carson related population will make up over 8% of the total study area population by FY 2011. When the new population growth associated with the forecast troop increases including military personnel, civilians, and all dependents) is combined with the general population (or baseline) growth, the three-county study area is forecast to increase by 15 percent or 124,992 persons in the five years ending in 2011 (see Table 1 below). Table 2 shows the annual population change from 2006 through 2011[1]. A significant portion of that increase, 27 percent or 33,810, is directly the result of the BRAC realignment (Figures 3 and 4).

Table 1. Summary of Population Impacts

Population	Population as of 2006	Population Increase (2007 to 2011)	Population by 2011
Military Personnel (1)	12,600	11,400	24,000
Military Dependents (estimated)	23,000	21,287	44,287
Civilians Working On-Post (2)	3,119	430	3,549
Civilians Dependents (estimated)	5,022	693	5,715
Total Fort Carson Related Population	**43,741**	**33,810**	**77,551**
Non-Military Related Population (3)	723,709	91,182	814,891
Total Regional Population	**767,450**	**124,992**	**892,442**

(1) The current Military Personnel Population used in this analysis differs from the FY 2006 Statistical Data Card and represents information provided by Fort Carson personnel.
(2) Includes DA and NAF Civilian Employees.
(3) Based on Colorado DOLA forecast information as of Spring 2007.
Source: Fort Carson Garrison Command, End FY 06 Fort Carson Statistical Data Card, RKG Associates, Inc.

Table 2. Population in Fort Carson Region by Segment, FY2006 to FY2011

Change in Population - 2006 through 2011

	2006	2007	2008	2009	2010	2011	Δ
Military Personnel	12,600	17,300	17,400	22,600	23,300	24,000	11,400
Military Dependents	23,000	31,776	31,963	41,673	42,980	44,287	21,287
Civilian Personnel	3,119	3,205	3,291	3,377	3,463	3,549	430
Civilian Dependents	5,022	5,160	5,299	5,437	5,575	5,714	692
General Population	723,709	750,969	766,877	782,767	798,821	814,891	91,182
Totals	767,450	808,411	824,830	855,855	874,140	892,442	124,992

Source: RKG Associates, 2007

1 Source: RKG Associates, 2007 and Navigant Consulting analysis

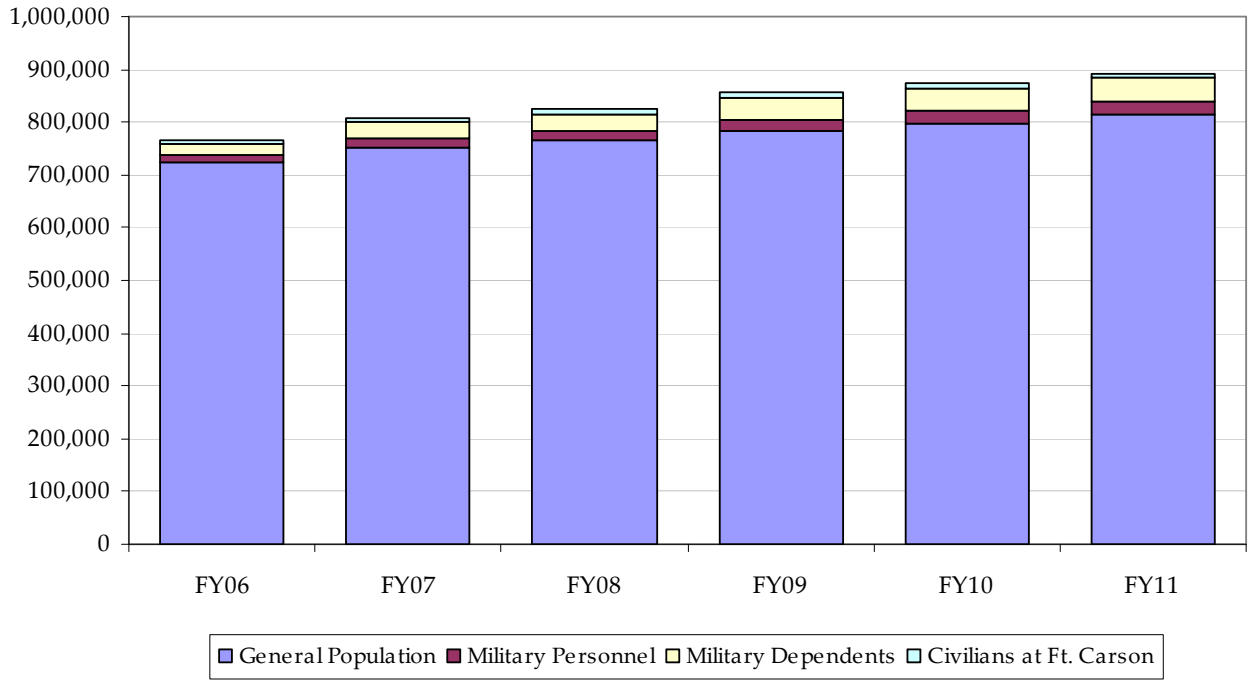


Figure 3. Population Growth by Category, FY2006 to FY20112

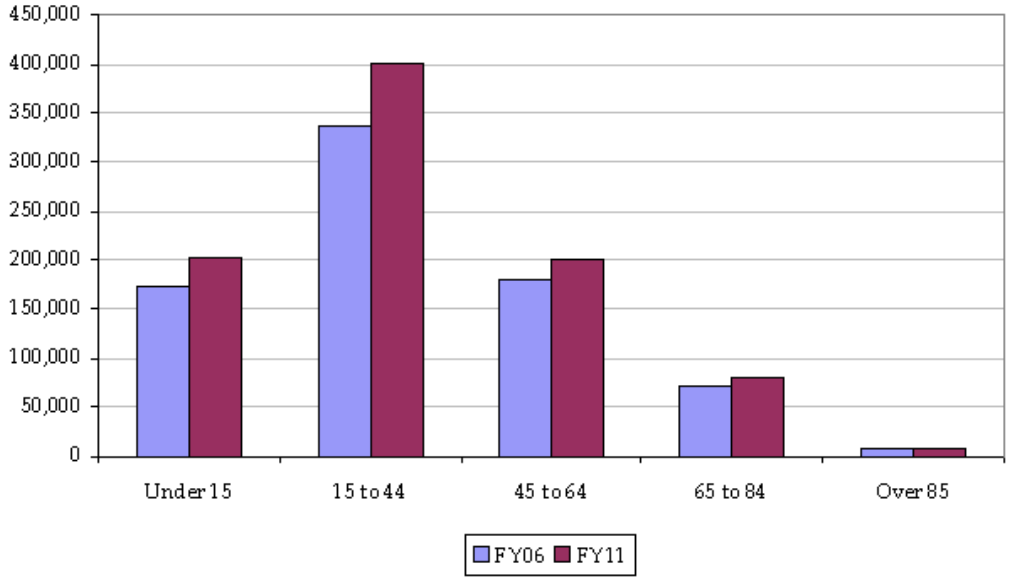


Figure 4. Fort Carson Study Area Population by Age Projections, 2006 and 2011[3]

The age cohort 15 to 44, in which persons associated with the military are concentrated, is the largest in the Fort Carson Region currently and is projected to grow the most in the next five years (Table 3 and Figure 5). Anecdotally, there is an increase in the number of older persons, particularly former military personnel retiring in the Fort Carson Region; however, it is projected that, as a portion of the total population, persons over age 65 will not grow as a percentage of the total population.

2 Source: RKG Associates, 2007
3 Source: RKG Associates, 2007

Table 3. Population by Age Cohort, 2006 and 2011

Change in Population FY06 to FY11

	FY06	FY11	Δ	% Δ	% of Total '06	% of Total '11	Δ in % of Total
Under 15	172,283	201,993	29,711	17%	22.4%	22.6%	0.2%
15 to 44	336,832	400,284	63,452	19%	43.9%	44.9%	1.0%
45 to 64	178,553	201,074	22,520	13%	23.3%	22.5%	-0.7%
65 to 84	71,784	80,150	8,366	12%	9.4%	9.0%	-0.4%
Over 85	7,998	8,941	943	12%	1.0%	1.0%	0.0%
Total	767,450	892,442	124,992	16%	100%	100%	0%

El Paso	565,341	669,754	104,413	18%	73.7%	75.0%	1.4%
Pueblo	154,383	169,797	15,414	10%	20.1%	19.0%	-1.1%
Fremont	47,726	52,890	5,164	11%	6.2%	5.9%	-0.3%
Total	767,450	892,442	124,992	16%	100%	100%	0%

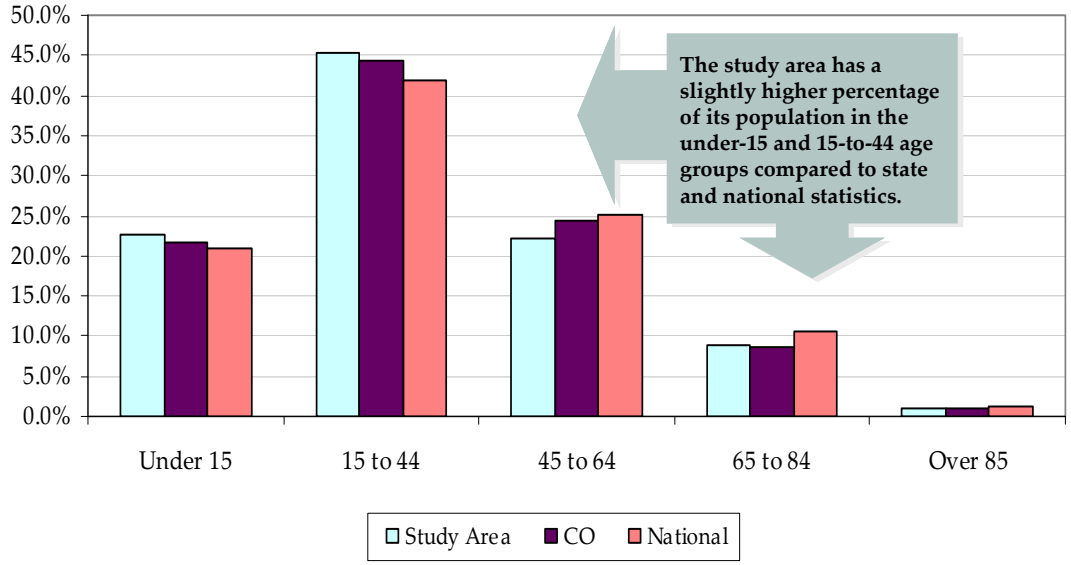


Figure 5. Age Comparison – Fort Carson Study Area to Colorado and USA, 20064

4 Sources: RKG Associates, 2007, US Census Data, Navigant Consulting analysis

E. CURRENT SERVICES INVENTORY

Current Hospital Bed Supply

The population in the study area is served by eleven hospitals, of which seven are general acute care hospitals, two are psychiatric or mental health hospitals (one of which is a state institution), and two long-term or rehabilitation hospitals. Of the acute care hospitals, two are located on military installations and, as such, serve exclusively military personnel and dependents. In turn, the study area's five community general acute care hospitals are available to the military population by their acceptance of payment through TRICARE, the health care insurance program serving the nation's military.

In the study area, hospitals are currently estimated to be operating at an average occupancy of 58% (see Table 4 and Figure 6). The industry planning target for maximum occupancy across all hospital services is 85%, a level that allows for sufficient capacity at times of peak demand, such as in the winter flu season, and also for an efficient operation for staff and capital resources. Therefore, in aggregate, hospitals in the Fort Carson study area are currently operating at below capacity.

Table 4. Fort Carson Study Area Hospitals and Utilization, 2005

HOSPITAL TYPE / NAME	BEDS	ADMISSIONS	ALOS	PATIENT DAYS	OCCUPANCY
Acute Medical & Surgical					
Penrose-St. Francis Health Services, Colorado Springs	387	23,365	4.0	93,460	66%
Memorial Health System, Colorado Springs	392	27,774	4.3	119,428	83%
Evans U. S. Army Community Hospital, Fort Carson	56	3,150	2.5	8,030	39%
St. Thomas More Hospital, Canon City	55	2,454	3.7	9,080	45%
St. Mary-Corwin Medical Center, Pueblo	254	8,944	4.4	39,354	42%
Parkview Medical Center, Pueblo	287	13,538	4.5	60,921	58%
U. S. Air Force Academy Hospital	24	1,057	2.8	2,920	33%
Sub-Totals	***1,455***	***80,282***	***4.2***	***333,193***	***63%***
Mental Health					
Cedar Springs Hospital, Colorado Springs	110	1,908	17.8	33,962	85%
Colorado Mental Health Institute at Pueblo	514	681	108.7	74,025	39%
Sub-Totals	***624***	***2,589***	***41.7***	***107,987***	***47%***
Rehabiliation / Long Term Care					
Select Specialty Hospital of Colorado Springs	30	302	24.2	7,308	67%
HEALTHSOUTH Rehabilitation Hospital of Colorado Springs	56	869	13.5	11,732	57%
Sub-Totals	***86***	***1,171***	***16.3***	***19,040***	***61%***
Totals	***2,165***	***84,042***	***5.5***	***460,220***	***58%***

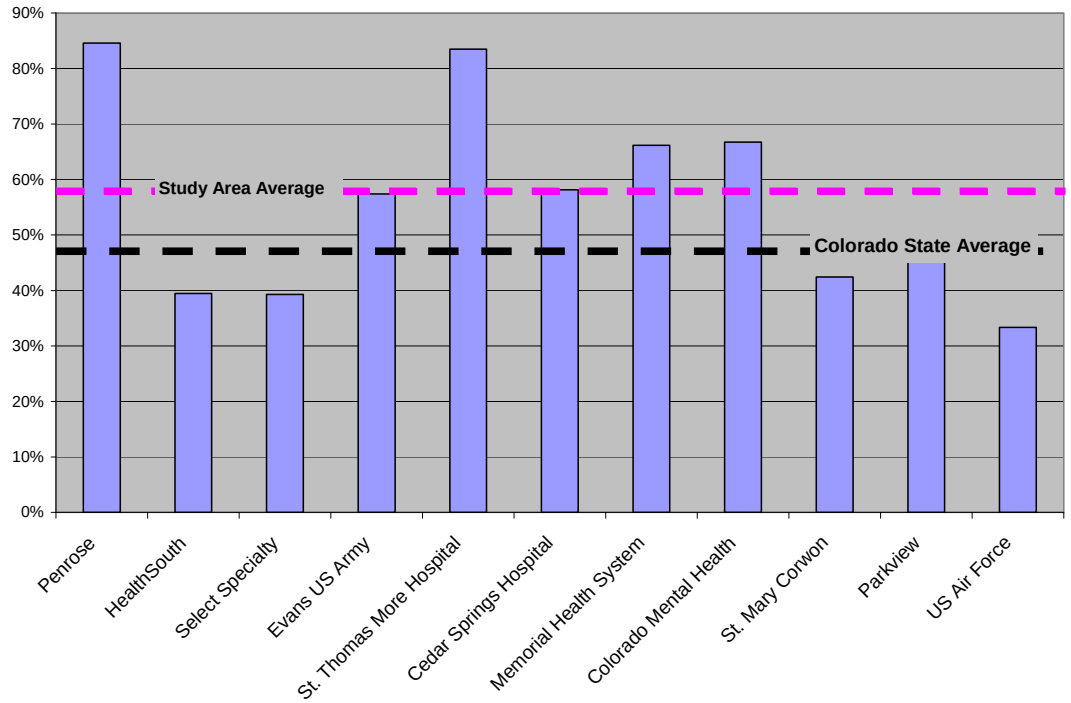


Figure 6. Fort Carson Region Hospitals' Occupancy Rates vs. Regional Rate, 2005

If the study area's hospitals were operating at the maximum industry level of 85%, there would be an excess of 381 beds available for future population growth (see Table 5). However, regional planning must take into consideration the location of the resources for timely and convenient access. For instance, having specialized services, such as orthopedics or neurology, accessible for a relatively small population means that these services, if present, would be under-utilized. By the same token, less acute services, such as general internal medicine, might be overcrowded or resource-constrained, even though the average use of all inpatient services was below the target utilization.

Table 5. Fort Carson Study Area Bed Capacity, 2005

Source / Operation	2005	
	Quantity	Unit
	1,455	regional acute care bed supply
less:		
	333,193	regional acute care patient days
divided by	365	days in a year
equals	913	average daily census (ADC)
divided by	85%	target occupancy
equals	1,074	required beds
equals	**381**	**regional excess bed capacity**

Military Health Care and TriWest

Active duty soldiers and their dependents at Fort Carson, Peterson Air Force Base and the Air Force Academy have access to health care through the TRICARE insurance program. In addition to the health care services available on the military bases, soldiers and dependents have access to private or non-military health care providers who have accepted payment by TriWest, the private company that is contracted to administer TRICARE programs in the western region of the country.

The coverage by TriWest in the Fort Carson study area is extensive in terms of the list of providers that have agreed to accept TriWest payments. However, the payment levels, depending upon the type of coverage, are unattractive for some providers from a financial point of view. For instance, the payment offered for a routine outpatient physician visit is one-half of the cost calculated by one large provider in Colorado Springs of providing that service, and it is nearly one-third of the payment provided by the combined state and federal Medicaid program. This significant difference can be viewed as a required cost shifting for providers that must use the margins from other payers to make up the difference, and may limit access for those persons seeking care with TriWest coverage. It also means that providers are more likely to "steer" these patients elsewhere by capping the portion of their practices that is paid by TriWest, which will be accomplished by lengthening appointment wait times or denying service altogether.

The range of inpatient and outpatient services at Evans Army Community Hospital is expanding to accomplish two related objectives: (1) provide greater access to care for soldiers on post, and (2) achieve greater efficiency by providing these services. In addition, the quality of services can be improved by tailoring the care to the specific needs of active military and their dependents.

The hospital at the Air Force Academy is mandated (as part of the BRAC initiative) to close by October 2008 and is currently in the process of reducing the inpatient stays there so that there will be no census by this date. The hospital will convert to an ambulatory surgery center and continue as an outpatient center, with a clinic that will offer walk-in care for episodic illnesses and minor, non-life threatening injuries and illnesses. True life threatening conditions will be sent to Evans Army Community Hospital. The amount of patient volume that will be transferred from the Air Force Academy to Evans has not been determined as of the date of this report. Peterson Air Force Base will continue to offer outpatient care at the base in a clinic building that will be renovated and upgraded in its condition to improve patient flow in the near future.

Current Physician Supply

Physicians constitute the foundation of the health care delivery system by virtue of their multiple roles in diagnosis, treatment, and patient management. An adequate supply and distribution of physicians is necessary to ensure a healthy community. Using the firm's proprietary model, the consultants calculated the number of physicians by medical specialty and physician density to serve the Fort Carson study area's population in 2006 (Table 6 and Map 3.)

The physician staffing model uses the regional population's age and sex information and the profile of insurance coverage and the median physician throughput statistics from the Medical Group Management Association to determine the appropriate physician supply by specialty service.

Comparing this result to the actual physician supply reveals that there are some significant deficiencies in some specialties, but that overall there is a sufficient supply of physicians. The aggregate number of physicians is adequate within the study area - with a total excess of 124.[5]

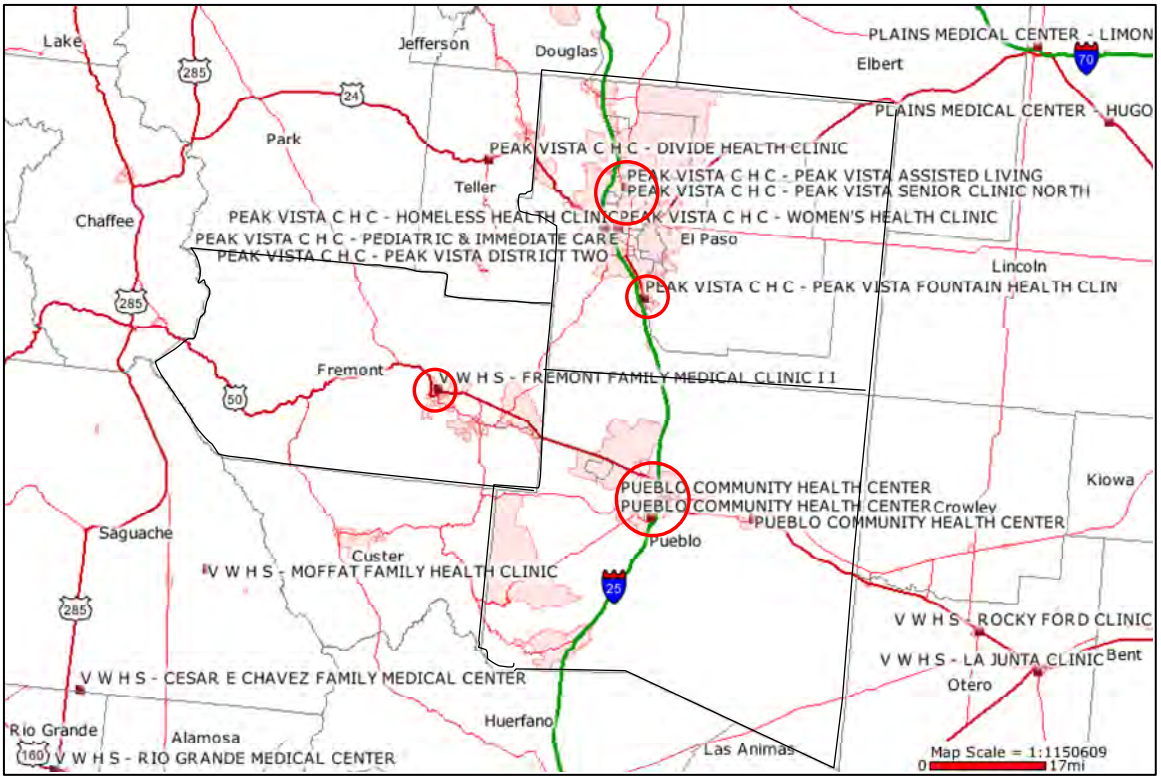
The deficit of 4 percent in the number of primary care physicians most probably indicates that specialty physicians, including the surplus of OB/GYN physicians, are serving as primary care physicians to their patients. At the same time, there is a significant presence of Federally Qualified Health Centers in the study area. Map 2 shows the FQHC's in the three counties: Pueblo County has six centers operated by Pueblo Community Health Center; El Paso County has eleven centers

5 The total overall physician supply was reduced by physicians whose specialty does not typically offer scheduled patient services -- emergency room physicians, anesthesiologists, radiologists, and pathologists. Similarly, the demand for services does not include the demand for these physicians.

operated by Peak Vista Community Health Centers; and, Fremont County has three operated by Valley-Wide Health Systems. The location of the centers in the more densely populated areas means ready access by a large portion of the population; however, rural areas are relatively underserved. Also, significantly for the military personnel, Peak Vista does not accept patients covered by TRICARE, thereby channeling these patients to providers.

There is also a deficit of a number of specialty physician groups, including cardiac surgery, cancer surgery and gynecology surgery. The latter services are probably provided by general surgeons, which are shown as having a large surplus.

Interviews with stakeholders reveal that the study area's health care providers are concerned about their future ability to retain and recruit an adequate supply of physicians to meet the needs of the growing population and to replace those who will retire. The Community Health Partnership will give this issue priority in the coming year; the objective will be to identify ways that the providers can cooperate in enhancing their offers to candidates.



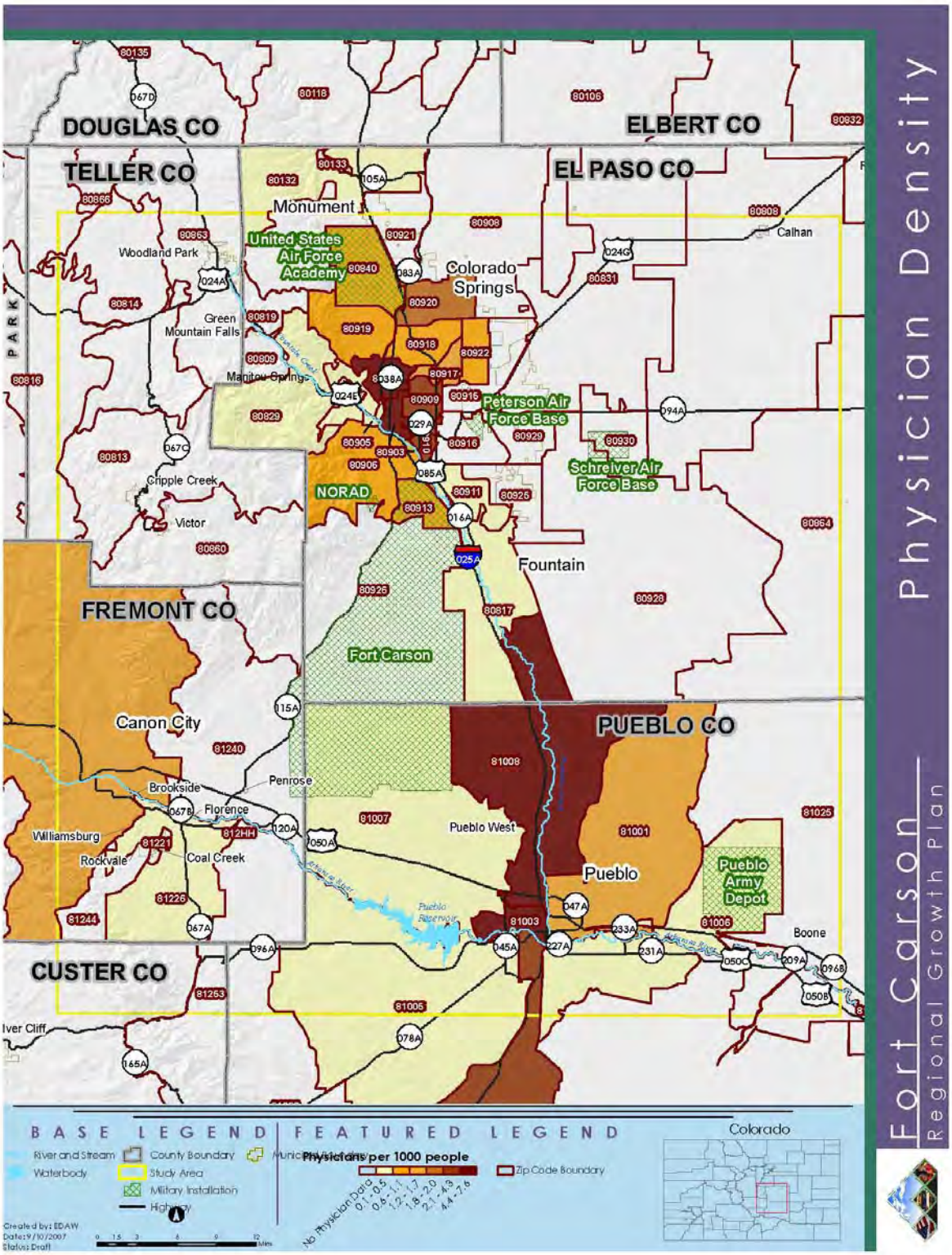
Source: Colorado Community Health Network, http://www.cchn.org/# and Rural Policy Research Institute, Community Information Resource

Map 2. Federally Qualified Health Centers, 2007

Table 6: Physician Demand and Supply by Specialty, 2006

Specialty	2006 Demand (FTEs)	2006 Supply (FTEs)	2006 Surplus/(Deficit)	Surplus / Deficit %
Primary Care	530	507	(23)	-4%
Family/General Practice	259	220	(39)	-15%
Internal Medicine	119	117	(2)	-2%
Pediatrics	96	97	1	1%
OB/Gyn	56	73	17	31%
Specialty Care	166	201	35	21%
Allergy/Immunology	17	21	4	21%
Cardiology	30	39	9	29%
Cardiology - EP	8	6	(2)	-20%
Dermatology	25	22	(3)	-12%
Endocrinology	7	7	0	2%
Gastroenterology	19	20	1	6%
Hematology/Oncology	10	18	8	71%
Infectious Disease	7	6	(1)	-18%
Nephrology	6	15	9	133%
Neurology	16	21	5	30%
Pulmonary Medicine	14	20	6	40%
Rheumatology	6	6	0	8%
Surgical Specialties	195	287	92	47%
CT Surgery	12	6	(6)	-50%
Vascular Surgery	11	12	1	14%
Colorectal Surgery	7	2	(5)	-70%
Oncology Surgery	12	0	(12)	-100%
General Surgery	14	56	42	314%
Gynecology Surgery	25	0	(25)	-100%
Neurosurgery	13	9	(4)	-29%
Ophthalmology	33	64	31	94%
Orthopedics	28	70	42	147%
ENT	23	27	4	18%
Plastic Surgery	3	17	14	422%
Urology	16	24	8	52%
Other	64	84	20	31%
Psychiatry	49	55	6	13%
Physical Medicine/Rehab	15	29	14	90%
TOTAL	955	1,079	124	13%

Sources: Physician services throughput: MGMA Medians, 2006; Utilization: Milliman USA, 2006; Physician supply: AMI, 2007; Population: US Census & RKG Associates, 2006



Map 3: Fort Carson Study Area Physician Density, 2006

Current Nursing Supply

The analysis assessed the supply of nurses within the study area by aggregating data from the American Hospital Association's 2007 Hospital Planning Database and benchmarking the results against state and national nurse density ratios (see Tables 7, 8 and 9). The Fort Carson Study Area currently has a nurses' shortage of 42 (or 2 percent).

Table 7. Nurse Supply, 2006[6]

Hospital	RN's
Penrose-St. Francis Health Services	570
HEALTHSOUTH Rehabilitation Hospital of Colorado Springs	31
Select Specialty Hospital of Colorado Springs	18
Evans U. S. Army Community Hospital	189
Cedar Springs Hospital	20
Memorial Health System	916
Colorado Mental Health Institute at Pueblo	113
St. Mary-Corwin Medical Center	316
Parkview Medical Center	407
U. S. Air Force Academy Hospital	131
TOTAL	**2,711**

Source: AHA Quick Disk, 2007

Note: Not included in above data are St. Thomas More Hospital, Canon City, and Fremont County

6 AHA Quick Disk, 2007.

Table 8. Nursing Needs Model, 2006

Inpatient Units	
ADC	1,261
days per week	7
hours per day	24
IP RN needs	211,827
worked hrs per week	40
patients per RN	3.5
IP RN needs	**1,513**
Surgery[a]	
surgical cases	61,545
days per year	250
cases per day per OR	2.4
RN per procedure	2.2
Surgical RN needs	**226**
Outpatient[b]	
Office Based Physicians	1,107
RN : MD Rate for Non-Hospital Services	0.60
OP RN needs	**664**
Emergency Department[c]	
ED cases	331,417
Min work hours per patient visit	1.85
Max work hours per patient visit	2.20
Total work hours per year per nurse	2,080
Min ED RN required	295
Max ED RN required	**351**
RN Needs	
IP	1,513
Surgery	226
OP	664
ED	351
Total	**2,753**

[a] Source: RN per procedure based upon NCI research

b Source: HFMA, 2006 - RN: MD ratio for multispecialty provdider benchmarked at the 2005 median

[c] Source: Min and max RN hours per visit based upon NCI research

Table 9. Nursing Gap Analysis, 2006

RN Needs	
1,513	IP
226	Surgery
664	OP
351	ED
2,753	**Total**

RN Supply	
2,711	Total RN's

Interviews with local provider stakeholders reveal that the nursing vacancy rate is not a major concern, in some part due to the ability of the providers to cope through the use of temporary help, creative and innovative working arrangements, and other efforts, such as Beth-El College of Nursing having a program to return nurses to the workforce. Nevertheless, the national shortage of nurses affects the ability of local hospitals to recruit and retain nurses. Interviews held with local providers indicate that the nursing shortage in the Fort Carson study area is a significant issue.

Nurses are the essential front line staff in meeting the patient care responsibilities of hospitals. Competing employment opportunities, offering better pay and working conditions, have been a factor in creating the nursing shortage, so that the average age of nurses is rising, as is the number of unfilled positions. A regional plan to recruit young nurses to the Fort Carson study area is an important goal in ensuring the health care infrastructure's ability to care for patients.

An accessible – and preferably local – school of nursing is key to ensuring a steady supply of nurses who are inclined to stay in the same community where they went to school. In this vein, the Fort Carson study area has two schools. The Beth-El College of Nursing & Health Sciences, which merged with the University of Colorado at Colorado Springs in 1997, offers a range of degrees in nursing from an undergraduate Bachelor of Science program to a master of science in nursing and a doctorate in nursing practice. Colorado State University – Pueblo also offers a nursing curriculum.

Mental and Behavioral Health

A critical issue for any community is the provision of adequate mental and behavioral health services. The right services must be brought to bear on the right illnesses at the right time to be cost effective. These services properly provided have the potential to improve the neighborhood, avoid or obviate violence, truancy, spousal and child abuse, alcoholism and drug addiction. The nexus of such emotions as despair, anger, self-blame and depression can be overwhelming and lead to self-destructive behavior. The states' closing of the large mental health institutions has made homeless persons in large and small urban areas common place.

Stakeholder Interviews

Interviews with mental health organizations in the Fort Carson study area revealed that there are gaps in mental health service coverage. The comments made in these interviews reflect that mental health issues have become an increasingly public concern, thus warranting a heightened review of current practices.

- There is an insufficient number of psychiatrists practicing in the Fort Carson study area;
- Growth in incidence of domestic violence is a concern due to limited number of trained responders; a particular concern is the projected increase in military households living in the community;
- The provisions of the mental health benefits offered by TriWest and other insurers should be reviewed, particularly in regard to the allowed services for psychiatric disorders and substance abuse separately or in combination (dual diagnosis); and,
- Psychiatric social workers and clinical psychologists are in high demand; low levels of payment for services makes offering competitive salaries difficult.

Military Personnel and Dependents

The military conflicts abroad over the past half-decade have called upon the Department of Defense and the individual military posts to provide an increased amount of psychiatric services for the soldiers and their dependents. Public attention has been focused upon both physical and emotional needs as some reports of faults in the care system have come to light.

In mid-2007, a report was issued by the Department of Defense[7] that made the following recommendations:

1. Building a culture of support for psychological health
2. Ensuring a full continuum of excellent care for service members and their families
3. Providing sufficient resources and allocating them according to requirements
4. Empowering leadership

The report cites an incidence rate[8] for psychological symptoms of 38% of soldiers and 31% of marines after deployment. Recently, TriWest Health Care Alliance added 4,260 health care providers to its network, an increase of 30% from the previous year, to improve access to care for military personnel returning from combat zones.[9] Another report[10] on a study published in the Journal of the American Medical Association corroborates this magnitude of mental health symptoms in soldiers returning from combat regions: 20.3% of active and 42.4% of reserve component soldiers were shown to require mental health treatment upon taking an evaluation test six months after return from deployment, a much higher rate than was reported by the evaluation taken one month after return.

Public reports of an increased level of awareness and response to mental health issues have been broadcast in the print and broadcast media, including National Public Radio, which reported the work of Veterans for America[11] in providing a resource for information and a guide to finding assistance for military and veterans facing difficulties in finding adequate help for their mental health problems.

In regard to the growing incidence of reported posttraumatic stress disorder or PTSD and the complaints that proper treatment has not been available in the military or the community, Fort Carson has responded with screening programs and increased resources. A report in May 2007[12] highlighted that "PTSD has been a growing problem at the post …[and] (T)he number of cases of the disorder, brought on by exposure to traumatic events, went from 32 in 2002 to 539 in 2006." With a case load this large of patients who may require multiple psychiatric and other treatments at many levels, from outpatient counseling to potentially inpatient care, Col. John Cho, the commander of the post's hospital at the time, is reported to have told his staff to listen to the critics and encouraged innovation to ensure that troops get proper care.

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7 Department of Defense Task Force on Mental Health. (2007). An achievable vision: Report of the Department of Defense Task Force on Mental Health. Falls Church, VA: Defense Health Board.

8 From data reported by the Post-Deployment Health Re-Assessment. Ibid Department of Defense.

9 "Military explores health care in Colorado Springs," May 19, 2006, Colorado Springs Business Journal, by Amy Gillentine.

10 "Longitudinal Assessment of Mental Health Problems Among Active and Reserve Component Soldiers Returning From the Iraq War," Charles S. Milliken, MD; Jennifer L. Auchterlonie, MS; Charles W. Hoge, MD, JAMA. 2007;298(18):2141-2148

11 http://www.veteransforamerica.org/index.cfm/page/subtopic/rswebsubtopicid/

12 "Carson health care gets boost," Colorado Springs Gazette, May 10, 2007, by Tom Roeder.

In response to the growing number of wounded soldiers returning to the U.S. from deployments abroad, the Army ordered the creation of the Army Medical Action Plan (AMAP) Warrior Transition Units (WTUs) in June 2007, with the mission to: "Provide command and control, primary care and case management for Warriors in Transition to establish conditions for healing and promote the timely return to the force or transition to civilian life." As of the date of this report, the action plan for the WTUs at Fort Carson are more than 50 percent complete; the goal is to achieve full implementation by January 1, 2008.[13]

This "collaborative effort to identify and implement changes to improve processes for Warriors in Transition and Family Members" establishes a battalion consisting of three Companies at Fort Carson's Evans Army Community Hospital, with an authorized Cadre of 164 and a capacity for 600 warriors. The planned ratios of care providers to warriors in transition, in addition to a squad leader for every squad of 12 persons, are 1 nurse case manager for every 36 warriors in transition and 1 primary care manager for every 200 warriors in transition. In addition, there will be Solider Family Assistance Center (to provide administrative assistance for Warriors in Transition and families), an Ombudsman (to aid in providing assistance on specific issues), and a website, MyMEB (for soldiers to track their Medical Evaluation Board status).

The definition of a Warrior in Transition is: (1) soldiers who meet the qualifications of Medical Hold, Medical Holdover or Active Duty Medial Extension; (2) soldiers who require a Medical Evaluation Board; and, (3) soldiers who have complex medical needs requiring greater than 6 months treatment. The demographic data show a majority of males (over 90 percent), active military (over 50 percent) to reserve or national guard, between 18 and 35 years of age (approximately 70 percent), and suffering from non-battle injury (approximately 60 percent). The five top diagnoses are: post-traumatic stress disorder, lower back pain, traumatic brain injury, knee injury, and carpal tunnel syndrome.

The WTU and AMAP have the stated purpose of returning soldiers to active status. Those soldiers who are so severely disabled by their physical or psychological injuries that they cannot return to duty are discharged and are then entitled to TRICARE and/or Veterans Administration care. Providers in the mental health area interviewed for this study report that these discharged soldiers and their families encounter difficulties in obtaining mental health care due to the poor payment levels of the TRI-CARE program.

Of concern, too, are the soldiers who have been given a dishonorable discharge. These former soldiers are not eligible for TRICARE or VA health benefits. In these cases, it may be that the dishonorable discharge was the result of behavior that was brought on by emotional or psychological distress arising from PTSD or TBI or another cause while in active duty and not properly treated. Now among the general population without health insurance (unless employed or able to afford an individual or family policy on his or her own), these persons are forced to seek charity care or Medicaid or go untreated. The likelihood is very high of the cost to tax payers being a great deal more in this scenario than if proper care had been made available at the onset of symptoms.

Due to the unique and new character of PTSD and TBI and the immediate need for skilled persons to diagnose and treat these conditions, it is imperative to combine and coordinate the knowledge and practice skills of the mental health professionals working at the military installations' health

13 Information regarding this program is from: "Warrior Transition Unit (WTU) and the Army Medical Action Plan (AMAP), a PowerPoint presentation by COL. Kelly A. Wolgast, dated Oct. 2, 2007; www/evans.amedd.army.mil/msmo/.

centers with the Veterans Administration and, also, community-based independent providers. Such coordination would accomplish a desired "warm hand-off" of the patient and his or her dependents.

State-Wide and Regional Mental Health Services

It is instructive to start with the general state-wide data in order fully to assess the mental health services in the Fort Carson study area. The State of Colorado mental health agency expenditures per capita have been below the national average, and the rate of increase in first years of the century has been significantly less than the average (see Table 10). Regardless of the comparative quality or sufficiency of the services provided by the state to meet its citizens' mental health needs, the fact that the expenditure level is relatively low shows that more should be done in this regard. It is reasonable to expect that a certain amount of private expenditure is making up the difference between state and national levels; in addition, there is probably a deficiency of accessible services as well in the state generally. The degree of impact upon the Fort Carson study area is not directly ascertainable from these data.

Table 10. Per Capita Expenditures by State Mental Health Agencies, 2001 to 2003[14]

				Average annual % Change	
Geographic region and state	**2001**	**2002**	**2003**	**1990-2001**	**2001-2003**
United States	$81	$88	$92	4.9	6.6
Colorado	64	67	66	5.9	1.6
Percent less than US average	-21%	-24%	-28%		

An extensive report was published in 2003 on the adequacy of mental health care services in Colorado, entitled The Status of Mental Health Care in Colorado[15]. The report divided the state into roughly equal population groupings by counties, with the three counties in the Fort Carson study area placed in two different sectors, thereby making analysis of the specific findings difficult.[16]

The report made the following seven observations about Colorado's mental health needs:

5. A fragmented array of public and private mental health providers in need of enhanced coordination and integration;
6. One in seven Coloradans from a diversity of groups, ages, and levels of need who cannot obtain needed care;
7. Mental health spending that is too low to meet current needs, and is shrinking further;
8. Rising costs of providing mental health care;
9. A great number of services that are known to be effective, but are not widely available;
10. A lack of psychiatrists, particularly for children and in rural areas of the state, as well as other providers with specialized skills; and
11. The importance of resilience and recovery in the lives of people and families coping with mental disorders.

14 ftp://ftp.cdc.gov/pub/Health_Statistics/NCHS/Publications/Health_US/hus06tables/Table143.xls

15 Prepared for The Mental Health Funders Collaborative, October 2003 by TriWest Group; http://coloradotrust.org/repository/publications/pdfs/MHCC/MHCCfinalreport.pdf

16 The report divides the state's counties into regions for its analysis. The Fort Carson study area's three counties are in two of the defined regions: southeast (El Paso County and Pueblo County) and western slope (Fremont County).

The report's recommendations for change were:

- **Implement empirically-based practices** known to improve coordination, such as wraparound planning and school-based services for children; Assertive Community Treatment (ACT) and Integrated Dual Disorders Treatment for adults; and primary care initiatives for all ages, particularly older adults.
- **Promote blended funding strategies** that integrate funding and services for populations with multiple needs. Boulder's Integrated Managed Partnership for Adolescent and Community Treatment (IMPACT) program for high-need children and adolescents in the mental health, child welfare, and juvenile justice systems exemplifies this approach.
- **Build awareness and understanding** among lawmakers, employers, and other health care funding decision makers regarding the extent of Colorado's unmet mental health needs and increasingly precarious mental health funding.
- **Apply the concept of "return on investment"** instead of "inflation" to untangle and assess complex trends of increasing costs as well as advances in treatment effectiveness, and the impact of these advances on those needing, paying for, and delivering care.
- **Implement treatment approaches with demonstrated effectiveness.** For these approaches to achieve their wanted outcomes, they must be implemented with fidelity to their original models, as well as some modification where there are cultural differences and where resources are limited (such as in rural areas).
- **Support efforts to recruit specialized providers,** such as child psychiatrists and competent providers for underserved cultural groups. It is also important to look for strategies to extend existing resources, such as telemedicine for rural areas, training for primary care physicians to improve their diagnostic and prescribing practices, and training in cultural competency.
- **Actively embrace and support the concepts of recovery and resilience.** This includes support for empirically-based service approaches that are consumer- and family-driven, as well as informal supports beyond traditional mental health services. In addition, promote efforts to involve consumers, youth, parents, and families at multiple levels in mental health initiatives, including oversight, provision of services, and evaluation of service effectiveness.

Somewhat surprisingly, no mention is made in the report of TriWest and payment for the soldiers at any of the military installations in the state or their dependents in any regard. It does cite the reported problem of low payments and limited coverage by private insurance companies. The third bullet point in the recommendations above regarding funding levels is the closest the report comes to this issue for the general public. In regard to the military's need for mental health services, the aforementioned Department of Defense Task Force on Mental Health report in June 2007 highlighted the need for "sufficient resources and allocating them according to requirements" and providing "adequate resources for mental health services," apart from relying on the services provided in the communities surrounding the posts.

Mental Health Providers in the Fort Carson Study Area

Mental health representatives interviewed for this report indicated that the current disjointed and uncoordinated provision of services would be much improved in quality and provided much more cost effectively to achieve the same or better outcomes if the payers (e.g., private insurance

companies and TriWest) required and paid for case management, education and awareness training (e.g., for family members), and preventive care.

As shown in Table 11, the mental health services available in the Fort Carson study area reflect in their extent a relatively greater breadth and higher quantity than those found elsewhere in the state (except for the Denver area). In their fragmentation, however, they reflect the need for more coordination to achieve both better outcomes and higher efficiency. In the absence of a payment system that provides resources for such coordination to occur – a "warm handoff" of patients from one service provider to another – patients are not provided adequate preventative or follow-up screening and evaluation and, consequently, suffer more severe episodes.

A capitated mental health program with a panel of selected community providers for government-insured active and non-active military and dependents would encourage care coordination and also create a predictable level of resource requirements A study is needed to determine whether such a program would save money and improve the quality of care and patient satisfaction.

A problem stated by the stakeholders is the fluctuation in the level and type of demand for services by TRICARE patients. The ability of the current mental health provider community to respond quickly to fluctuations in demand is limited. At the date of this report in October-November 2007, Fort Carson will have three full brigades in residence, while the usual troop strength is two brigades. A flexible system that responds to expansion and contraction in demand can be achieved through formal and informal communication among providers and possibly, cooperative programs that allows specialization (e.g., family therapy, migraine headaches, domestic violence and anger management).

Table 11: Selected Mental Health Providers in the Fort Carson Study Area

Organization	Function	Locations / Budget
Penrose-St. Francis Health Services	For more than 25 years, the Penrose-St. Francis Center for Behavioral Health at St. Francis Health Center has offered services including drug and alcohol treatment programs, neurological psychiatric testing, dementia assessment, inpatient psychiatric treatment for adults and outpatient counseling for children and adults of all ages. Individual and group therapy is also available for patients and their families. Our compassionate and devoted staff realizes that you may have unique needs. Because of that, we'll work through it together.	Colorado Springs, CO
PSI Cedar Springs Hospital	Hospitalization for adults, adolescents and children	Southgate Road Colorado Springs CO,
Pikes Peak Behavioral Health Group	Family of companies that provide behavioral healthcare services.[17]	Southern Colorado Revenue $40 Million (12 months ending 6/30/06)
Pikes Peak Mental Health	PPMH provides behavioral health and detoxification services that give patients treatments and tools to be independent and productive members of the community. PPMH serves 10,000 mental health and substance abuse clients annually, 3,000 at any given time. PPMH clients show an improvement rate of about 67% compared to about 42% for clients in other mental health centers in the state. Through the Adult Network, services focus on individuals aged 18+ with chronic mental illness. Through the Child and Family Network, services focus on	Cripple Creek, Fairplay, Colorado Springs (Administration; Adult Services Network; Café Moreno; Child and Family Network; Club House, Moreno; Peak Vista; Emergency Services Network; First Choice; Peak Vista Family Health Center at Myron Stratton),

17 From Pikes Peak Behavioral Health Group's web site: http://www.ppbhg.org/Events/MHAwarenessMonth/AboutPPBHG.html

	children 0-18 years with severe emotional disturbances and their families. The Acute Network services include crisis assessment and 24-hour behavioral healthcare for acute psychiatric and substance abuse issues. 66% of our clients are Medicaid recipients.	Fountain, Divide, Park County-Bailey, Peak Vista – Divide Site, Pueblo Stat Hospital, Woodland Park
ADI (Aspen Diversified Industries)	ADI educates, trains, and employs people with behavioral health challenges and disabilities allowing them to contribute successfully and grow personally. Creates meaningful career opportunities for disadvantaged and disabled people in Colorado. ADI is a competitive business providing relevant training, steady and meaningful employment opportunities and skills for life. ADI offers 4 vocational rehabilitation programs within mental health centers in Colorado who refer approximately 500 consumers/clients per year into these programs. 225 employees in 11 locations - Colorado Springs (4 locations); Denver Metro (3 locations); Montrose (2 locations); Pueblo (1 location); La Junta (1 location). 50-75% of the ADI workforce is disabled, primarily with mental illness and to a lesser extent with physical and developmental disabilities. Highly diverse employee base: all ages, types/degrees of disability, ethnicity and gender.	
Workout Ltd.	Workout, Ltd. serves juvenile offenders and at-risk youth through alternative education programs, vocational rehabilitation and training as well as court-appointed restitution to redirect them to achieve personal success. In 32 years of service to the community, Workout, Ltd. has: returned more than $1.7 million to the victims of juvenile crime served more than 17,000 youth offenders Fewer than 10% of participants in the Workout, Ltd. programs have been rearrested; the average rate of re-arrest of participants in other programs is 30%. The cost per youth participating in Workout, Ltd. Work Restitution and Restorative Justice Programs is about $55 per day, less than a third of the cost per day to institutionalize the same youth offender. Participants agree or strongly agree that the program: focuses on the needs of the victim, community and offender (83% agree/strongly agree) helps the offender accept responsibility for his/her actions (87% agree/strongly agree) offers the possibility to reduce the chance of future harm by the offender (84% agree/strongly agree) offers appropriate and fair consequences for the offense (92% agree/strongly agree)	Colorado Springs, CO
FirstCHOICE	FirstCHOICE provides counseling services and programs to families and couples and to children with behavioral health challenges, ensuring that each family member has the proper treatment and tools to be healthy, happy and productive. Our behavioral health services are comprised of individualized treatment plans with specialized tools and counseling strategies that are client driven. Therapies are research-based and proven to support positive change in people's lives. Our programs focus on solutions for depression, school behavior difficulties, sexual abuse, trauma, suicidal ideation, aggression, anxiety, ADD and coping with divorce. We have been serving military families in the Pikes Peak region since 1992.	Colorado Springs, CO

Connect Care	Manages the delivery and financing of mental health and substance abuse services Develops and manages a network of approximately 100 providers Coordinates care by referring clients to the right care provider, at the right time, and the right place Processes provider claims and payment Provides utilization and financial management Data management, analysis, and interpretation Clinical development – creating/enhancing programs and services Quality improvement and compliance	Colorado Springs, CO
Colorado Counseling and Consulting Services	Professional counseling for individuals, families, and children.	N. Academy Blvd., Colorado Springs, CO; 7 counselors listed in web site[18]
Spanish Peaks Mental Health Center	A non-profit behavioral healthcare organization, making available a comprehensive range of quality community-based mental health care services.	Chinock Lane, Pueblo, CO
Stone Gate Resources	Offering resources to deal with the problems of sexual addiction, affairs, pornography, and sexual misconduct. Dr. Schaumburg is a licensed counselor.	Larkspur, CO
Brain Train	Involved in the rehabilitation of individuals who have acquired neurological disorders since 1983.	Currant Way, Parker, CO
Veatch Counseling, Inc	A counselor and therapist - Marriage counseling, cognitive behavioral family therapy, cognitive behavioral therapy, and more.	N. Union Blvd., Colorado Springs, CO
The Colorado Institute for Conflict Resolution & Consortium	Expertise and resources on outpatient treatment centers, marriage counseling, codependency, conflict resolution, psychotherapy, trauma, and more.	Colorado Springs, CO
A Children's Therapy Place	Offers a social emotional play-based assessment that describes a child's strengths and weaknesses in seven critical areas of social development	W Colorado Ave., Colorado Springs, CO
El Pueblo Boys' & Girls' Ranch	A residential childcare facility that provides residential treatment to young, at-risk boys and girls, ages 10 - 18.	Pueblo, CO
Rocky Mountain Health Care Services	Home and Health Care Brain Injury Program - offering an opportunity for persons in the community with brain injury to participate in a structured day treatment program.	E. Bijou, Colorado Springs, CO
Psychotherapy Services	Learn about us and our programs and services which include level I and level II alcohol education programs, group therapy, and evaluation services.	North Wasatch, Suite 202, Colorado Springs, CO

In addition to the table above, the military's health care facilities offer care to all persons covered by TriWest.

The Air Force Academy's hospital will continue to provide outpatient services, including mental health, after completing the closure of its inpatient services by October 2008; Peterson Clinic at the Air Force Base; and Fort Carson's Evans Army Community Hospital, where there is an expansion of its clinics planned, and the program for this project will be adjusted for the volume of mental health services before construction begins.
The above facilities are available to all dependents of active and non-active military personnel covered by TRICARE; active military personnel are generally required to seek care at their own base.

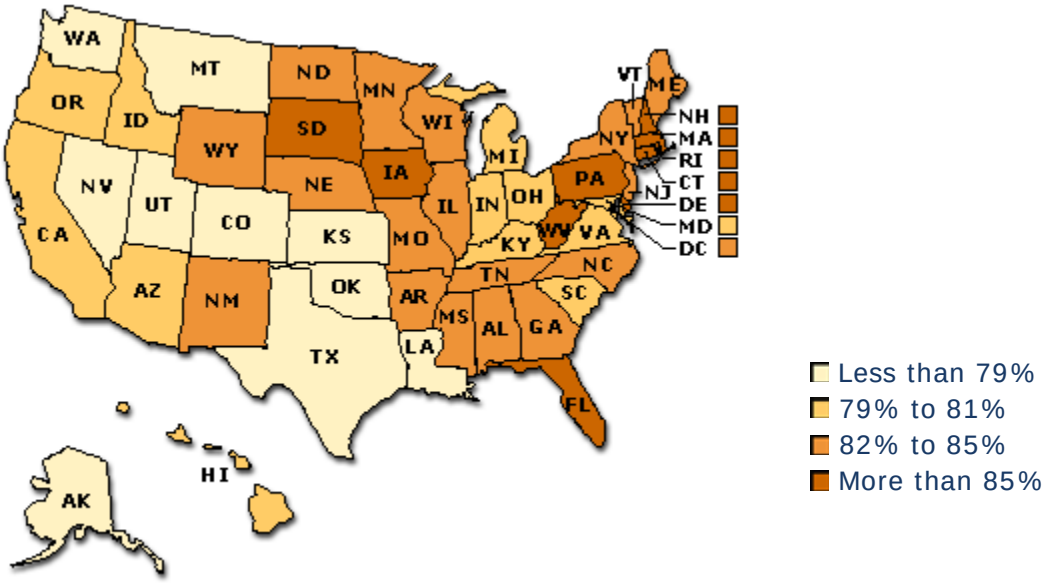
18 http://www.cspringsonline.com/

Immunization Programs

Immunization programs in Colorado are somewhat less effective than the national average (Table 12 and Map 4). No specific data for the Fort Carson study area are available.

Table 12. Immunization Rates, Colorado and US, 2001[19]

Area / Immunization	4:3:1[20]	4:3:1:3[21]	4:3:1:3;3[22]
	+/- 4.5 CI 95%	+/- 4.6 CI 95%	+/- 4.8 CI 95%
Colorado	77.2	75.4	71.5
United States	78.6	77.2	73.7



Map 4. State Comparison of Childhood Immunization Rates, 2004

The local information on immunizations in El Paso County shows very favorable rates from surveys of the community and by parents, but less than acceptable rates for the daycare and the school populations specifically (Figure 7).

19 http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5130a2.htm

20 Comprises = or > 4 doses of DTP/DT/DTaP, = or > 3 doses of poliovirus vaccine, and = or > 1 dose of measles-containing vaccine

21 4:3:1 plus = or > 3 doses of Hib vaccine

22 4:3:1:3 plus = or > 3 doses of hepatitis B vaccine

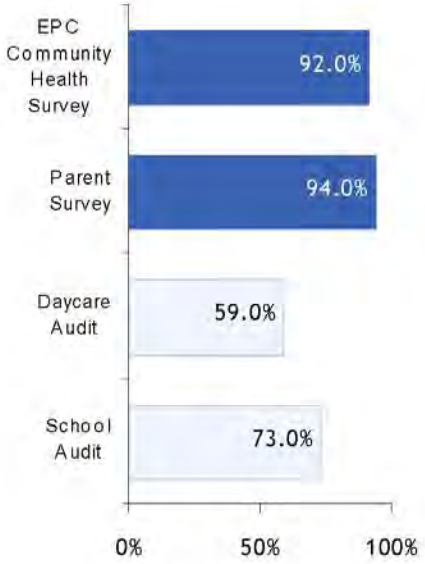


Figure 7. Percent Up to Date on Immunizations: El Paso County, 2004/2005[23]

Sexually Transmitted Diseases

Sexually transmitted diseases are tracked by the El Paso County Department of Health & Environment and only treated by the Health Department. (Fremont County's Building & Environmental Health and Pueblo City-County's Health Department do not include sexually transmitted diseases in their missions.) In any case, the occurrence of sexually transmitted diseases ("STD"), including AIDS, syphilis, Chlamydia, and gonorrhea are of concern to state and national public health officials (Table 13).

Table 13. Rate of STDs per 100,000, El Paso City, Colorado, and US, 2005

STD	El Paso County[24]	Colorado[25]	United States[26]
Chlamydia	424.3	333.0	332.5
Gonorrhea	106.3	71.8	115.6
Syphilis	0.4	0.4	3.0

The rate of HIV/AIDS infection per 100,000 in 2005 in Colorado was significantly below the national average (Table 14).[27]

23 Sources: 2004/05 El Paso County Immunization Audit and Parent Survey; 2004 El Paso County Community Health Survey.

24 El Paso County Department of Health & Environment STD Program

25 Colorado Department of Public Health and Environment HIV/STD Surveillance Program, 2004 & 2005 Sexually Transmitted Disease Surveillance Report available at http://www.cdphe.state.co.us/dc/HIV/HIV STDSurv/0405SurvReport.pdf, accessed October 29, 2007.

26 Centers for Disease Control and Prevention 2005 STD Surveillance report; available at http://www.cdc.gov/std/stats/toc2005.htm. Accessed on October 19, 2007.

27 HIV/AIDS Surveillance Report, Vol. 17, Revised June 2007, Department of Health and Human Services, Centers of Disease Control and Prevention. http://www.cdc.gov/hiv/topics/surveillance/resources/reports/2005report/pdf/2005SurveillanceReport.pdf

Table 14. Rate of HIV/AIDS per 100,000, Colorado, and US, 2005

Area	HIV	AIDS
Colorado	42.3	58.6
United States	137.0	174.5

F. ON-GOING AND/OR PLANNED PROJECTS

Enhancing the service delivery system in the Fort Carson study area to meet future demands will require additional investments in buildings and equipment, as well as the recruitment of new physicians and other health care personnel.

Health care leaders are aware of and planning for the expansion of the military installation by increasing their physical capacities and initiating physician recruitment efforts. The following are the publicly announced recent, ongoing and planned initiatives noted for each facility listed that will either increase service capacities or improve the patient experience within the hospital through more integrated work flows.

Evans Army Community Hospital, Fort Carson, Colorado Springs, CO

The hospital will undergo a project that combines renovation and new construction on the ground and second floors of the hospital to expand the Emergency Room, improve various clinical areas and retrofit an area to accommodate moving administrative functions that will be moved into the hospital from modular buildings. The total area is 103,000 square feet, and work will begin in 2008 and be completed by late 2010 at a budgeted cost of $44 Million.[28]

In addition, a new Family Health and Dental Clinic will be built next to the hospital and will be sized at between 117,000 to 168,000 square feet. At a budgeted cost of $59 Million, the project is scheduled to begin in 2008 and be completed 2010. It will house primary care, pediatrics, internal medicine, outpatient records, ancillary services, social work, physical therapy, occupational therapy, ortho/podiatry, chiropractic services, and will also have a 24-chair dental clinic. As of the third quarter 2007, a project was announced to have a second look at the services planned for this building due to the increase demand for mental health services and other possible changes in the projected volume of services. This project will be completed in a short period of time and may not materially delay the planned opening of the completed building.

The listing for Evans Community Hospital by US News contains the following information:[29]

- Activity (10/1/2004–10/1/2005)
  - Admissions: 3,150
  - Inpatient surgeries: 1,306
  - Outpatient visits: 459,654
  - Outpatient surgeries: 4,692
  - Emergency room visits: 23,565
  - Births: 1,367

28 Op. cit. Fort Carson's Master Facility Plan
29 http://health.usnews.com/usnews/health/hospitals/directory/numbers_6840090.htm

  - Number of beds: 56
- Staffing (employed, on payroll)
  - Registered nurses Full-time: 185 Part-time: 9
  - Licensed practical nurses Full-time: 89 Part-time: 3
  - Total facility personnel Full-time: 1,535 Part-time: 34

Penrose St. Francis Health Services, Colorado Springs, CO

Penrose is currently investing in its infrastructure by building a new full service 350,000 square foot 158-bed medical center.

Prior to the new 158-unit bed tower, at the Hospital Campus, Penrose built a five story tower with 36 critical care beds, a 36-bed cardiovascular floor (all private), and wellness center.

The new 350,000-square foot medical center will include 120,000 square feet of medical office space and 60,000 square feet of freestanding ambulatory space. The space will provide patients and visitors a fitness facility, education center and will be equipped with an electronic medical record.

Total Square Footage is as follows:

- Medical Center Tower 350,000 sq. ft.
- Ambulatory Services Building and Physician Offices 100,000 sq ft
- Freestanding Physician Office Building 80,000 sq ft, Opening date: August, 2008

St. Thomas More Hospital, Canon City, CO

In March 2007, St. Thomas More opened a new $18-Million, 56,000-square foot unit to increase its surgical, ICU, ED, rehab, imaging, and other service capabilities. Prior to this construction, the hospital's bed complement was 55 beds.

United States Air Force Academy Hospital and 10th Medical Group

The inpatient facility will close by October 1, 2008, and, in practice, it is expected that no patients will be admitted overnight after summer 2008. The inpatient population will be transferred to Evans Army Community Hospital, and a study is being conducted to identify what diagnoses and how many can be expected.

The primary care services at the hospital are planned in family practice, obstetrics and pediatrics; dental and behavioral health will continue. An ambulatory surgery center using the base hospital's operating room capacity is planned.

Memorial Health System, Colorado Springs, CO

MEMORIAL HOSPITAL CENTRAL

1400 East Boulder Street

Memorial's latest expansion project is the construction of a five-story, 300,000 square ft. addition, consisting of four patient-care floors, a basement and a shelled-in fifth floor for future growth. This new addition will house the following services:

- Emergency Department
- Women's and Maternity Services

- Memorial Hospital for Children
  - 100+ beds, a hospital within a hospital
  - Level III Neonatal Intensive Care Unit (NICU) – 60 beds
  - Pediatrics – private and semi-private rooms
  - Pediatric Observation Room
  - Only Pediatric Intensive Care Unit (PICU) in southern Colorado – private and semi-private rooms
  - Pediatric Emergency Department
  - Playrooms for children on pediatric floor/Ronald McDonald family area
- Emergency Department, approximately 40,000 square feet, almost doubling its current space
- Behavioral Unit
- Clinical Decision Unit
- Critical Care Area
- Express Care Unit
- Pediatric Unit
- Radiology
- Resuscitation
- Triage

MEMORIAL HOSPITAL NORTH

4050 Briargate Parkway

Opened April 2007, the project is a five-story, 224,000 square foot, 98-bed hospital with a full range of diagnostic and treatment services, including:

- Pre-surgery clinic
- Pre-admission testing
- Surgery (state-of-the-art operating suites)
- Monitored Surgical Care Unit (care up to 23 hours post surgery)
- GI Lab (inpatient and outpatient)
- Emergency Department and Helicopter Transport Pad
- Birth Center with 13 private LDRP suites designed for the comfort of patients and families
- Neonatal Intensive Care Unit, Level III
- Acute care private rooms for medical and surgery patients
- Inpatient and outpatient radiology services; including diagnostic imaging with new Magnetom Avaro MRI, 64-slice CT scanner with cardiac software and Ultrasound all implemented on PACs system for timely response and electronic record keeping.
- Laboratory (all diagnostics)
- Blood Bank services
- Cardiology (EKG, ultrasound, stress testing)

- Inpatient rehabilitation
- 24-hour Emergency Department physician coverage
- 24-hour anesthesiology and OB physicians
- Hospitalist and Intensivist

MEDICAL OFFICE BUILDING

Scheduled to open winter 2007:

- Offers support to the medical practices of affiliated physicians and surgeons
- Owned by Med Cap HCPI Development in partnership with Memorial Health System
- 123,000 square feet; four floors of custom-designed physician offices integrated with Memorial's IT system (computer access to radiology images and phone)
- Plenty of surface parking and covered patient drop-off area
- GI Surgery Center and Ambulatory Surgery Center

Memorial has also expanded its outpatient services in the past several years, and the hospital lists the following on its web site:

- Briargate Medical Campus
  8890 North Union
- Dublin Radiology
  2685 Dublin Boulevard
- HealthLink
  5360 North Academy, Suite 220
- Memorial Administrative Center
  2420 East Pikes Peak Avenue
- Memorial Medical Building
  1400 East Boulder
- Pediatric Specialty Clinics
  2121 East LaSalle Street, #201
- Printers Park Medical Plaza
  175 South Union
- Springs Medical Center
  2502 East Pikes Peak Avenue
- Westside Services
  2020 West Colorado

Pikes Peak Regional Medical Center, Woodland Park, Teller County

Not in the Fort Carson study area, but nevertheless only twenty miles from Colorado Springs, Woodland Park's new hospital opening October 1, 2007, is a 15-bed inpatient facility that can expand in the future to 75 beds to serve the growing population in that area. Diagnostic services include MRI, CT, and ECG. The projected population to be served is a reported 36,000 persons; however, the population of Woodland Park itself is approximately 7,000. The hospital is independent and is not affiliated with any other institution or system for clinical services; its admitting medical staff, presumably, places patients in other area hospitals as well as this one.

G. NEEDS ASSESSMENT

Inpatient Services

Inpatient bed capacity is determined by projecting the frequency and duration of overnight admissions. This analysis uses national and regional discharge rates published by the Center for Disease Control (CDC) in October 2006 to estimate the discharge patterns for the Fort Carson study area.[30] These benchmarks, along with available local data, allow the consulting team to project inpatient discharges by specialty.

To determine the projected inpatient volume, Navigant applied the regional factor for Colorado (see Table 15) to the current utilization rates.

Table 15. Discharge Rates by Region, 2004

Geographic Rate Comparisons per 1,000					
	USA	Northeast	Midwest	South	West
Rates per 1,000	119.2	135.5	117.0	125.8	97.8
Compare to USA	1.0	1.1	0.98	1.1	0.82
					(Colorado)
Source: CDC, 2006					

Projected Number of Discharges, 2012

The projected hospital discharges for 2012 holds the utilization rates from 2006 constant. Multiplying the utilization rates by age cohort by the 2012 population yields the 2012 discharge volumes (see Tables 16, 17 and 18).

Hospital discharge rates differ significantly across the country, and the Fort Carson study area benchmarked higher than the West data when the discharges calculated using the CDC adjusted rates were compared to the AHA hospital summary data for 2006. Navigant Consulting applied an additional adjustment factor of 1.1 for the calculated data to match the actual data.

30 Loc. Cit., Centers for Disease Control and Prevention, 2006. "National Hospital Discharge Survey: 2004 Annual Summary with Detailed Diagnosis and Procedure Data."

Table 16: Rates per 1,000 of Discharges from Short-Stay Hospitals by Age and First-Listed Diagnosis, West, 2004

Category of first-listed diagnosis and ICD–9–CM code	All Ages	Under 15	15 to 44	45 to 64	Over 64
Rates per 1,000					
All conditions	97.82	34.68	71.09	96.64	297.73
Infectious and parasitic diseases	2.66	2.10	1.13	2.47	9.24
Septicemia	1.15	0.10	0.18	1.04	6.44
Neoplasms	4.60	0.51	1.89	7.04	16.04
Malignant neoplasms	3.38	0.38	0.82	4.96	14.13
Malignant neoplasm of large instestine and rectum	0.45	0.00	0.07	0.57	2.32
Malignant neoplasm of trachea, bronchus, and lung	0.46	0.00	0.08	0.62	2.20
Benign neoplasms	1.07	0.11	0.99	1.90	1.30
Benign neoplasm of uterus	0.61	0.00	0.71	1.21	0.00
Endocrine, nutritional and metabolic diseases, and immunity disorders	4.91	2.55	2.54	5.62	15.66
Diabetes mellitus	1.68	0.41	0.98	2.42	4.77
Volume depletion	1.45	1.71	0.42	0.95	5.55
Diseases of the blook and blood-forming organs	1.26	0.79	0.71	1.14	4.15
Anemias	0.89	0.37	0.59	0.73	3.08
Mental disorders	6.48	1.72	8.25	7.69	6.06
Psychoses	4.50	0.00	5.56	5.37	4.98
Schizophrenic disorders	0.93	0.00	1.17	1.44	0.62
Major depressive disorder	1.30	0.00	1.76	1.44	1.09
Diseases of the nervous system and sense organs	1.55	1.08	0.88	1.53	4.70
Diseases of the circulatory system	17.85	0.42	2.95	21.85	90.49
Essential hypertension	0.96	0.00	0.32	1.62	3.44
Heart disease	12.27	0.25	1.75	15.15	63.00
Acute myocardial infarction	2.05	0.00	0.28	2.67	10.39
Coronary atherosclerosis	2.99	0.00	0.32	5.11	13.01
Other ischemic heart disease	0.52	0.00	0.10	0.89	2.07
Cardiac dysrhythmias	2.14	0.07	0.37	2.03	11.90
Congestive heart failure	3.06	0.00	0.25	2.71	18.46
Cerebrovascular disease	2.54	0.00	0.31	2.53	14.41
Diseases of the respiratory system	9.96	9.27	2.27	8.55	40.25
Acute bronchitis and bronchiolitis	0.75	2.69	0.11	0.18	0.77
Pneumonia	3.73	2.44	0.68	2.83	18.08
Chronic bronchitis	1.36	0.00	0.07	1.74	7.29
Asthma	1.39	2.56	0.60	1.30	2.35
Diseases of the digestive system	10.04	3.35	5.65	12.42	31.74
Appendicitis	0.88	1.11	1.03	0.63	0.47
Noninfectious enteritisandcolitis	0.89	0.75	0.62	0.81	2.17
Intestinal obstruction	0.85	0.19	0.21	0.98	3.94
Diverticula of intestine	0.88	0.00	0.27	1.07	4.00
Cholelithiasis	0.99	0.00	0.80	1.20	2.87
Acute pancreatitis	0.69	0.00	0.50	1.09	1.62
Diseases of the genitourinary system	5.45	1.13	3.82	5.76	17.67
Calculus of kidney and ureter	0.48	0.00	0.48	0.79	0.65
Urinary tract infection	1.21	0.35	0.23	0.76	6.83
Complications of pregnancy childbirth, and the puerperium	1.47	0.00	3.42	0.00	0.00
Diseases of the skin and subcutaneous tissue	2.14	0.00	1.41	2.44	5.28
Cellulitis and abscess	1.58	0.72	1.08	1.98	3.93
Diseases of the musculoskeletal system and connective tissue	5.39	0.52	2.05	7.91	20.11
Osteoarthrosis and allied disorders	1.95	0.00	0.15	2.86	9.66
Intervertebral disc disorders	1.03	0.00	0.85	1.78	1.92
Congenital anomalies	0.57	1.92	0.21	0.25	0.21
Certain conditions originating in the perinatal period	0.57	2.73	0.00	0.00	0.00
Symptoms, signs,and ill-defined conditions	0.70	0.80	0.52	0.74	1.05
Injury and poisoning	7.98	3.24	5.45	8.23	24.15
Fractures, all sites 3	2.91	0.98	1.58	2.22	12.06
Fracture of neck of femur	0.93	0.00	0.00	0.36	6.53
Poisonings	0.72	0.26	0.98	0.72	0.57
Certain complications of surgical and medical care	2.44	0.62	1.19	3.69	7.39
Supplementary classifications	14.22	1.10	27.94	3.00	10.92
Females with deliveries	0.00	11.60	27.12	0.12	0.00

Source: Navigant Consulting, Inc. proprietary model, 2007

Table 17: Discharges from Short-Stay Hospitals by Age and First Listed Diagnosis, 2006[31]

Category of first-listed diagnosis and ICD–9–CM code	All Ages	Under 15	15 to 44	45 to 64	Over 64
Actual Number of Discharges					
All conditions	84,042	7,079	28,373	20,445	28,145
Infectious and parasitic diseases	2,276	429	452	522	873
Septicemia	921	20	72	220	609
Neoplasms	3,862	104	753	1,489	1,516
Malignant neoplasms	2,790	77	327	1,050	1,336
Malignant neoplasm of large instestine and rectum	365	0	26	120	219
Malignant neoplasm of trachea, bronchus, and lung	373	0	33	132	208
Benign neoplasms	944	22	396	403	123
Benign neoplasm of uterus	540	0	285	255	0
Endocrine, nutritional and metabolic diseases, and immunity disorders	4,205	521	1,015	1,189	1,481
Diabetes mellitus	1,437	84	390	512	451
Volume depletion	1,241	348	167	201	524
Diseases of the blook and blood-forming organs	1,079	161	285	241	392
Anemias	756	75	236	154	291
Mental disorders	5,845	352	3,294	1,626	573
Psychoses	3,828	0	2,220	1,137	471
Schizophrenic disorders	828	0	465	304	59
Major depressive disorder	1,111	0	704	304	103
Diseases of the nervous system and sense organs	1,340	221	350	325	444
Diseases of the circulatory system	14,438	85	1,176	4,622	8,555
Essential hypertension	796	0	128	344	325
Heart disease	9,909	52	697	3,204	5,956
Acute myocardial infarction	1,657	0	111	564	982
Coronary atherosclerosis	2,439	0	128	1,081	1,230
Other ischemic heart disease	422	0	39	187	195
Cardiac dysrhythmias	1,716	13	147	430	1,125
Congestive heart failure	2,419	0	102	573	1,745
Cerebrovascular disease	2,021	0	124	535	1,362
Diseases of the respiratory system	8,413	1,893	907	1,809	3,805
Acute bronchitis and bronchiolitis	703	549	43	38	73
Pneumonia	3,079	499	272	599	1,709
Chronic bronchitis	1,087	0	29	368	689
Asthma	1,260	523	239	276	223
Diseases of the digestive system	8,568	683	2,256	2,628	3,001
Appendicitis	817	226	413	134	44
Noninfectious enteritisandcolitis	776	154	246	172	205
Intestinal obstruction	704	39	85	208	372
Diverticula of intestine	714	0	108	227	378
Cholelithiasis	846	0	321	253	271
Acute pancreatitis	583	0	200	231	153
Diseases of the genitourinary system	4,643	231	1,523	1,218	1,671
Calculus of kidney and ureter	418	0	190	167	61
Urinary tract infection	970	72	92	161	645
Complications of pregnancy childbirth, and the puerperium	1,365	0	1,365	0	0
Diseases of the skin and subcutaneous tissue	1,580	0	563	517	499
Cellulitis and abscess	1,369	147	432	418	372
Diseases of the musculoskeletal system and connective tissue	4,498	106	819	1,673	1,901
Osteoarthrosis and allied disorders	1,576	0	59	604	913
Intervertebral disc disorders	899	0	341	377	181
Congenital anomalies	550	392	85	54	19
Certain conditions originating in the perinatal period	558	558	0	0	0
Symptoms, signs,and ill-defined conditions	624	162	206	156	99
Injury and poisoning	6,860	662	2,174	1,741	2,283
Fractures, all sites 3	2,442	201	632	469	1,140
Fracture of neck of femur	694	0	0	76	617
Poisonings	653	54	393	153	54
Certain complications of surgical and medical care	2,080	126	475	781	699
Supplementary classifications	13,041	224	11,149	635	1,032
Females with deliveries	13,217	2,368	10,824	25	0

31 Discharge information that did not meet standard for reliability was entered as a 0 as provided by the CDC

Table 18. Projected Number of Discharges, Fort Carson Study Area, 2012[32]

Category of first-listed diagnosis and ICD–9–CM code	All Ages	Under 15	15 to 44	45 to 64	Over 64
Actual Number of Discharges					
All conditions	96,470	8,300	33,717	23,024	31,429
Infectious and parasitic diseases	2,603	503	537	588	975
Septicemia	1,037	24	86	248	680
Neoplasms	4,387	122	895	1,677	1,693
Malignant neoplasms	3,153	90	389	1,183	1,491
Malignant neoplasm of large instestine and rectum	411	0	31	135	245
Malignant neoplasm of trachea, bronchus, and lung	420	0	39	149	232
Benign neoplasms	1,088	26	471	453	138
Benign neoplasm of uterus	626	0	339	287	0
Endocrine, nutritional and metabolic diseases, and immunity disorders	4,809	611	1,206	1,339	1,653
Diabetes mellitus	1,642	98	463	577	504
Volume depletion	1,419	408	198	227	585
Diseases of the blook and blood-forming organs	1,237	189	339	272	438
Anemias	867	88	280	174	325
Mental disorders	6,798	412	3,915	1,832	640
Psychoses	4,444	0	2,638	1,280	526
Schizophrenic disorders	960	0	553	342	66
Major depressive disorder	1,294	0	837	342	115
Diseases of the nervous system and sense organs	1,537	259	416	366	496
Diseases of the circulatory system	16,255	100	1,397	5,205	9,553
Essential hypertension	902	0	152	387	363
Heart disease	11,149	61	829	3,608	6,651
Acute myocardial infarction	1,864	0	132	635	1,096
Coronary atherosclerosis	2,743	0	152	1,218	1,374
Other ischemic heart disease	476	0	47	211	218
Cardiac dysrhythmias	1,931	16	175	485	1,256
Congestive heart failure	2,714	0	121	645	1,949
Cerebrovascular disease	2,271	0	148	602	1,521
Diseases of the respiratory system	9,582	2,219	1,078	2,037	4,249
Acute bronchitis and bronchiolitis	819	644	51	43	81
Pneumonia	3,491	585	323	674	1,909
Chronic bronchitis	1,219	0	35	414	770
Asthma	1,456	613	284	311	249
Diseases of the digestive system	9,792	801	2,681	2,959	3,351
Appendicitis	955	265	490	151	49
Noninfectious enteritisandcolitis	895	181	292	194	229
Intestinal obstruction	797	45	101	235	416
Diverticula of intestine	807	0	128	256	423
Cholelithiasis	970	0	381	285	303
Acute pancreatitis	668	0	237	260	171
Diseases of the genitourinary system	5,318	271	1,809	1,372	1,866
Calculus of kidney and ureter	482	0	226	188	68
Urinary tract infection	1,096	84	109	182	721
Complications of pregnancy childbirth, and the puerperium	1,623	0	1,623	0	0
Diseases of the skin and subcutaneous tissue	1,810	0	669	582	558
Cellulitis and abscess	1,572	173	514	471	415
Diseases of the musculoskeletal system and connective tissue	5,104	124	973	1,884	2,123
Osteoarthrosis and allied disorders	1,770	0	70	680	1,019
Intervertebral disc disorders	1,032	0	405	424	203
Congenital anomalies	643	459	101	61	22
Certain conditions originating in the perinatal period	654	654	0	0	0
Symptoms, signs,and ill-defined conditions	722	190	245	176	111
Injury and poisoning	7,870	776	2,584	1,961	2,550
Fractures, all sites 3	2,788	236	751	528	1,273
Fracture of neck of femur	775	0	0	86	689
Poisonings	762	63	467	172	60
Certain complications of surgical and medical care	2,371	147	564	880	780
Supplementary classifications	15,381	263	13,250	715	1,153
Females with deliveries	15,668	2,777	12,863	29	0

32 Discharge information that did not meet standard for reliability was entered as a 0 as provided by the CDC

Discharges by Bed Type, 2006 to 2012

The data allowed NCI to identify the number of discharges by the following bed types, below and in Table 19 and Table 20:

- Medical/Surgical
- OB/GYN
- Pediatrics
- Psychiatric

Table 19. Change in Bed Occupancy, 2006 to 2012

	2006		2012	
Hospital	Beds	Occupancy Rate	Beds	Occupancy Rate
Totals	2,165	58%	2,733	53%

Table 20: A Comparison of Discharges by Bed Type, 2006 to 2012

	Admissions		
Bed Type	2006	2012	Δ Change
Med/Surgical	59,255	67,270	13.5%
Ob/Gyn	14,583	17,290	18.6%
Pediatrics	4,359	5,111	17.2%
Psychiatric	5,845	6,789	16.3%
Total	84,042	96,470	14.8%

Provision of Inpatient Services for Military Personnel & Dependents

Patients using TriWest coverage from the military installations in the study area were admitted to hospitals within the area 69 percent and outside 31 percent (Table 21). The latter rate reflects both referral to regional and national hospitals for specialty care and use of home town hospitals presumably on leave or by dependents that go home during the spouse's deployment.

Table 21. Hospital Admissions by TriWest Patients, 2006[33]

	Study Area Hospitals		Other Hospitals		Total	
Origin of TriWest Patients	**Number**	**Percent Origin**	**Number**	**Percent Origin**	**Number**	**Percent Origin**
Fort Carson	1,696	72%	672	28%	2,368	100%
Peterson Air Force Base	407	70%	172	30%	579	100%
USAF Academy	815	64%	452	36%	1,267	100%
Total	2,918	69%	1,296	31%	4,214	100%

An indication of the adequacy of the resources and the degree of access that the military has to healthcare through the TRICARE program is whether the services are used at a rate commensurate with a comparable population (Table 22). Utilization by the total enrollment in TriWest for the study area in 2006 of 98,600, whose average age was 28.01 years, is lower than the entire country for the same age cohort; however, the level of physical fitness and general health of the study area's military population is expected to be above average, which would also entail a lower admission rate.

33 Source: TriWest, 2007

Table 22. Inpatient Utilization Comparison, TriWest Patients and US Average, 2006[34]

	Admissions			Rate/1,000			
	Community Hospitals	Evans Com. Army Hos	Total	TriWest Enrollment 2006	US 2005 (age 15-44)		
					Male	Female	Both
Fort Carson	2,368	3,150					
Peterson Air Force Base	579						
USAF Academy	1,267						
Total	4,214	3,150	7,364	75.02	45.46	1,259.10	85.33

The use of ambulatory care, physician offices and emergency room by the TriWest is nearly one-half as frequent as the general population on average (Tables 23 and 24). With better-than-average physical condition generally and the use of the outpatient services on the bases (that are not included in the table), the discrepancy between US and the study area would be reduced significantly.

Table 23. Ambulatory & Outpatient Visits by TriWest Covered Patients, 2006

Origin of TriWest Patients	ER Visits	OP Professional	OP Institutional	Total
Fort Carson	8,792	106,043	101,303	216,138
Peterson Air Force Base	2,562	33,454	32,364	68,380
USAF Academy	4,401	98,666	108,009	211,076
Total	15,755	238,163	241,675	495,593

Table 24. Ambulatory & Outpatient Visits by TriWest Covered Patients, 2006[35]

	Study Area		US, age 18-44
Origin of TriWest Patients	Enrollment	Visits/person	
Fort Carson	47,189	4.6	
Peterson Air Force Base	23,822	2.9	
USAF Academy	27,149	7.8	
Total	98,160	5.0	2.9

Projected Physician Supply Needs, 2012

Military growth plans and baseline population increases will require a larger number of providers in 2012. Military personnel and their families, economic migrants, and natural population growth will all contribute to an increased use of health care.

In order to identify the number of physicians that need to be recruited to the area over the next 5 to 6 years, the physician supply described previously was reduced by the number of practitioners over 65 to reflect expected retirement by 2012.

In addition, NCI assumed that the community would not recruit any new physicians to the area during the intermediate years; therefore, the total physicians that must be recruited to the study area are the total demanded in 2012 less the current supply minus physicians over 65.
The increased population resulted in a need for 152 additional physicians, more than making up for the expected departure from the workforce of 125 physicians due to retirement (1,079 in 2007 to 954 in 2012) as shown in Table 25. The most severe shortages are forecasted to occur in primary care – Family/General Practice, Internal Medicine, and Pediatrics, with shortages also in specialty services, such as Cardiology –EP (electrophysiology), Dermatology, Endocrinology,

34 Source: TriWest, 2007
35 Source: TriWest, 2007; US data from CDC, 2004, at http://www.cdc.gov/nchs/data/hus/hus06.pdf#089

Gastroenterology, and Neurology. The shortages in surgical services are in Cardio-Thoracic Surgery, Oncological Surgery, Neurosurgery, and ENT (Ear, Nose and Throat). There is also a marked shortage of Psychiatrists.

The shortage of psychiatrists in the community is particularly critical for military personnel and dependents because our information from interviewing mental health professionals is that many psychiatrists do not accept TRICARE coverage. An additional barrier to access is the provision of TRICARE coverage that requires active soldiers to have a referral for treatment off-base, which forces soldiers and their families who are reluctant to have such care on their records in case it may adversely influence their promotions to either forego treatment or pay out-of-pocket. These barriers are made even more difficult to overcome for those soldiers and family members who are reluctant to risk the social stigma of appearing weak when the army culture is to be tough and self-reliant in the face of adversity.

To address the broader issues affecting the quality of life for the active and reserve military, in addition to mental health services, the Army established the Army Family Action Plan (AFAP) more than twenty years ago. This organization is a way for "all members of the Army, including Active, Reserve, and National Guard Soldiers, family members, retirees, surviving spouses, DA Civilians, and military technicians have a forum to voice concerns to Army leadership and make recommendations for change." [36] The intent for the all-volunteer army is to "recruit a family, enlist a soldier; maintain a family, retain a soldier."

This analysis indicates the opportunity for hospitals within the study area to expand their primary and specialty services in order to meet patient volumes, and the significant hospital expansions planned or recently completed attest to the hospitals' awareness of the community's need based upon the population's baseline growth, fueled in part by the BRAC realignment

In addition, as the population grows and the number of patients requiring specialized care increases, the study area will be more able to support full-time specialists, rather than continuing the practice of sending patients to Denver.

36 https://www.arfp.org

Table 25. Physician Demand and Supply, Fort Carson Study Area, 2012

Specialty	*2012 Demand (FTEs)*	*2012 Supply (FTEs)*	*2012 Surplus/(Deficit)*	*Surplus / Defict %*
Primary Care	***615***	***466***	***(149)***	***-24%***
Family/General Practice	299	205	(94)	-32%
Internal Medicine	137	102	(35)	-26%
Pediatrics	113	91	(22)	-19%
OB/Gyn	66	68	2	4%
Specialty Medicine	***192***	***177***	***(15)***	***-8%***
Allergy/Immunology	20	14	(6)	-31%
Cardiology	35	36	1	4%
Cardiology - EP	9	6	(3)	-31%
Dermatology	29	21	(8)	-28%
Endocrinology	8	7	(1)	-12%
Gastroenterology	22	18	(4)	-17%
Hematology/Oncology	12	15	3	24%
Infectious Disease	8	6	(2)	-29%
Nephrology	7	15	8	103%
Neurology	19	14	(5)	-25%
Pulmonary Medicine	16	19	3	15%
Rheumatology	6	6	(0)	-6%
Surgical Specialties	***226***	***242***	***16***	***7%***
CT Surgery	14	6	(8)	-57%
Vascular Surgery	12	12	(0)	-1%
Colorectal Surgery	8	2	(6)	-74%
Oncology Surgery	14	0	(14)	-100%
General Surgery	16	49	33	214%
Gynecology Surgery	29	0	(29)	-100%
Neurosurgery	15	8	(7)	-45%
Ophthalmology	38	46	8	21%
Orthopedics	33	65	32	98%
ENT	27	19	(8)	-28%
Plastic Surgery	4	15	11	298%
Urology	18	20	2	10%
Other	***75***	***69***	***(6)***	***-7%***
Psychiatry	57	42	(15)	-26%
Physical Medicine/Rehab	18	27	9	53%
TOTAL	**1,106**	**954**	**(152)**	**-32%**

Mental and Behavioral Health Supply Needs, 2012

The needs assessment for mental and behavioral health professionals should be built from the expected case loads of the principal providers in the Fort Carson study area. Quantitative information is not available due to the fragmentation of the provider and payer communities and the understandable reluctance to share private business and patient information.

The calculation, however, is straight forward, and should be performed for each service in the acute or inpatient and non-acute or outpatient settings (see Figure 8).

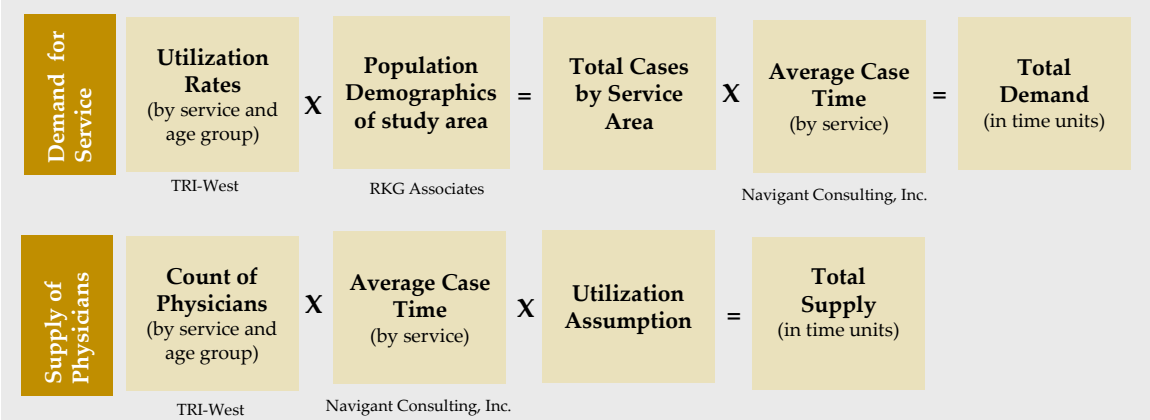


Figure 8. Behavioral Health Care Needs Model

H. QUALITY OF LIFE INDICATORS

Introduction

Health care influences a community's quality of life through prevention, education, and treatment of disease. This section proposes four key indicators to address these influences and assess overall well being in the Fort Carson study area. These indicators measure high-level trends and will allow community leaders to gauge progress over time.

NCI has identified four key indicators that, taken together, evaluate the effectiveness of the community's health care services and, by extension, its quality of life. They are the following:

- Percentage of population with health insurance;
- Number of doctors per capita;
- Percentage of births that are a low-birth weight; and,
- Suicide rates.

Key Points

Health status is determined by a complex set of factors, many of which are difficult or impossible to measure because of their subjectivity and wide variability. The set of key indicators outlined for this project, however, are relatively accessible as measures of the direction and magnitude of changes in regional health status.

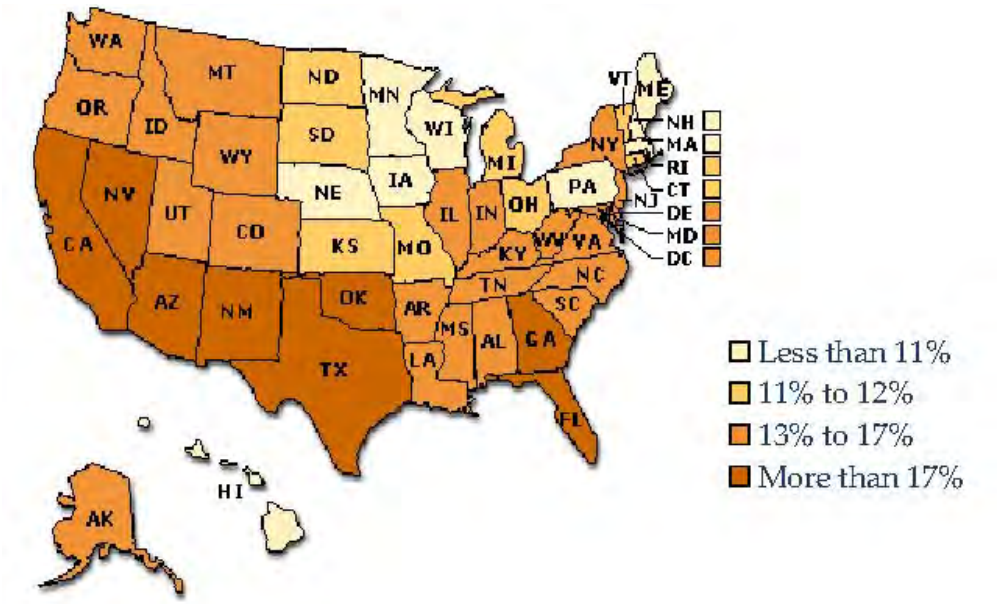
By the same token, the community may adopt other factors to benchmark health status. The planning team encourages the creation of a voluntary commission of healthcare leaders to discuss well being indicators, such as health care services resources and their utilization patterns. This commission should include participation by the principal providers in the community, including hospitals, physicians and allied health professionals. It could function as a clearing house of information and a focus of attention upon health care issues for the local governments, education system, and other community members, such as religious organizations.

Indicator 1: Percent of Population with Health Insurance

Health insurance coverage is a key indicator of access to health care services. An inability to pay results in delayed medical assistance for routine or non-emergent episodes of chronic illness or denial by private physicians for lack of payment. Evidence in literature reinforces this relationship among ability to pay, access to care, and overall well being:

- Nearly one-quarter (23 percent) of the uninsured reported changing their way of life significantly in order to pay medical bills, thereby, often causing a reduction in a patient's quality of life.[37]
- In addition, 50 percent of all bankruptcy filings were partly the result of medical expenses.[38]
- The discrepancy in health status between the insured and uninsured is well documented.

The Colorado State Blue Ribbon Commission for Healthcare Reform stated that in 2007 there were 792 thousand Colorado Citizens who were uninsured, or approximately 17 percent[39], which is higher than the national average of approximately 16 percent. For comparison purposes, the state of Minnesota has the lowest percentage of uninsured citizens (approximately 9%). Map 5 depicts a state-by-state analysis of uninsured rates in the U.S.



Map 5. State by State Comparison of Uninsured Rates, 2005[40]

A concern was voiced in stakeholder interviews in regard to access by unmarried adults and children who are part of an active duty soldier's household, particularly if the adult person were an illegal alien. Providers acknowledged that these persons must pay out-of-pocket for care or seek assistance from public aid programs and Medicaid and that their limited financial resources may mean foregoing needed care.

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37 Chernew, M. "Rising Health Care Costs and the Decline in Insurance Coverage," Economic Research Initiative on the Uninsured, ERIU Working Paper 8, September 2002.

38 Himmelstein, D, E. Warren, D. Thorne, and S. Woolhander, "Illness and Injury as Contributors to Bankruptcy, "Health Affairs Web Exclusive W5-63, 02 February, 2005.

39 State of Colorado Blue Ribbon Commission for Health Care Reform, Final Report to the Colorado General Assembly, Executive Summary, January 31, 2008, p. 6.

40 Loc. cit, Kaiser Family Foundation, 2007.

Indicator 2: Quantity of Physicians

The analyses in this report of current and projected physician demand and supply shows that there is a need for both primary care and specialist physicians to serve the current and projected population.

A different measure is the following analysis, which shows that the Fort Carson study area ratio of physicians per 1,000, which is similar to the U.S. rate and below the Colorado rates (Table 26).

Table 26. Comparison of Physicians per 1,000 Population, 2006

Area	Population, 2006[41]	Physicians, 2007[42]	Physicians per 1,000
United States	299,398,484	378,293	1.26
Colorado	4,753,377	7,813	1.64
Fort Carson study area	842,221	1,079	1.28

Indicator 3: Percentage of Births that are Low-Birth Weight (less than 2,500 grams)

The low-birth-weight ("LBW") infant is at much higher risk of mortality than the infant with normal weight at birth. In the neonatal period, when most infant deaths occur, the proportion of LBW infants, especially those with very low weight, is the major determinant of the magnitude of the mortality rates.[43]

Nationally, 8.1 percent of all births are of low birth weight; the percentage of low birth weights in Colorado is higher (9.0%) than the national average (Table 27). This result ranked Colorado as 39th behind the national leaders Oregon and Nebraska at 6 percent.[44]

Table 27. Comparison of Infant Mortality and Low Birth Rates

Locality	Comparison Rates	
	Infant Mortality Rate per 1,000 Births	Low Birth Weight (%)
Colorado	7.3	9.0%
National Average	6.9	8.1%
CO National Rank	14	39

Following the premise that infant health and development can be greatly enhanced through breastfeeding, in 2000, Healthy People 2010 set the target of 75 percent of new mothers breastfeeding in the hospital, 50 percent maintaining breastfeeding for at least 6 months, and 25 percent continuing for 1 year.[45] Parental education on breastfeeding could improve the health of infants in the Fort Carson study area.

41 http://quickfacts.census.gov/qfd/states/08000.html

42 http://www.americanmedicalinfo.com/cgi-bin/abicgi/abicgi.pl

43 McCormick, MC. (1985). The contribution of low birth weight to infant mortality and childhood morbidity. New England Journal of Medicine 312: 82-90.

44 Kaiser Family Foundation, 2007. "Births of a Low Birth Weight as a Percentage of all Births, 2004." [Online.] www.statehealthfacts.org

45 Healthy People 2010. [Online.] http://www.healthypeople.gov/

Indicator 4: Suicide Rates

Suicide is an important health care issue and suicide rates are a strong proxy for the mental health of a community. As the eighth leading cause of death among US men and the 3rd leading cause of death among individuals between 15 and 24, reducing the suicide rate has become an important health care issue.[46]

Suicide took the lives of 30,622 people in 2001 and another 132,353 individuals were hospitalized following suicide attempts in 2002.47 In 2004, Colorado ranked 45th in the number of suicides with 17.3 per 100,000 population compared to a national average of 11.148 (Figure 9). This illustrates that suicides are more frequent in Colorado than in most other states in the country and reinforces the need for additional preventative actions.

As a proxy for mental health status, the high suicide rate would indicate an opportunity to improve the mental health status of citizens in Colorado and the Fort Carson study area. Recent reports of an increased risk of mental health disease among troops returning from combat may cause the Fort Carson Study Area to have higher rates of mental illness than the state average. This area should begin monitoring the utilization of mental health services to identify trends in disease occurrence and to ensure the proper supply of treatment providers.

In 2004, the suicide rate in El Paso County was double that of the nation as a whole for all age groups, with Colorado state some 50 percent higher than the national figure. While the state and El Paso County rates were the same for the 15 to 24 age group, though double the national average, the rate of 65 years and older group was noticeably higher than both state and national averages.

Since suicide is often the result of mental illness, in particular depression, the high rates in El Paso County indicate that there may be a shortage of effective detection and diagnosis as well as treatment for this condition in the available and accessible health services.

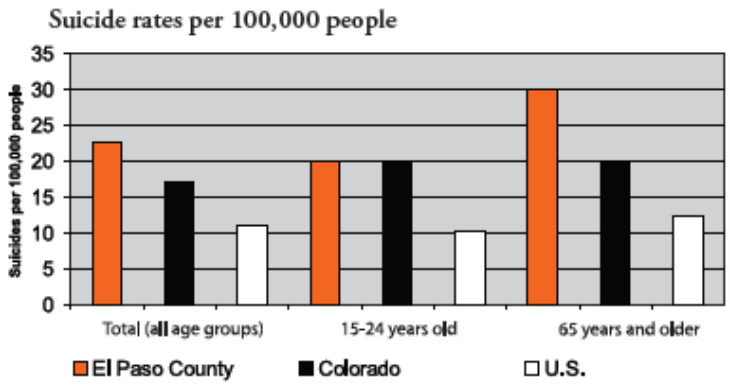

Figure 9. Suicide Rates in El Paso County, 2004[49]

46 Anderson RN, Smith BL. Deaths: leading causes for 2001. National Vital Statistics Report 2003;52(9):1-86.

47 Centers for Disease Control and Prevention, 2007. "Suicide Fact Sheet." [Online.] http://www.cdc.gov/ncipc/factsheets/suifacts.htm

48 American Society of Suicidology http://www.suicidology.org/associations/1045/files/2004statedatapgv1.pdf

49 "Quality of Life Indicators for the Pikes Peak Region," 2007, Pikes Peak United Way, p. 50.

I. KEY FINDINGS

Current Scenario, 2006

1. The Fort Carson Study area has a limited supply of primary care physicians and some specialty physicians to meet the current demand for services. There is a disproportionate concentration of primary care physicians in the more densely populated areas, which impedes access for those in rural areas.
2. Mental health services, including behavioral health and addiction services, are also in limited supply, based upon stakeholder interviews with the principal providers in the Fort Carson study area. It was not possible to measure the degree to which military personnel and their dependents were disadvantaged by either the limited supply or the payment levels available through TriWest, the administrators of the health insurance program provided to them through the Department of Defense.
3. Significant expenditures have either recently been put in place or are underway at the study area's major inpatient providers, ensuring that there will be growth in the resources at least at the secondary and tertiary care levels to meet current and future demand. The inpatient bed inventory is currently adequate if not under capacity. The providers' outpatient network is also growing, and medical office buildings are being constructed on the hospitals' campuses to attract additional physicians.
4. Public health programs which benefit the entire region and military personnel and families are currently underfunded, and cuts in certain services, such as inspections of restaurant, child care facilities and other businesses may impact public health in the region and Fort Carson soldiers and families. Please see Appendix B for a list of public health services provided in El Paso County.

Projected Scenario, 2012

1. The supply of primary care physicians and specialist physicians in many areas is deficient to care for the projected growth in population.
2. Inpatient bed inventory is sufficient for the projected demand.
3. Based upon the high level of demand placed on the current system, mental and behavioral health services, inpatient and outpatient, are inadequate to care for the increase in population. This is especially true given the additional troop levels and soldiers returning from deployments abroad with higher levels of neurological and psychological trauma than in previous periods of overseas conflicts.

J. RECOMMENDATIONS

Short-Term Actions

1. Enhance community-wide health care planning. The activities that should be undertaken are:
   - Provide resources, such as funding grants, to the recently formed Military Community Collaborative, which includes representatives from the Colorado state government, local community health care providers, Fort Carson, the Veterans Administration, and the Community Health Partnership, a group of approximately 50 top executives from the study area's health providers;

- Create a data clearinghouse by acquiring and disseminating reliable data to local health organizations that would aid in the monitoring of regional health performance and establishing regional healthcare milestones;
- Act as a conduit in bringing together leaders from Evans Army Community Hospital and the study area's hospitals and physicians to anticipate the needs of the military community and identify which services the military will look elsewhere to provide. The work group should explore services that could be provided more effectively at Evans Army Community Hospital or on-base, such as teen psychiatric services, which are currently sent off-post. This especially applies to behavioral and mental healthcare, in light of the need for confidentiality as well as affordability;
- Create a regional strategy for recruiting physicians to the Fort Carson study area so local providers can reduce the physician shortfall that is expected to worsen. The regional organization should identify if there would be a large enough volume of patients under the projected growth scenario to substantiate the recruiting of highly specialized physicians (e.g. neurosurgeons and other highly-skilled doctors) to treat disorders that currently are migrating out of the area.
- Provide advocacy for government and private insurance payment levels for insured and uninsured adults, children and military personnel; and,
- Maintain a website as a one-stop source of healthcare information.

2. Concerns voiced in the stakeholder interviews in regard to the availability of adequate mental health and social services to meet the demand created by the military personnel returning from deployments abroad must be met with a variety of measures. The pilot program funded by Colorado Senate Bill 07-146 "to provide mental health services to families of recently discharged veterans" promises to be able to identify the extent of the need and explore how best to expand the study area's capacity for meeting that need.
   - To meet the growing needs of active and discharged military and their dependents, form a mental health alliance of community and military providers. This alliance will build upon the Warrior Transition Unit program and the task force coordinating services to recently discharged veterans (funded by SB 07-146) and provide the information needed by both the military and the community providers to invest in the appropriate level of resources to meet future demand and avoid service gaps and capacity constraints.
   - As part of the enhanced community-wide planning (see above), obtain funding to develop and test the feasibility of innovative mental and behavioral program models. Ideas such as a capitated program of community-based providers to supplement the military's services and a case management function that would ensure a "warm handoff" between providers should be explored.
   - Explore ways that local planning can be part of the Colorado State Health Reform, particularly for funding as a pilot site.

3. In expectation of having to expand capabilities, the Pikes Peak Behavioral Health Group should begin identifying facility growth opportunities that would allow for expanded service offerings since the current space has limited growth potential.
4. In addition, high occupancy levels in existing inpatient psychiatric units (e.g., Cedar Springs Hospital) may indicate that more hospitalization capacity is required. A close clinical referral

relationship should be fostered between the various outpatient and community-based programs addressing behavioral health needs and the inpatient programs.

5. To the extent it is practical and the effort is considered worthwhile by the clinical community, programs in medical and nursing education, as well as the allied health professions, should be explored in regard to offering clinical experiences and conducting continuing medical and in-service education programs with the University of Colorado in Colorado Springs and other institutions.
6. The range of covered services and their payment rates by TRICARE should be examined in more detail than has been presented in this study to identify how they are affecting access to services in the community. It should be recognized that adjustments in the rates can quickly improve the community's ability to recruit and retain providers, as well as to make appropriate capital investments in facilities.
7. Develop a regional health care manpower plan that identifies specific needs. The plan should be formulated among community and military providers, as well as representatives of the training programs in the study area.

Long-Term Actions

1. Improve access to care for the community, which has a significant level of migration due to its military installations and educational institutions, by establishing a clearing house of information on clinical and social welfare services based on a web site that links to the providers in the community would be very helpful. Such an effort could also include patient advocacy and clinical and/or non-clinical case management support.
2. Establish a regional health information network that would permit patients to show up for care at any facility and allow physicians to "pull" the patients medical history from an electronic database. The electronic network would be a key method to linking patients to their medical histories in emergency situations when a patient is unable to communicate and would provide a single source of information on all patients, thereby, reducing communication errors when transferring patients between providers. The regional system would design and implement a standards-based network prototype usable by local health care providers.
3. Access to care in the rural areas south of the Fort Carson study area is more limited due to driving distances to local providers and the fragmented array of clinical services. Over the next 2 to 3 years, Wal-Mart will open 400 in-store clinics and up to 2,000 clinics in five to seven years. These facilities will provide primary care services intended to complement the retailer's 76 existing clinics. For the Fort Carson study area, just a few primary care clinics in the county would benefit the rural population immensely. Local leaders should explore the opportunity to offer care through any of the five existing Wal-Marts in the area by collaborating with local professionals. Licensed physician assistants and advanced nurse practitioners could staff such clinics with the aid of a primary care physician.

APPENDIX A. LIST OF INTERVIEWEES

Name	Organization	Title	Phone	Email
Mike Decker	Area Council on Aging	Director	(719) 471-7080	
Trudy Strewler	CASA	Executive Director		
Elaine Conkovic	Cedar Springs Behavioral Health System	CEO		
BJ Scott	Community Health Center	CEO	(719) 630-6474	bjscott@peakvista.org
Barbara Drake	El Paso County	Director, Dept. of Human Services		barbara.drake@elpasoco.com
Carol Walker	El Paso County Medical Society	Executive Director	(719) 591-2424	cwalker@epcms.org
Arthur Hastings	Evans Army Community Hospital			arthur.hastings@amedd.army.mil
COM Cho	Evans Army Community Hospital	Commander		
James Terrio	Evans Army Community Hospital	Deputy Commander, Clinical Services		
Patricia Randle	Evans Army Community Hospital	Social Services	(719) 526-0437	patricia.randle@us.army.mil
Steven J. McCoy	Fort Carson	Deputy Garrison Commander		
John Suits	Memorial Health System	Assoc. Administrator, Business & Governmental Affairs		john.suits@memorialhealthsystem.com
C.W. Smith	Parkview Medical Center	CEO		ceo@parkviewmc.COm
Rick O'Connell	Penrose Hospital	CEO	(719) 776-5111	
John Golden	Pikes Peak Behavioral Health Group	CFO	(719) 491-1943	johng@ppbgg.org
Lara Shadwick	Pikes Peak Behavioral Health Group			laras@ppbhg.org
Sharon Raggio	Pikes Peak Behavioral Health Group	COO	(719) 572-6148	
Brian Printz	School District 8	Executive Director of Special Programs	(719) 382-1314	bprintz@ffc8.org
Linda Boedeker	Southern Colorado AIDS Project			lboedeker@s-cap.org
Patrick Shargel	TESSA	Director, Clinical Services	(719) 633-1462	
Howard Brooks	United Way	VP, Community Impact	(719) 955-0735	
Hal Alguire	US Army	Director of Public Works		hal.alguire@conus.army.mil
Marvin Roth	VA Hospital			

APPENDIX B. EL PASO COUNTY PUBLIC HEALTH SERVICES

The El Paso County Department of Health and Environment (EPCDHE) is organized into four divisions: *Health Promotion, Environmental Health, Clinical Services* and *Epidemiology and Research*. Health Promotion focuses on programming and services to prevent and control chronic illness and cancer; improve access to health care for children with special needs; reduce risk for low-birth weight babies and infant mortality; and improve nutrition for women, infants and children. This division is also responsible for inspecting child care facilities and initiates partnerships in the community to address a myriad of education and prevention activities for all age groups. Environmental Health focuses on the safety and quality of the environment (air, water and hazardous waste), preventing the transmission of diseases from animals to humans (such as West Nile virus, plague and rabies) as well as assuring the safety of the community's retail food establishments, swimming pools, and spas. Epidemiology and Research focuses on the surveillance and control of communicable diseases, maintenance of vital records for the county, and the collection and analysis of health data. Clinical Services provides laboratory and clinical services to vulnerable and high-risk populations for women's health, control of bloodborne pathogens and sexually transmitted disease, and immunizations. In addition, EPCDHE maintains an administrative infrastructure (finance, human resources, information technology, operations and communications) to support the Department's programs and services.

Services Overview:

- The **Air Quality** Program maintains and monitors air quality through education, enforcement and monitoring activities.
- The **Water Quality** Program protects the public and environment from water-borne diseases and contamination of drinking water supplies, streams and lakes and wastewater system discharges and regulates all onsite wastewater systems (OWS) through enforcement, education, and environmental planning.
- The **Food and Living Environment** Program prevents food-borne illness in El Paso County's more than 2,500 retail food establishments through regulatory and educational efforts, as well as monitors swimming pools, spas, body art establishments, correctional institutions, and public lodging facilities through regulatory inspections and/or consultative visits.
- The **Solid Waste and Vector** Program's primary goal is the prevention of disease and illness resulting from exposure to biologic or toxic agents that occur naturally or are introduced into the environment through surveillance and control efforts, public education, and compliance.
- The **Communicable Disease(CD)/Epidemiology** Program protects and promotes the health of the community by way of detection, surveillance, investigation, prevention and control of communicable diseases—including outbreaks and infectious diseases of new and increasing concern.
- The **Emergency Preparedness** Program provides the following services:
  - Ensures that EPCDHE is prepared for, and capable of, responding to naturally occurring and intentional acts of terrorism, pandemics and other public health emergencies in collaboration with community partners;

  - Promotes preparedness and educates the community on emerging health threats, such as a flu pandemic;
  - Serves as Regional Planners, Trainers and Epidemiologists for a five-county region within Colorado; and
  - Provides expanded reference laboratory capacity for the Pikes Peak Region.
- The **Vital Records Program** provides certified copies of birth certificates for the State of Colorado and certified copies of death certificates, which meet stringent state and federal requirements for recording of these vital statistics.
- The **Breast and Cervical Cancer** Program provides the following services:
  - Provides ongoing community education on breast health;
  - Links low-income women with community resources for screening, diagnosis and treatment at a reduced cost when appropriate; and
  - Works with area clinical providers and services to ensure appropriate referrals exist to meet client needs.
- The **Tobacco Education Prevention Partnership** (TEPP) provides educational information to deter people from using any form of tobacco, along with resource referral information to help users achieve tobacco cessation.
- The **Immunization** Program provides parent education and immunizations for children who are uninsured/underinsured, Medicaid eligible, or Alaskan Native or Native American; supports school immunization audits; helps health care providers maintain proper immunization practices; and provides recommended adult vaccinations on a fee-for-service basis. The program also operates the International Travel Clinic, which provides counseling, education and vaccinations.
- The **Special Supplemental Nutrition Program for Women, Infants and Children** (WIC) provides vouchers for nutritious foods to supplement the diet of pregnant women, new mothers, infants and children under the age of five years, who both meet the income guidelines and qualify as "nutritionally at risk." As of 2007, enrollment for WIC in El Paso County is 13,700 clients. Approximately 48% of all infants in the county participate in the WIC program, along with 35% of pregnant women.
- The **Women's Clinic** provides low-income women access to reproductive and preventive health services, breast and pelvic examinations, cervical cancer treatment, screenings and medical referral assistance for expecting mothers.
- The **Child Health Promotion** Program addresses a wide range of health issues affecting children in El Paso County, with emphasis on improving health and safety initiatives in child care settings and child abuse prevention and advocacy. Program activities include:
  - Health and sanitation inspections of licensed child care facilities;
  - Participation in a variety of community committees focused on the health and well-being of children; and
  - Community education on issues such as child abuse prevention, positive parenting, health and safety topics, and children's health advocacy.
- The **Health Care Program for Children with Special Needs** (HCP) is a comprehensive program that focuses on improving the health, development and well-being of children from birth to 21 years of age who have special health care needs. The

EPCDHE functions as the El Paso Regional HCP Office and serves residents of both El Paso and Teller Counties—ensuring that families have access to integrated, family-centered, culturally competent, and community-based programs and services. Program activities include:

- Information and referrals to community services for local families and providers;
- Care coordination activities (including those specific to children enrolled in the Traumatic Brain Injury Trust Program); and
- Local family-to-family support, training, consultation and capacity building with community partners.

- The **Perinatal Health** Program is a comprehensive program that addresses issues affecting women of child bearing age and infants less than one year of age, including community perinatal case management; outreach and education services; and the Fetal, Infant & Child Mortality Review Program.
- The **Nurse-Family Partnership (NFP)** is an evidence-based, home visitation program that improves the health, well-being and self-sufficiency of low-income, first-time parents and their children.
- The **Sexually Transmitted Diseases (STD)/Bloodborne Pathogens** Program provides education, diagnoses, treatment, medical referrals, investigations and reports as required by Colorado law; compiles statistics and closely monitors trends within El Paso County; and provides education, counseling, testing and referrals regarding other blood borne pathogens.
- The **Laboratory** provides testing services for the EPCDHE's varied programs and clinics; performs drinking water potability testing for private well owners of El Paso County, as well as small community water systems required to meet Colorado Primary Drinking Water regulations. The Lab also performs microbiology screening and confirmatory testing for zoonotic based diseases, such as West Nile Virus and Plague.
- The **Office of Communication (OC)** staff serves to inform, educate and empower the general public about health risks and other health topics.

Social Services Technical Report

Fort Carson Regional Growth Plan

April 24, 2008

Pikes Peak Area Council of Governments

Communities Working Together

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A. INTRODUCTION AND METHODOLOGY

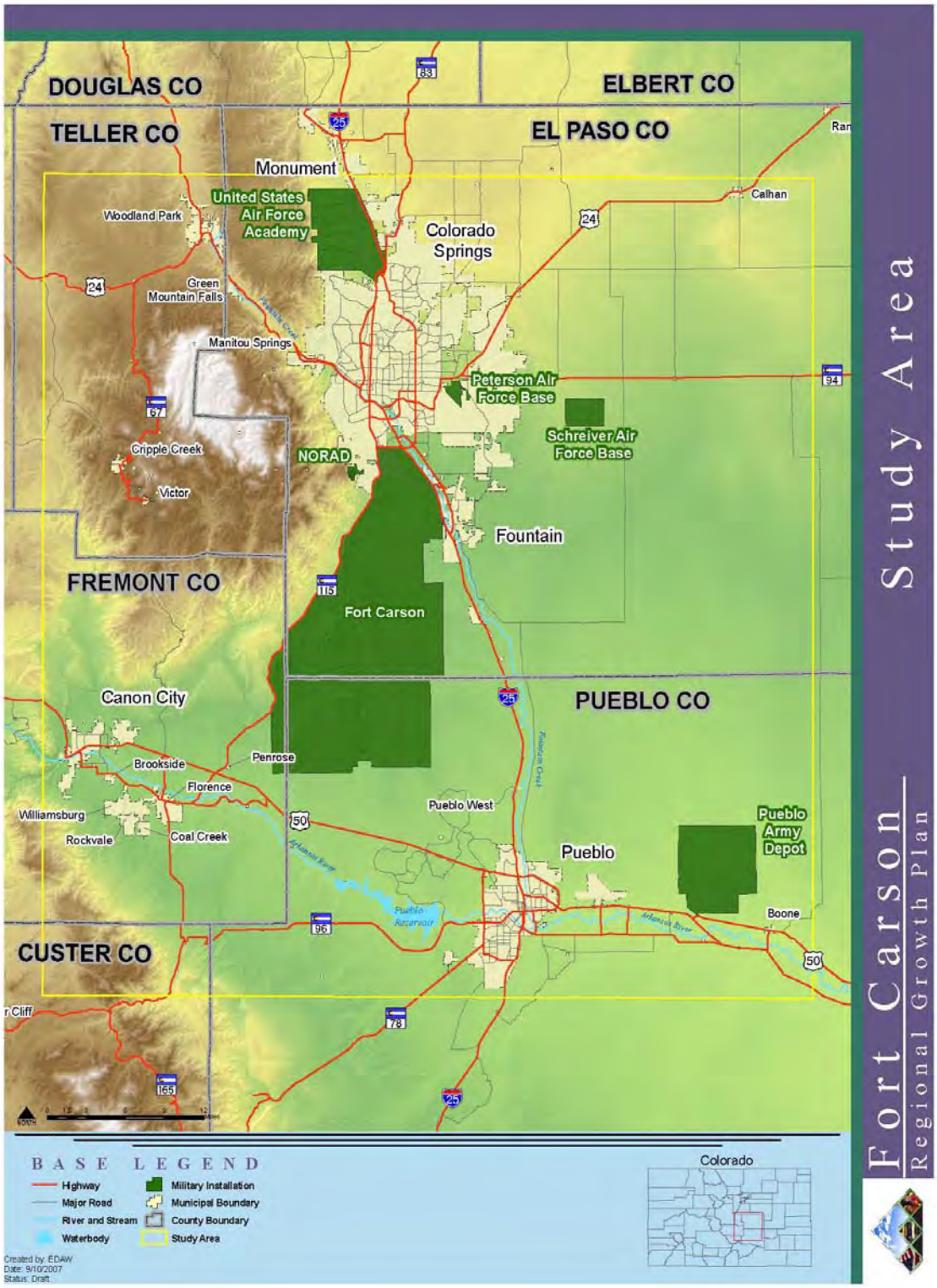
Social services – those services that support families, protect children, promote self-sufficiency and improve the quality of life in a community – are delivered by a wide range of providers, including government agencies, non-profit and religious organizations, and for profit businesses. Because provision of services and funding sources are so varied, the adequacy and quality of the social services provided across the Fort Carson region are difficult to measure.

The study area for the Fort Carson Regional Growth plan includes El Paso, Fremont and Pueblo counties (see Map 1). This assessment of Fort Carson's growth on the demand for social services is based on demographic projections supplied by Fort Carson in early 2007 and summarized in the Demographics Technical Report of this Growth Plan. Information on soldier residences, discussed in the Housing Technical Report of the Growth Plan, indicates that nine out of ten families currently live within twenty miles of Fort Carson. Therefore, this paper focuses on the services available within the El Paso County region and assumes the smaller numbers of troops and families seeking services in Pueblo and Fremont counties will be absorbed by the local providers at current levels of service. This assessment utilizes data from the El Paso County Department of Human Services (EPCDHS), as well as from Fort Carson and community-based organization who serve soldiers and families.

Social services data specific to soldiers and their families are not systematically collected by most agencies or are just beginning to be collected. Where possible, the analysis in this report relies on data obtained from agencies that serve Fort Carson or military clients. When specific Fort Carson data are not available, the paper references research on Army populations compared to the civilian population and anecdotal information obtained from providers regarding military impacts and emerging trends.

Information was gathered on factors that contribute to an individual's need to seek assistance within the community, such as stress, financial strain, or substance abuse. Key challenges or issues regarding the military population are outlined. The issues discussed in this paper include areas addressed in other Growth Plan technical reports, such as housing, education, and child care. Background and data from those reports are included, where relevant.

Stakeholder interviews were conducted in February, March and September, 2007 and March 2008 to discuss the impacts of population growth on service provision over the next five years. Information was gathered in one-on-one interviews, from agencies, and from publicly available records. Issues and avenues for more detailed research were identified. The Fort Carson Regional Growth Plan convened partnership groups consisting of Fort Carson and community-based providers to consider recommendations made in the technical report and to develop action steps to implement those recommendations.



Map 1: Fort Carson Regional Growth Plan Study Area

Demographics

Fort Carson soldiers and families seek social services both on-post and in the community. The arrival of additional troops and family members will increase the demand for social services in the region, particularly in the El Paso County area. This section outlines the projected Fort Carson growth as a component of total regional population growth. This section also identifies the projected number of children that may impact services provided by schools, child development centers, and other child-related social services.

An estimated 12,600 military personnel were authorized for Fort Carson at the end of FY 2006, with an estimated 23,000 dependents living in the region. The population of the total Fort Carson community, including civilian employees and their dependents, at the beginning of FY 2007 was over 43,000, representing over 5% of the regional population (see Table 1).

Table 1: Fort Carson Related and Regional Growth by FY 2011

Population	Population as of 2006	Population Increase (2007 to 2011)	Population by 2011
Military Personnel (1)	12,600	11,400	24,000
Military Dependents (estimated)	23,000	21,287	44,287
Civilians Working On-Post (2)	3,119	430	3,549
Civilians Dependents (estimated)	5,022	693	5,715
Total Fort Carson Related Population	**43,741**	**33,810**	**77,551**
Non-Military Related Population (3)	723,709	91,182	814,891
Total Regional Population	**767,450**	**124,992**	**892,442**

(1) The current Military Personnel Population used in this analysis differs from the FY 2006 Statistical Data Card and represents information provided by Fort Carson personnel.
(2) Includes DA and NAF Civilian Employees.
(3) Based on Colorado DOLA forecast information as of Spring 2007.
Source: Fort Carson Garrison Command, End FY 06 Fort Carson Statistical Data Card, RKG Associates, Inc.

The Expected Growth Scenario detailed in the Demographics Technical Report of the Growth Plan projects an increase of 11,400 troops by FY 2011. Total population growth associated with the troop increases at Fort Carson is expected to be 33,810, consisting of 11,400 newly authorized troops, 21,287 military dependents, 430 civilians, and 693 civilian dependents.

When baseline growth is combined with the forecasted troop increase, the three-county study area population is expected to increase by sixteen percent, or 124,992 persons, in the five years ending in 2011. Fort Carson-related growth accounts for over one-quarter of the total growth of the region during this time frame, and the Fort Carson-related population will make up over 8% of the total study area population by FY 2011.

As detailed in the Education and Child Care Technical Reports of the Growth Plan, the total number of new children arriving in the Fort Carson study area, from both baseline and Fort Cason troop growth, is estimated to be 14,831 over the next five years. Of those children, approximately 9,207 will be of school age by FY 2011. (See Table 2: FY 2011 End-State Summary of School Age Children by District.)

Table 2: FY 2011 End-State Summary of Forecasted School Age Children by District

School District	K-5	6-8	9-12	Total
Fountain-Fort Carson District 8	1,541	679	716	**2,935**
Colorado Springs District 11	740	326	343	**1,409**
Harrison District 2	604	267	283	**1,153**
Widefield School District 3	1,277	571	609	**2,457**
Cheyenne Mountain District 12	174	77	81	**332**
Outside School Districts	189	83	87	**359**
Private School/Home School	294	130	137	**561**
Total	**4,818**	**2,132**	**2,257**	**9,207**

Source: RKG Associates, Inc.

The Child Care Technical Report details the number of child care age dependents by FY 2011 from Fort Carson and baseline growth (see Table 3: FY 2011 End-State Summary of Forecasted Child Care Age Dependents from Baseline Growth and Fort Carson Troop Increase). Over 6,000 of the 9,207 school aged children and 3,197 of the 0 to 5 years olds can be attributed to population growth at Fort Carson. These children will need varying levels of service, not just from child care providers and school districts, but also from community-based social services, particularly those children with developmental disabilities or behavioral problems, which are addressed later in this report.

Table 3: FY 2011 End-State Summary of Forecasted Child Care Age Dependents from Baseline Growth and Fort Carson Troop Increase

	Infants 0-1	Pre-Toddlers 1-2	Toddlers 2-3	Pre-Schoolers 3-5	School-Age 5-9	Total
BASELINE ONLY						
Total	265	265	265	514	1,253	**2,562**
FORT CARSON GROWTH ONLY						
Total	659	659	639	1,240	2,814	**6,011**
TOTAL GROWTH						
Total	924	924	904	1,754	4,023	**8,528**

Source: RKG Associates, Inc., EDAW, Inc.

B. NEEDS ASSESSMENT

Social service providers address some of the most complex and often intractable issues confronting any community – serving those with developmental disabilities or affected by poverty, social isolation, substance abuse and violence. Organizations must grapple with these challenges in an environment of chronic funding shortages, and many agencies rely heavily upon volunteers and charitable giving to maintain current levels of programming. In the Fort Carson region, there are a myriad of providers committed to addressing the needs of Fort Carson soldiers and their families, as

discussed in the next section of this paper, Existing Services. The key issues that social service providers face in the Fort Carson study area are discussed below.

Because services and funding sources are so varied, the adequacy and quality of the social services across the Fort Carson study area are difficult to measure. This assessment relies on information obtained from a cross-section of service providers in El Paso County, as well as from on-post providers and general research on Army populations. Fort Carson-related growth will add to the baseline population growth of the region and impact social service providers that are currently struggling to meet service demands. Further, issues specific to military families, including family stress from transitions and deployments and health and behavioral problems of soldiers and families related to illness and injury, have begun to add to the challenges of community-based providers and will increase as more troops arrive.

The mission of Fort Carson is to prepare and send troops into conflict zones around the world, currently in Operation Iraqi Freedom and Operation Enduring Freedom (Afghanistan). Deployments, in conjunction with reassignment to a new post for more than 11,000 soldiers, create a complex and interrelated series of challenges for soldiers, families, and the community. While the military has long understood and worked to counter the impacts of a highly mobile work force, emotional and physical stress placed on soldiers during a time of war, as well as emotional and economic stress that can occur in military families of deployed soldiers, combine to create a population in need of a new continuum of services.

Fort Carson provides services on-post through health and behavioral health programs at Evans Army Community Hospital, soldier and family assistance centers, and through the post's Army Community Service Center (ACS). On-post family assistance centers are staffed with social workers and other specialists. A list and summary of ACS services can be found in Appendix A. When on-post services are not sufficient to meet specific needs or are not accessed by families due to a perceived stigma or lack of information, soldiers and families may look to the community for services delivered by government agencies, non-profit entities, religious organizations and for-profit businesses.

At this time, most community support agencies do not collect data according to military status, and the stigma of mental health treatment in society and privacy considerations exacerbate the lack of available information. Some agencies are beginning to collect military-specific data. However, most data collected are too recent to assess trends, and data collection methods across organizations are not standardized. Therefore, this assessment examines data relating to the general population and research on Army populations in general and highlights Fort Carson-specific data where possible. The key social service issues identified in this report are discussed in the following sections.

Transitions

Military families experience a great deal of transitions in general, and these transitions are compounded by deployments.[1] Soldiers and family members, particularly spouses and dependents of deployed soldiers, may need services to assist them in coping with transition and deployment issues. The need for services may be especially enhanced for family members who have recently

[1] Families Under Stress: An Assessment of Data, Theory, and Research on Marriage and Divorce in the Military. Karney, B.R. and Crown, J.S. The Rand Corporation, 2007.

moved to the area and do not have traditional support systems, including family and friends locally. The Army has created services and programs to assist in transitions. However, deployments can also result in additional financial strains for families, leading to an increased need for assistance from the community. Further, because of stresses from deployments and combat experience, some soldiers' relationships may be disrupted or severed, leaving former dependent family members isolated and more vulnerable, without access to military services.

In addition to active duty military members requiring services, separated and retired military members also seek community services. Mobility makes it very difficult to determine the numbers of families that will remain in our community and need services once separated from the military. El Paso County has one of the highest populations of retired military in Colorado, but greater analysis is needed to assess the types and levels of services that active duty, retired, and separated military members are seeking, including financial assistance, affordable housing assistance, mental health, and other services.

Poverty and Financial Well-Being

Generally, social service needs correlate highly with lower income levels. Table 4 provides data on El Paso County's population in poverty. El Paso County's poverty rate is 10.9% for individuals with related children and 9.4 % for families with children. The percentage of El Paso County families in poverty is below the national poverty rate and below Pueblo County's poverty rate. Therefore, while the majority of Fort Carson soldiers and families reside within El Paso County, these families do not appear to be a major contributing factor to the county's overall poverty rate.

Table 4: Population and Percent of Families in Poverty, 2006

	Total Population	Population in Poverty		% Families in Poverty
		Total	Percent	
United States	291,531,091	38,757,253	13.30%	9.80%
With related children under 18 years	72,065,732	12,911,393	17.90%	15.00%
El Paso County, CO	561,888	50,314	9.00%	5.90%
With related children under 18 years	146,688	15,950	10.90%	9.40%

Source: US Census Bureau, 2006 American Family Surveys

Income Levels

Income level is generally a good indicator of self-sufficiency. Table 5 provides an overview of Fort Carson soldier income levels. The incomes shown in Table 5 consist of Army basic pay and the basic allowance for housing for Fort Carson soldiers with dependents. Income levels do not depict other allowances or benefits for soldiers or a second income contributed by a spouse. Army demographics indicate that 66% of Officers, 82% of Warrant officers, and 48% of enlisted personnel are married. [2] As cited in the Growth Plan's Economic Impacts Technical Report, data collected from local real estate firms suggest that 52% of Fort Carson personnel are married, and approximately 55% of these married individuals have working spouses. Therefore, a percentage of Fort Carson families would be expected to have higher income levels than described in Table 5.

2 Army Profile 2004. United States Army. 2004. Summer 2007 <http://www.goarmy.com/flindex.jsp>.

Economic assistance programs, such as El Paso County's Temporary Assistance for Needy Families (TANF) provide cash assistance to low-income families based on the poverty guidelines issued each year by the U.S. Department of Health and Human Services (HHS). The poverty guideline for a family of four for 2008 is $21,200. At Fort Carson, even for the most entry level positions, soldier pay grades plus the basic allowance for housing appear to be sufficient for those families to remain above the poverty line. Therefore, it is unlikely that Fort Carson soldiers will be eligible for the TANF program. However, some soldiers, predominantly lower ranking soldiers (E-1 to E-3 in particular) with large families, may be at risk of facing poverty-related issues and will seek services from the Army and the community.

Table 5 also does not take into account personal choices made by soldiers regarding disposable income nor debt load, both of which are discussed in the Housing Technical Report. Therefore, income levels depicted in the table do not necessarily reflect the entire financial situation of some soldiers and families. In addition to affecting housing affordability, high personal debt affects soldiers' financial stability and their abilities to meet other needs, such as obtaining car loans, or providing food for their families.

Table 5: Fort Carson Soldier Income Levels

Pay Grade	Basic Pay*	BAH**	Annual Pay***
O-10	$14,068.80	$1,696.00	$189,177.60
O-9	$12,305.10	$1,696.00	$168,013.20
0-8	$8,706.60	$1,696.00	$124,831.20
O-7	$7,234.50	$1,696.00	$107,166.00
O-6	$5,362.50	$1,677.00	$84,474.00
O-5	$4,470.00	$1,663.00	$73,596.00
O-4	$3,856.80	$1,532.00	$64,665.60
O-3	$3,390.90	$1,345.00	$56,830.80
O-2	$2,929.50	$1,162.00	$49,098.00
O-1	$2,543.40	$1,030.00	$42,880.80
W-5	$6,231.00	$1,498.00	$92,748.00
W-4	$3,504.00	$1,418.00	$59,064.00
W-3	$3,200.10	$1,348.00	$54,577.20
W-2	$2,831.70	$1,260.00	$49,100.40
W-1	$2,485.50	$1,166.00	$43,818.00
E-9	$4,233.90	$1,398.00	$67,582.80
E-8	$3,465.60	$1,303.00	$57,223.20
E-7	$2,409.30	$1,231.00	$43,683.60
E-6	$2,083.80	$1,165.00	$38,985.60
E-5	$1,909.50	$1,013.00	$35,070.00
E-4	$1,750.50	$909.00	$31,914.00
E-3	$1,580.10	$909.00	$29,869.20
E-2	$1,502.70	$909.00	$28,940.40
E-1	$1,340.40	$909.00	$26,992.80

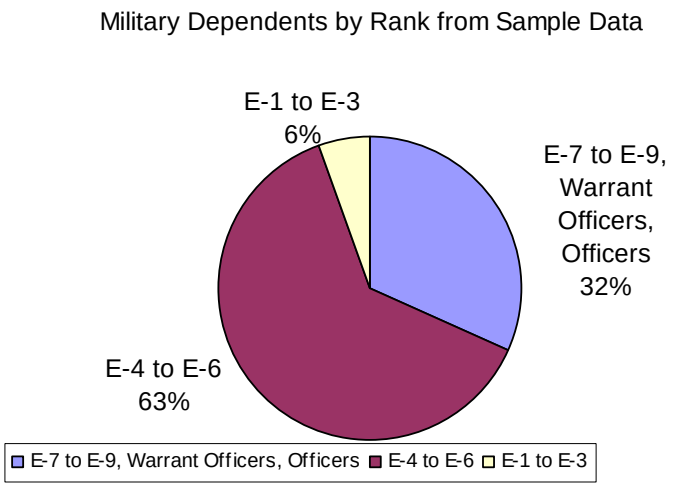
* Basic pay = 2008 active duty monthly basic pay (effective January 1, 2008, with 3% increase) for 2 years or less in service, except for O-10, O-9, & W-5, which require at least 20 years of service and E-9 and E-8, which require over 10 and 8 years of service, respectively.

** BAH = 2008 basic allowance for housing for service members with dependents in Colorado Springs

***Annual pay = basic pay plus BAH; it does not include other allowances or benefits.

Source: Defense Finance and Accounting Service

While soldiers and their families may not be eligible for TANF because of strict income and other eligibility requirements, a certain percentage of Fort Carson troops are struggling financially and seek assistance from the Army and the community. Figure 1, taken from the Demographics Technical Report, indicates that six percent of the total dependent population at Fort Carson is attributed to soldiers with the rank of E-1 to E-3, those that have the greatest risk of poverty. This six percent estimates 1,280 dependents (spouses and children up to age 24) currently living in soldier households representing these ranks. The new troop estimates indicate an additional 1,203 dependents living in households of that rank for a total of 3,174 new troops and family members in this at-risk category by FY 2011. This number represents just below ten percent of the expected Fort Carson growth. However, preliminary data and anecdotal information discussed below indicate that a significant number of Fort Carson soldiers are currently facing poverty-related issues, and these numbers will increase with additional troops.



Source: Fort Carson, RKG Associates, Found in Growth Plan Demographics Technical Report

Figure 1: Military Dependents by Rank from Sample Data

Financial and Food Assistance

Many military families, particularly young soldiers at lower pay grades with families or those soldiers with high debt loads, currently seek financial and food assistance. These soldiers and families may have limited savings or spend significant portions of their incomes on housing; therefore, when an emergency arises, such as a medical crisis, death in the family, or car problems, these families need help to pay for rent, car repairs, travel or food. Fort Carson offers several assistance programs and also refers soldiers to community-based services. Other soldiers and families seek assistance directly from community-based organizations.

Fort Carson soldiers and dependents represented approximately 7% of the total El Paso County population in 2006. However, Fort Carson growth between 2007 and 2011 is estimated to be over one-quarter of the region's total growth, and the Fort Carson population will represent over 8% of the total regional population, including El Paso, Pueblo, and Fremont counties, by FY 2011. Therefore, assuming that new soldiers will be similar in rank and income to the current soldier profile, an increase in number of soldiers and families that might access food stamps or other assistance programs in 2011 would be expected.

The El Paso County Department of Human Services (EPCDHS) administers the county's assistance programs, including food stamps. However, ECDHS does not currently track military data for services provided. Therefore, determining specific Fort Carson growth impacts is difficult, and additional data collection and analysis are recommended to quantify soldier needs for food stamps and other assistance from county agencies. While EPCDHS would be expected to meet the incremental needs of Fort Carson families for food stamp assistance, the department is facing significant budget restrictions that hinder the department's ability to provide services. Therefore, soldiers and families also seek access from other non-profit organizations.

Army Emergency Relief (AER) is a non-profit agency established to provide financial assistance to Army personnel and is dedicated to "Helping the Army Take Care of Its Own". AER provides a variety of financial assistance to active duty soldiers and family members, as well as scholarships to

dependents and assistance to widows and retirees.[3] In 2007, AER provided $1,152,000 through 1,119 cases at Fort Carson. Approximately 33% of this assistance was through the commander's referral program, which provides funding for unit commanders to give grants or loans up to $1,000 to soldiers to help with immediate needs, such as emergency travel, rent or mortgage payments, or car repairs. 92% of the assistance was provided to soldiers with a rank of E-6 or below. [4] Approximately 369 soldiers received assistance through unit commanders in 2007, and AER anticipates a significant increase in needs at Fort Carson as a result of the post's growth. The 369 cases represented approximately 2% of soldiers assigned to the post in 2007. If additional troops are similar in demographics, an additional 11,400 troops may result in an additional 228 soldiers in need of assistance. This is a conservative estimate of financial need, as soldiers and families also seek assistance from other community-based service providers, as discussed below.

Care and Share Food Bank for Southern Colorado, the regional food bank serving the Fort Carson area, reports a large number of military families that receive assistance from local emergency food pantries. In 2007, Fort Carson's Army Community Service Center referred 125 families to Care and Share for emergency food assistance. This number is lower than the total number of Fort Carson families that receive assistance, because many families do not go through the post for services. For example, in October 2006 Care and Share conducted a survey of fourteen emergency food pantries located near Fort Carson. In a one-week time frame, 141 active duty military families received food from these agencies, representing 33% of the total number of families served at these pantries during that week. [5]

The El Pomar Foundation also administers an assistance fund for needy military families. El Pomar's Military Family Assistance Fund provides grants to families of deployed soldiers facing unexpected crises, such as needs for food, shelter, and transportation, as well as grants for family members to attend memorial services for soldiers who have been killed. The fund, established in 2005, has provided over $525,000 in grants to 437 Fort Carson families, four families from Peterson Air Force Base, and two Guard/Reserve families.[6]

Clearly, a significant number of Fort Carson families are seeking financial and emergency food assistance from the community. Based on the limited data above, a minimum of 2% of Fort Carson soldiers and families currently need some sort of financial or commodity assistance. Assuming different soldiers and families are seeking services from the various agencies in the community, this 2% estimate is conservative. An additional 11,400 troops may nearly double the demand for financial and food assistance by Fort Carson soldiers and families in the community. A more detailed assessment of the number of military families served by EPCDHS and community agencies is recommended to understand more fully the number and types of assistance Fort Carson families are seeking.

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[3] Army Emergency Relief 2006 Annual Report.

[4] Telephone interview with Sgt. Major (Ret.) Scott, Assistant Secretary or Administration, Army Emergency Relief, March 28, 2007.

[5] Care and Share Food Bank of Southern Colorado, survey data, October 17, 2006

[6] Military Family Assistance Fund data were provided by Terrance McWilliams, Director of Military Support, El Pomar Foundation.

Health and Behavioral Health

Active duty soldiers at Fort Carson and their families are experiencing increased emotional stress since the war began in 2003, and this stress could lead families to require or seek social services. Mental health services are detailed in the Health and Behavioral Health Technical Report. That paper found that mental health and behavioral health services in the region are currently strained, noting a deficiency in the supply of psychiatrists and difficulty in hiring and retaining counseling and other support staff. Further, there has been limited coordination of the community's mental health services, and insurance programs do not adequately reimburse providers, nor do those programs recognize treatments that address the complex needs of patients and their families.

Also, community-based providers are not always knowledgeable in military culture, making it difficult for providers to meet soldier and family needs. Fort Carson is currently working to address this culture gap by offering a community education course, "Army 101", a program to educate community leaders and service providers regarding Army culture and other issues. This type of program should continue in order to help coordinate service provision between Fort Carson and the community.

Current budget constraints and the fragmented nature of services will challenge the ability of the community to meet the behavioral health needs of soldiers and their families. A county report on health and behavioral health noted that in 2004, 47% of adults in El Paso County reported poor mental health at least one day in the previous 30 days, compared with 34% in the state and 34.4% in the U.S. Nearly 14% of adults in the county reported at least 14 days of poor mental health in the prior 30 days, compared with 9.1% in the state and 10.4% nationally. The report also indicated that in 2004, one-third of El Paso County residents suffering mental health crises were not able to receive needed crisis care.[7] More detailed analysis is needed to determine the specific military component of these data, as well as determine the impacts of Fort Carson's growth on mental health in the region.

As of March 18, 2008, the five-year anniversary of the war in Iraq, 233 Fort Carson soldiers have died.[8] Fort Carson has deployed 16,413 soldiers since 2003,[9] and Fort Carson has brought back to the post or re-deployed from the war zones 22,669 soldiers, compounding the dynamic nature of Base Realignment and Closure (BRAC) changes during war time. Multiple combat and support units assigned to Fort Carson have been deployed more than once since 2003. Current conditions make it difficult to determine an exact number of those deployed and how many times they have been deployed. However, available data for the region indicate that the number and duration of deployments are affecting soldiers and their families.

The Pikes Peak Behavioral Health Group, an umbrella organization of behavioral health service providers, has begun to compare its case load to deployment schedules, noting a correlation between deployments and the number of new clients served. Initial data shown in Figure 2 suggest

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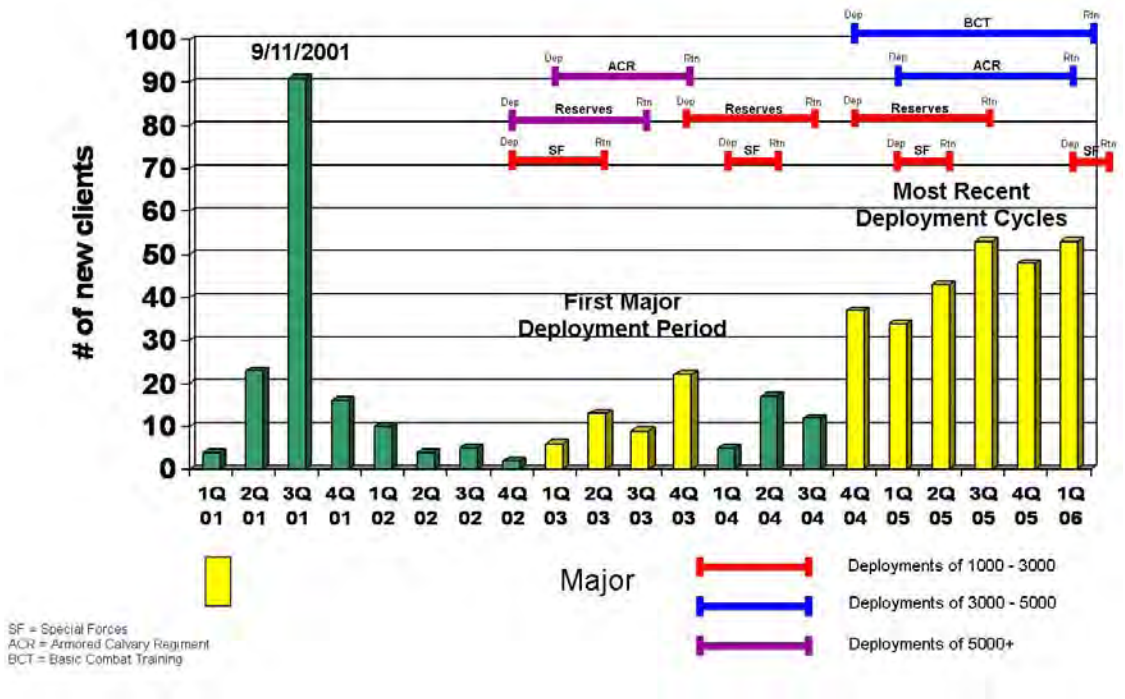
[7] *Life, Death and Disease in El Paso County, Colorado*, El Paso County Department of Health and Environment, 2006 Report to the Community.

[8] "5 Years Later: A Local Look at the Iraq War," The Colorado Springs Gazette, March 18, 2008.

[9] Mixon, General Robert. Speech. Pueblo of Chamber of Commerce. Pueblo Chamber of Commerce Annual Lunch. Pueblo Convention Center, Pueblo, Colorado. Aug.

that the increased number and duration of deployments are affecting the demand for community-based services.



Source: Pikes Peak Behavioral Health Group

Figure 2: New Military Related Clients for Mental Health Services Related to Deployments

Reports estimate that between 30% and 40% of soldiers returning from deployments will experience mental health problems, including depression and post traumatic stress disorder (PTSD).[10] Evans Army Community Hospital diagnosed 2,141 soldiers with PTSD between 2003 and August 2007, and that number will increase as the post grows and soldiers return from deployments. In addition to PTSD, traumatic brain injury (TBI) affects not only the soldier, but also his or her family. There is also a correlation between TBI and PTSD. A recent study found that soldiers with mild traumatic brain injury were more likely to experience PTSD than those with other injuries.[11] This report also found that those with mild TBI were more likely to report poor general health, missed work days, and other difficulties. However, when treated for depression and PTSD, most symptoms subsided, indicating the importance of a continuum of services, including early diagnosis, for soldiers returning from deployments.

Assuming that 30% of troops returning from deployments will experience symptoms of PTSD, by FY 2011 an additional 3,400 soldiers may need services on post and in the community, not including services that will be needed by family members of affected soldiers. This number represents a significant increase in the need for services provided currently, and more coordination and

[10] "Charities Scramble to Provide Housing and Health Care to Veterans." Denise Kersten Wills, The Chronicle of Philanthropy, March 2008.

[11] "Mild Traumatic Brain Injury in U.S. Soldiers Returning From Iraq." *The New England Journal of Medicine*, January 31, 2008.

resources will be required to meet this increased need. However, a more detailed community-wide analysis is recommended to obtain a better understanding of the types of services military families need and the amount of resources and funding required to serve these families. Additional research is needed to determine the post's and the community's abilities to serve higher numbers of soldiers with PTSD, as well as identify emerging trends in types of services and treatments for soldiers and family members, such as substance abuse, domestic violence, behavioral problems in children of deployed, injured, or ill soldiers, and other areas of concern. General information concerning these issues is provided below.

Suicide

As detailed in the Growth Plan's Health and Behavioral Health Technical Report, suicide, an indicator of a community's mental health, is a significant concern in El Paso County and the state of Colorado. In 2004, Colorado ranked 45th in the nation with 17.3 suicides per 100,000, compared with a national rate of 11.1 per 100,000. The suicide rate in El Paso County was double that of the nation for all age groups, and the State of Colorado suicide rate was approximately 50 percent higher than the national figure (see Figure 3: Suicide Rates in El Paso County). The Suicide Prevention Partnership of the Pikes Peak Region reports that the number of suicides in El Paso County decreased from 123 in 2004 to 93 in 2005.[12] This decrease is encouraging. However, the Army is also reporting increases in suicides and suicide attempts. In 2006, the Army reported ninety-nine suicides, compared with eighty-seven in 2005 and sixty-seven in 2004. The overall Army suicide rate in 2006 was 17.3 per 100,000 soldiers.[13]

While it is not yet possible to determine the direct military impact, the county's high suicide rates indicate the need for more effective detection, diagnosis, and treatment services, including increased communication between Fort Carson and the community. Fort Carson and community-based agencies such as PPBHG and the Suicide Prevention Partnership of the Pikes Peak Region, should track and monitor utilization of services to identify trends and ensure the availability of adequate services in the community. Further, more detailed data collection and analysis should be conducted in order to determine the effect of deployments on the county's high suicide rates.

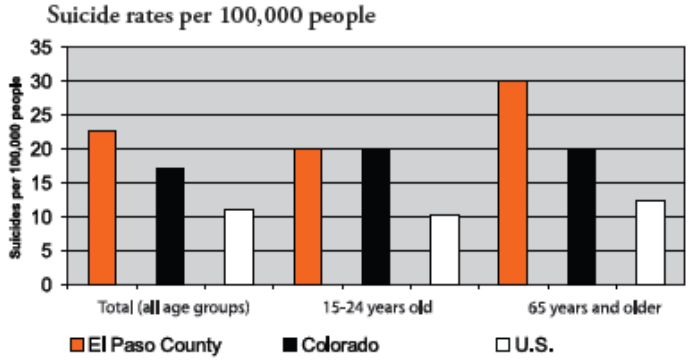


Figure 3: Suicide Rates in El Paso County, 2004[14]

[12] Suicide Prevention Partnership of the Pikes Peak Region website (http://sppr.org/statistics.shtml.)

[13] "Army Releases Suicide Data, Promotes Prevention Programs", Sgt. Sara Wood, Army Medicine News Release, August 16, 2007.

[14] Quality of Life Indicators Report for the Pikes Peak Region. Pikes Peak Area Council of Governments. Colorado Springs: Pikes Peak United Way, 2007. 50.

Substance Abuse

El Paso County is an area already facing significant substance abuse issues. In 2004, the El Paso County Department of Health and Environment reported that 34.3% of residents aged 18-25 were binge drinkers and that there were 2,839 drug arrests in the county, accounting for eight percent of all county arrests.[15] However, public funding for substance abuse programs is not sufficient to meet needs. As of 2005, Colorado ranked 50th among states in funding for drug abuse prevention and treatment and 49th in funding for drug rehabilitation programs. Colorado spent significantly less on prevention and treatment programs compared to national averages. Colorado was also one of three states that refused Medicaid coverage for drug treatment, partially because of a lack of state matching funds.[16] Additionally, there is a significant gap in the number of adults in need of substance abuse services and those receiving services. 2001 state figures indicate that 27,000 adults needed services, but only 2,090 individuals received services through publicly-funded programs.[17] Reports indicate that emergency room contacts and police and fire service responses to substance abuse-related calls are significantly more expensive to communities than prevention and treatment services.

A collaboration of providers in the Pikes Peak region has identified a continuum of care, from detox, to outpatient services and after care, to help address substance abuse problems in the community. Participants include El Paso County, the City of Colorado Springs, Penrose-St. Francis Hospital, Memorial Hospital and Pikes Peak Mental Health. However, El Paso County discontinued funding for this program and other substance abuse programs in its 2008 budget. Other collaborative efforts have developed Harbor House, which serves homeless individuals with severe substance abuse problems. Harbor House spends approximately $8,000 per person per year, compared with $27,000 in annual costs of emergency room services for homeless individuals. Harbor House currently reports a 74% success rate in treating individuals.[18] Therefore, focus on community-based treatment and prevention programs should be encouraged.

General data indicate that younger populations (ages 18-25) are significantly more likely to experience substance abuse problems. Therefore, in addition to the stress of transitions and deployments, the age of new soldiers arriving at the post will be a factor contributing to increased substance abuse issues in the community. Service providers have seen an increase in demand for substance abuse services, and new community-based programs have been initiated to meet this increased demand. First Choice Counseling Center recently initiated programs to treat Fort Carson personnel, and currently treats sixteen active duty soldiers in the center's substance abuse program. Other providers, such as Cedar Springs Behavioral Health System, provide inpatient and outpatient services. These providers indicate a need for coordinated services, particularly in treating dual diagnosis, as many soldiers with PTSD also have substance abuse problems.[19]

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[15] *Life, Death and Disease in El Paso County, Colorado*, El Paso County Department of Health and Environment, 2006 Report to the Community.

[16] "Communities in Crisis: Collaborative Solutions", presentation, 2005 Addictive Disorders and Behavioral Health Annual Advanced International Winter Symposium, January 27, 2005.

[17] Colorado Department of Human Services, Alcohol and Drug Abuse Division.

[18] Interview with Jeannine Holt, Executive Director, Harbor House, 2007.

[19] Telephone interviews with Brian Duncan, First Choice Counseling Center and Andrew Laning, Cedar Springs Behavioral Health System, March 2008.

As the Army sees an increase in demand for counseling and behavioral health treatment for active duty soldiers and as Fort Carson relies more heavily on off-post behavioral health services to meet an increase in demand, available resources will likely be stretched. Additionally, as active duty members are discharged because of health and/or behavioral issues, separate, or retire and remain in the community, there will be an increased service demand on local providers. While the focus of this assessment is on the active duty component of Fort Carson, the needs of veterans, family members, and separated military who are part of the civilian population should not be overlooked in future needs assessments in the region.

As noted previously, a more coordinated approach to health, behavioral health, and social services is needed. Organizations such as the Military Community Collaborative (MCC) have begun to review the collective needs of Fort Carson for these services, and these collaborative efforts should continue to help determine Fort Carson-specific needs. It is recommended that a more detailed analysis of numbers served, service providers, and funding sources be undertaken to assist the community in identifying gaps in service and identify funding opportunities to provide needed services, particularly those most likely to be accessed by military personnel.

Child Welfare

Child welfare is greatly affected by family stress and other factors (including family history), making the stresses faced by military families because of transitions and deployments a significant concern for the Fort Carson area. Several studies have shown that deployments contribute to stress for military families, including stress and behavior problems in children. One study found that in families "with substantiated reports of child maltreatment, rates of maltreatment are greater when the soldiers are on combat-related deployments."[20] Another study found that during periods of departures and return from deployments, the rate of substantiated child maltreatment in military families approximately doubled, while the rate for nonmilitary families was relatively unchanged.[21]

Table 6 provides an overview of child abuse reports from currently-available data. These data represent county-wide statistics reported by the El Paso County Department of Human Services and do not break out military or Fort Carson specific information. In general, despite a drop in reports in 2004, the number of child abuse cases continues to rise. The drop in reports in 2004 does correlate to a time period when the number of deployments from Fort Carson was lower (see Figure 2). However, more detailed analysis is needed to determine the reasons for the change.

Table 6: Child Abuse Reports in El Paso County

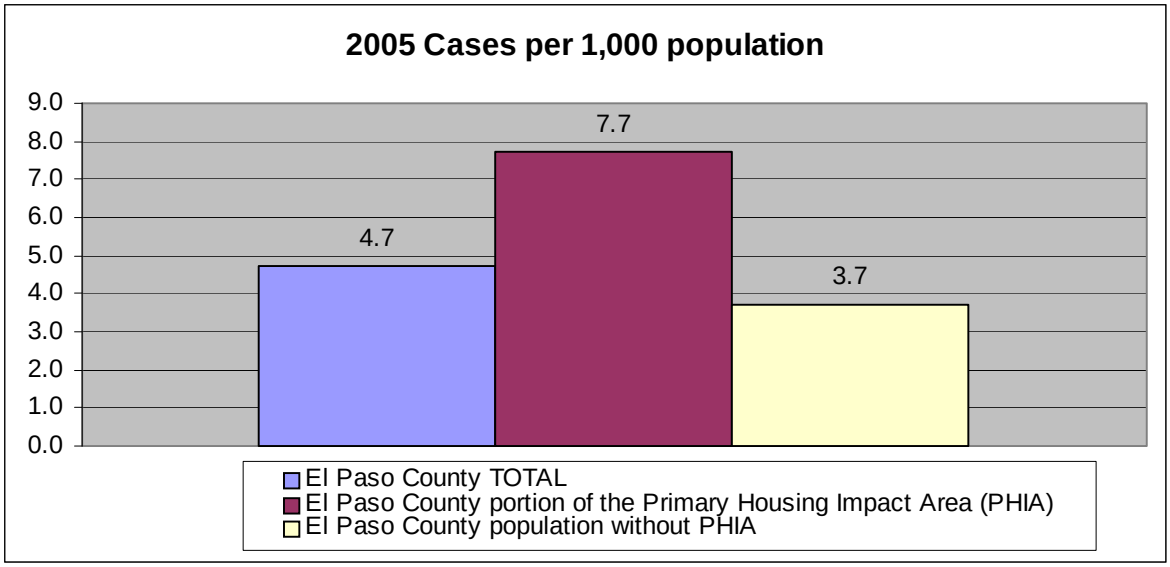
	2003	2004	2005	2006
Number of Child Abuse Cases Reported	9,387	7,965	9,586	9,879

Source: El Paso County Department of Human Services

[20] "Child Maltreatment in Enlisted Soldiers' Families During Combat-Related Deployments", Deborah A. Gibbs, MSPH; Sandra L. Martin, PhD; Lawrence L. Kupper, PhD; Ruby E. Johnson, MS, *JAMA*, Vol. 298, No.5, August 1, 2007, pp. 528-535.

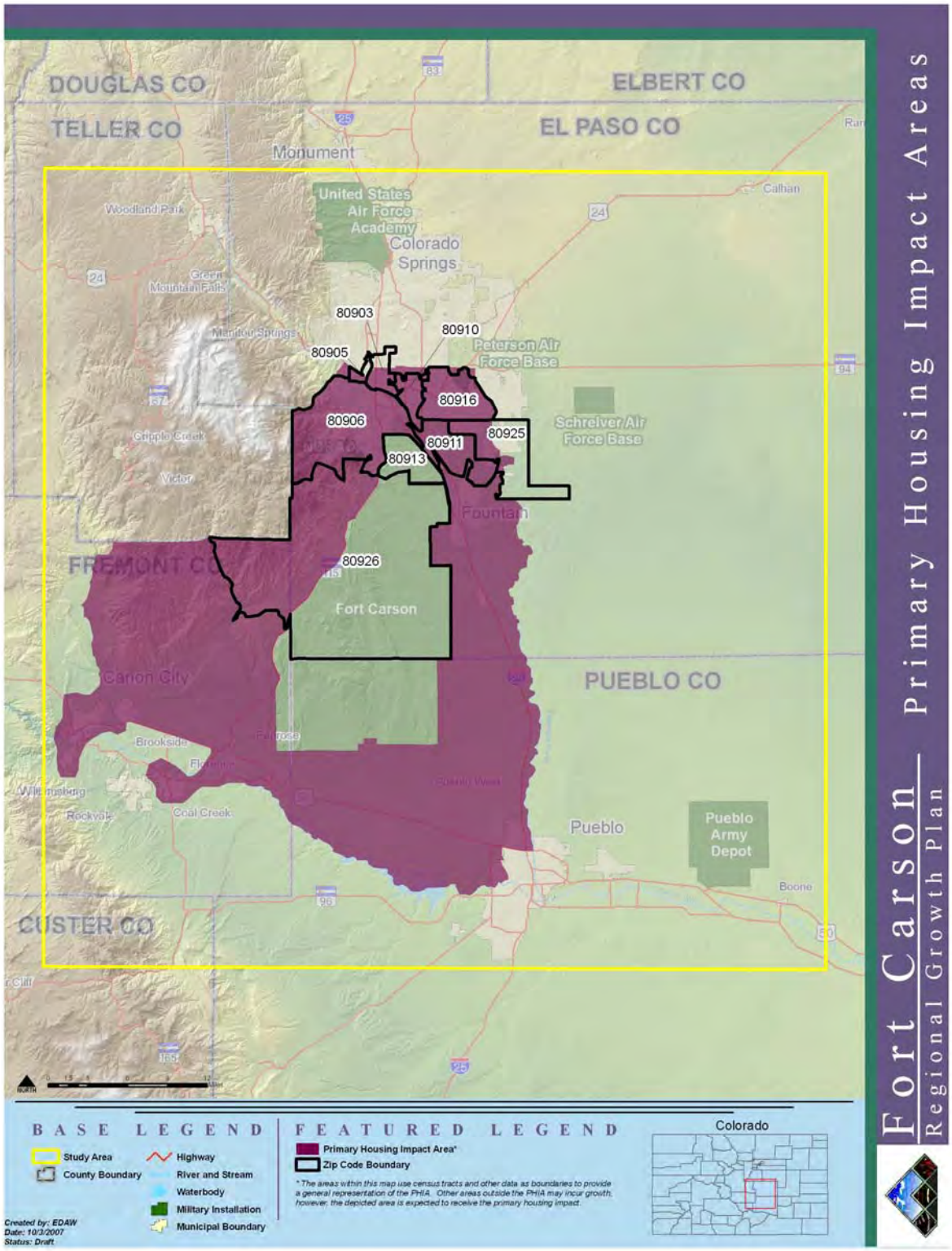
[21] "Effect of Deployment on the Occurrence of Child Maltreatment in Military and Nonmilitary Families", E. Danielle Rentz, Stephen W. Marshall, Dana Loomis, Carri Casteel, Sandra L. Martin and Deborah Gibbs, American Journal of Epidemiology" Vol. 165, No. 10, pp. 1199-1206.

ECDHS also provides data on child abuse reports by zip code. In 2005, of the thirty-seven zip code areas in El Paso County, 41% of the child abuse reports came from the nine zip code areas in and surrounding Fort Carson. This area is also considered the El Paso County portion of the Primary Housing Impact Area (PHIA) for the Fort Carson Regional Growth Plan (see Map 2). Figure 4 shows an increase in child abuse reports per thousand in the PHIA compared to El Paso County as a whole. More detailed data and analysis are needed to determine if these child abuse reports are specifically attributable to Fort Carson families. Even assuming that no Fort Carson families were contributing to this report case load, more information would be beneficial, since military families may move into areas that are facing social problems at a rate greater than the rest of El Paso County. A more detailed study would also help identify specific programs and intervention services that may be needed to protect child welfare, particularly during times of deployment.



Source: EPCDHS

Figure 4: 2005 Reports of Child Abuse per 1,000 Population in El Paso County



Map 2: Growth Plan Primary Housing Impact Area with El Paso County Zip Codes by Fort Carson

The Court Appointed Special Advocate (CASA) program, created in 1977, includes over 900 member agencies nationwide that train volunteers to speak up for abused, neglected, or abandoned children in the court. CASA volunteers are appointed to gather information in child abuse and neglect cases and speak to the court on behalf of the needs of the children. CASA serves more than 206,000 children in the United States each year. CASA was instituted in Colorado in 1985, and currently, there are fourteen CASA programs in Colorado.[22]

CASA of the Pikes Peak Region began collecting data on military affiliation in 2004. Because of funding limitations, CASA does not handle every case that involves military dependents in the El Paso County court system. Therefore, the numbers below do not represent all military children needing assistance. Table 7 shows the increase in the number of military children served through CASA's programs since the agency began collecting military-specific information. The data indicates that the number of military children served is growing at a faster rate than the general population. In 2006-2007 military children represented 17.5% of the total clients served (eighty-one military children out of a total of 464 children served). CASA does not break down data by specific branch of service or by active duty or retired status, and more detailed data would help assess the specific impact Fort Carson troop growth is having on these services.

Table 7: Growth in Military Cases Served by CASA

CASA Program	% Growth in Military Children Served from 04-05 to 06-07	% Growth in Total Cases Served from 04-05 to 06-07
Dependency and Neglect	93%	84%
Domestic Relations (children in highly conflicted divorces)	43%	20%
Supervised Exchange and Parenting Time	30%	46%
Average Growth in All Programs	55%	50%

Source: CASA of the Pikes Peak Region

Studies in other communities show a correlation between deployments and increases in child maltreatment, and initial data from the Fort Carson study area show a correlation between higher concentrations of military families and increased reports of child abuse. However, much more detailed analysis is needed before any conclusions can be made specific to Fort Carson families and the post's growth. More detailed data should be obtained from ECDHS and other child welfare agencies, as well as public school counselors who are primary reporters of child abuse in El Paso County. A better understanding of the data will help providers identify the prevalence of child welfare issues from Fort Carson families and develop specialized intervention programs, if necessary.

Domestic Violence

Studies have also reported an increase in family violence as a result of deployments.[23] With the added stresses of transitions and deployments on military families, increased levels of domestic

[22] CASA of the Pikes Peak Region. Fall 2007 <http://www.casappr.org>.

[23] "Deployment and the Probability of Spousal Aggression by U.S. Army Soldiers". McCarroll, JE, Ursano, RJ, Liu, X, Thayer, LE, Newby, JH, Norwood, AE, and Fullerton, CS. *Military Medicine*,165 (1), January 2000, pp. 41-44.

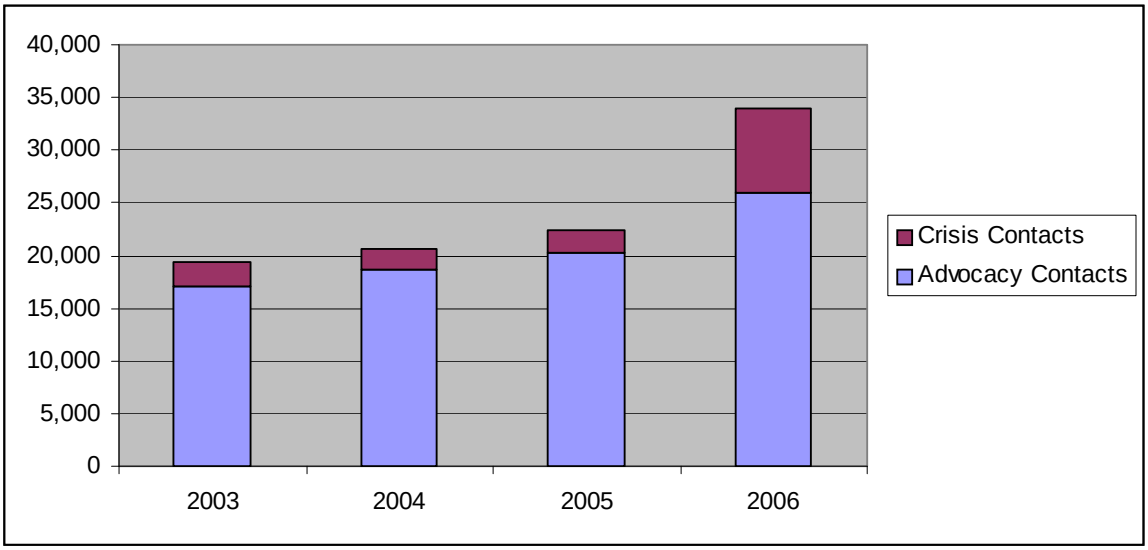
violence is a concern for the Fort Carson community. Initial data and anecdotal information suggest that local service providers, law enforcement officials, and the court system have seen increased numbers of domestic violence cases associated with military personnel in the region. While most law enforcement agencies and the court system do not currently collect or report data specific to military personnel or dependents, some local agencies have begun collecting military-specific data regarding domestic violence.

TESSA is the primary agency in El Paso and Teller counties dedicated to the issues of domestic violence and sexual assault. TESSA offers a wide variety of prevention, intervention, and treatment services to victims of domestic violence and sexual assault, as well as limited services to offenders, in order to ensure the safety of victims and assist them in obtaining long-term safety and self-sufficiency. Fort Carson's Army Community Service Center refers soldiers and dependents to TESSA for support services. In general, the workload of TESSA staff has increased since 2003, with a significant increase in contacts as well as increases in the number of nights of shelter the agency provides. The agency reports a sharp rise in contacts in 2006 (see Table 8: Women and Children Served by TESSA, and Figure 5: Advocacy and Crisis Contacts at TESSA).

Table 8: Women and Children served by TESSA

	2003	2004	2005	2006
Number of Women Sheltered	211	199	237	226
Number of Children/Teens Sheltered	179	179	178	180
Advocacy Contacts	17,115	18,753	20,261	25,928
Crisis Contacts	2,241	1,925	2,215	8,096

Source: TESSA Colorado Springs

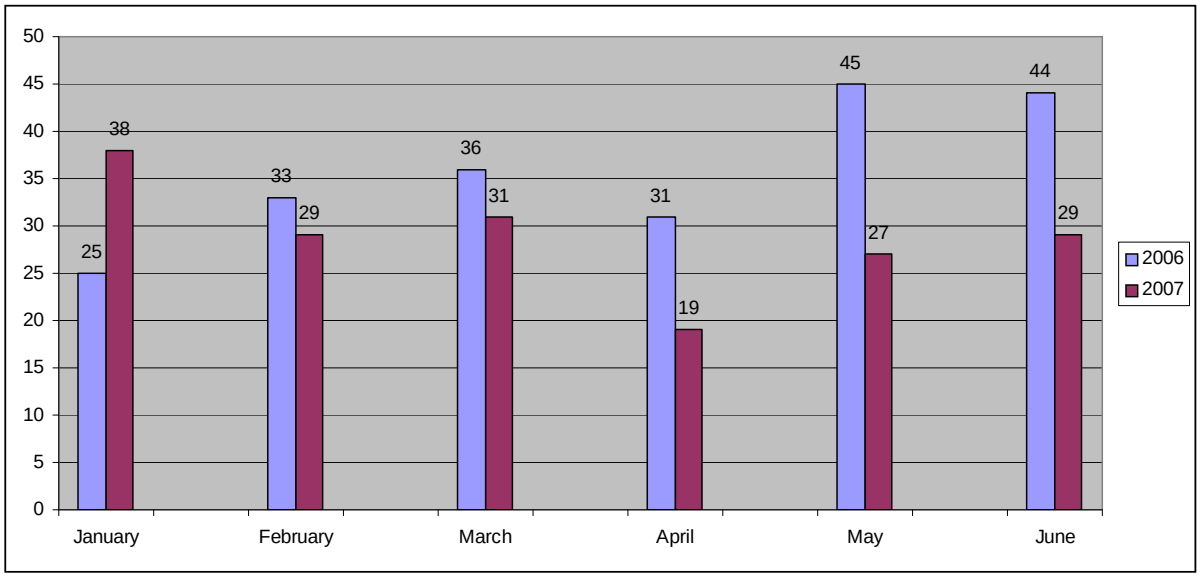


Source: TESSA Colorado Springs

Figure 5: Advocacy and Crisis Contacts at TESSA

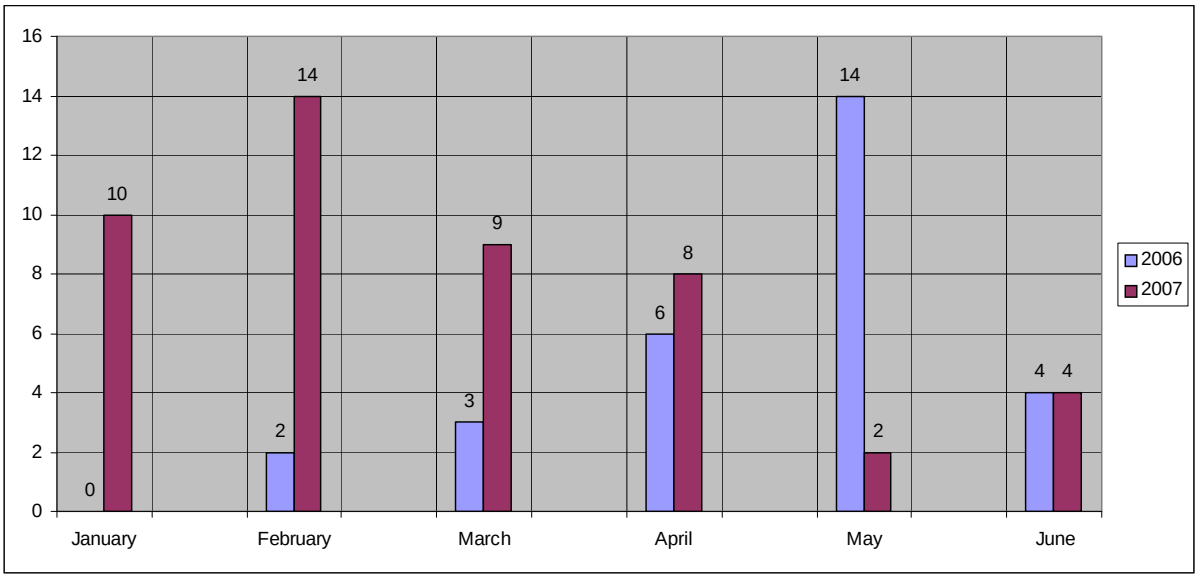
In 2006, TESSA began to collect data on clients and offenders in the military. Data are collected by branch of service, but the agency does not separate active duty from retired or separated military personnel. The agency's initial findings are shown in tables 6-9 below.

Figure 6 represents total cases served by TESSA of domestic violence offenders in the military, and Figure 7 shows total cases of sexual assault offenders in the military served by TESSA.



Source: TESSA

Figure 6: Domestic Violence Offenders in Military served at TESSA

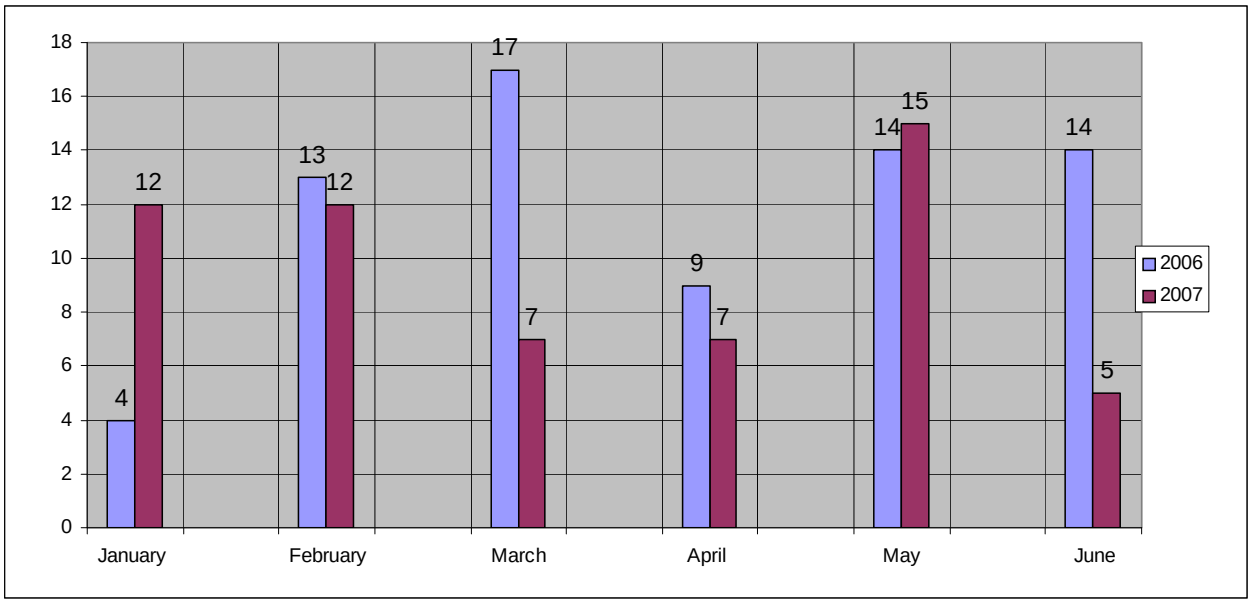


Source: TESSA

Figure 7: Sexual Assault Offenders in Military served at TESSA

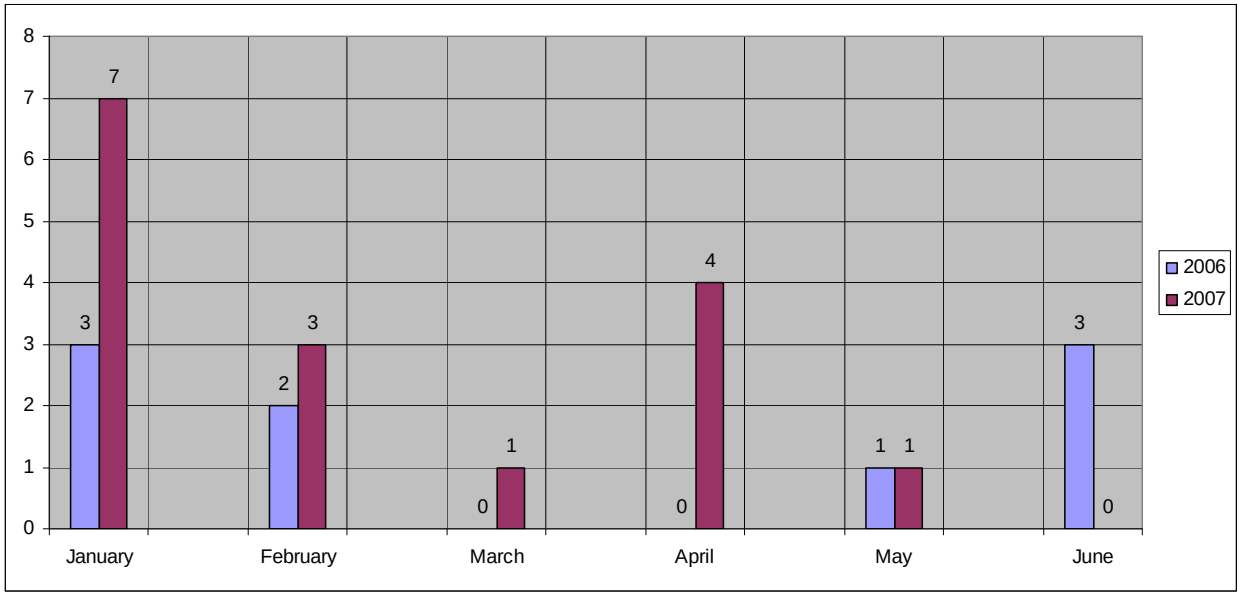
Figures 8 and 9 depict the number of victims of domestic violence and sexual abuse served by TESSA. Initial data indicate that the number of military-related clients varies. However, longer-term data collection and analysis are needed to identify any trends. TESSA does anticipate an increase in demand for services, particularly from Fort Carson, as the installation grows and deployments

continue. Tracking military information will provide valuable data on trends and needs for future services in order to target resources to address Fort Carson needs.



Source: TESSA

Figure 8: Domestic Violence Clients in Military served at TESSA



Source: TESSA

Figure 9: Sexual Abuse Clients in Military served at TESSA

Child Care

The need for child care, as detailed in the Growth Plan's Child Care Technical Report, is a significant community need, particularly for military families. The number of two-worker households is rising in general, and, for Fort Carson families, when one parent is deployed, families become, in essence,

single-parent households with greater needs for child care services. Deployment-related stress also raises the need for respite care for parents, whether they are working or not.

Addressing the need for increased capacity for child care services, specifically targeted to military families in the study area, will help meet the needs of Fort Carson growth. Further, child care providers have noted an increase in behavior problems of military children. Coordinated child-related services, including respite care for parents whose spouses are deployed and additional training for child care providers on the needs of military children and families may help reduce stresses that can affect child welfare and child safety.

Family Members with Developmental Disabilities

Fort Carson is a post that can be requested as a compassionate assignment. Therefore, if a soldier has a family member that needs care that can be found within sixty miles of the post, the soldier may request consideration for assignment to Fort Carson. Not only does Fort Carson have a full medical facility, but Children's Hospital in Denver also has many services to meet needs of families who have children with special needs.

Fort Carson serves families with special needs primarily through the Army's Exceptional Family Member Program (EFMP), a mandatory enrollment program for soldiers and families. Fort Carson's Army Community Service Center works with other military and community-based agencies to provide comprehensive and coordinated services (including medical, educational, housing, community support and personnel services) to families with special needs.

As of November 2007, there were 1,839 dependents of Fort Carson soldiers registered with EMFP through Fort Carson. An additional Department of Defense benefit, administered through the active duty health benefits of Tri-Care, is the ECHO program which provides services for children with qualifying disabilities. In 2007 the total number enrolled in the ECHO program for the nine-state central region was less than the total number of EFMP enrollees in the state of Colorado. However, community organizations report that a number of Fort Carson families choose not to enroll in the EFMP program, based on erroneous concerns that enrollment may affect the soldier's career. These non-enrolled families do, however, seek services in the community.

The Army recently recognized an emerging need for families of deployed soldiers for respite care for those members who are primary care givers of a disabled family member. Using Global War on Terrorism (GWOT) funds, the Army provides funding for up to forty hours per month of free respite care for each registered EFMP child. Fort Carson families must find a provider that meets established criteria for this service in the community. However, current capacity for this type of service is limited and must be addressed by the community.

An outcome of Fort Carson's compassionate assignment is the increased need for specialized services, particularly in local schools. For example, Fountain-Fort Carson School District 8 has seen an increase in enrollment of students with special needs. The district reports that the rate of children with autism is one in sixty-eight for Fort Carson children, compared to a national rate of one in 150.[24] In the 2007-2008 school year, the district enrolled 460 new students, the majority of whom are Fort

[24] Fountain-Fort Carson School District 8, documentation for funding request to Economic Adjustment Committee submitted to PPACG, February 2008.

Carson dependents; approximately 20% of those new students have special needs.[25] To meet this increased demand for special services, the district must provide additional one-on-one classroom assistant positions and other staff to support students. The Growth Plan did not assess the impacts at this level of staffing in the Education Technical Report. It is recommended that a more detailed assessment of services for Fort Carson students with special needs be conducted to ascertain the need for specialized staff and counselors in school districts.

Community service providers, particularly non-profit entities, are also impacted by Fort Carson's special needs families. These providers are currently having difficulty meeting Fort Carson's needs, and an increase in troops and families requiring services will exacerbate current funding shortages and the lack of service providers. The primary community-based service provider for the disability population in the region is The Resource Exchange (TRE). The federally-approved agency serves as the community-centered board for El Paso, Teller, and Park counties, contracting with the state to provide case management services to the area. However, the region's ability to provide services to families and children with special needs is limited.

Because of limited budgets for special needs services in the state of Colorado, the state and local agencies receive only a small portion of federal Medicaid matching funds, further limiting resources to assist needy families. Also, the Fort Carson region is very tax-averse. According to TRE, the allocation formula for providing state/federal funds to developmental disability services is the third lowest in the state. State and local tax limitation measures, an economic downturn, and funding formulas that do not allow for adequate recovery of funding following an economic downturn have severely restricted funding for social services. The overall result is that there are very limited resources to serve people with developmental disabilities and many families wait significant periods of time before receiving services or they receive no services at all.

In order to address Fort Carson growth, community-based organizations will need to identify additional resources to meet increased demands for services. The magnitude of this problem has been raised by service providers in the Fort Carson study area. For example, TRE anticipates a minimum of 370 dependent children and adults with disabilities, based on the addition of 23,000 Fort Carson dependents in the region by FY 2011. TRE bases this estimate on the American Association on Intellectual and Developmental Disabilities (AAIDD) prevalence rate of 1.6%. This rate is considered very conservative by industry experts.[26] The agency also reports a larger number of children being diagnosed with Autism and Autism Spectrum Disorders. Therefore, the actual number of Fort Carson family members with special needs may be higher than national rates, based on TRE's reports and the recent experience of Fountain-Fort Carson School District 8.

The result of this increased prevalence of Fort Carson's and the region's children with special needs is that TRE's and other organizations' waiting lists continue to grow, and local providers are concerned about their ability to provide timely and quality services to new military families. In fact, TRE recently announced that, because of severe funding restrictions, the agency will discontinue its contract with the state to serve as the community-centered board for the region as of May 2008.

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[25] Fountain-Fort Carson School District 8.

[26] Interview with Deborah Swanson, Director of Development, The Resource Exchange, October 2007.

The state and local service providers are currently struggling to determine how to maintain services for people with disabilities in the region based on TRE's decision.[27]

There is a need for a coordinated and comprehensive approach to service delivery on- and off-post. It is therefore recommended that collaborative efforts, such as through the Military Community Collaborative (MCC), continue in order to enhance communication between the post and community-based service providers. Collaboration should continue between the post, school districts, and community-based providers to identify military-specific needs and ensure the availability of specialized, including early intervention, services in the community.

Public Health Issues

The incidence levels of sexually-transmitted diseases and HIV/AIDS may also be affected by the increase in troop levels. There is an increased prevalence of STDs among younger adults, and this age range will make up a significant portion of the new troops. For example, in El Paso County, young adults, age 20-24 have the highest rates of Chlamydia and gonorrhea, followed by teenagers, ages 14-19. In fact, in 2005, these two age ranges accounted for nearly three-quarters of the Chlamydia cases and nearly one-half of the gonorrhea cases in El Paso County.[28]

The El Paso County Department of Health and Environment tracks the incidence of these issues and provides services, as well as other community-based organizations, including the Southern Colorado AIDS project (S-CAP). A more detailed list of agencies serving the community is provided in Appendix C. Additional monitoring and assessment of available services for preventing and treating STDs and HIV/AIDS should be conducted to ensure that new troops have adequate access to these services.

"Downstream Effects"

Active duty military members have access to benefits, including health care, housing allowances, and other services that help families maintain financial stability. However, Fort Carson growth will also result in an increased number of soldiers separating or retiring from the Army. These soldiers and families will no longer have access to additional funds for housing, they may be unable to find employment, or they may have separated involuntarily, possibly due to conditions related to their service (such as PTSD). Also, the VA is experiencing a significant backlog in processing disability claims, leading to long wait times for veterans seeking disability benefits.[29] Those waiting to receive benefits and those who no longer have access to Army or veterans' benefits may, therefore, have a higher need for services in the community. Some of the issues that may result in an increase in social service needs for former military personnel and dependents are discussed below.

Divorce

Divorce can often lead to increased stress and financial hardship. It is estimated that over 50% of assigned soldiers will bring a spouse, partner or dependent family member to the region.[30] The strain of deployment and combat experience may disrupt or even sever relationships, causing the

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[27] "Financial Woes May Force Charity to End Help for Disabled." Perry Swanson, The Gazette, April 12, 2008.

[28] *Life, Death, and Disease in El Paso County, Colorado*. El Paso County Department of Health and Environment 2006 Report to the Community.

[29] "Charities Scramble to Provide Housing and Health Care to Veterans," Denise Kersten Wills, The Chronicle of Philanthropy, March 20, 2008.

[30] Flint Hills Regional Growth Plan. Manhattan, KS: EDAW, Inc, 2007. ss2.

dependent family members to become isolated and more vulnerable, and no longer eligible for military benefits. Again, more detailed research is needed to determine the number of soldiers and dependents affected by divorce to determine the level of community assistance that may be needed to accommodate Fort Carson growth.

Employment

Access to employment is not an issue for active duty military members; however, spousal employment is an issue and is discussed in the Economic Impacts Technical Report of the Growth Plan. Also, troop increases at Fort Carson will result in an increase in soldiers exiting the military. The ability of some of these soldiers to obtain employment is a concern, as some may be medically discharged or may separate involuntarily from the Army, and their employment options may be limited. An estimated 500,000 veterans currently reside in the state, and an estimated 85,000 reside in El Paso County. Further, local officials report a 5-7% increase in veterans in the county annually.[31] It has also been reported that veterans aged 20-24 have significantly higher unemployment rates than older veterans.[32] Therefore, additional job training programs may be necessary to provide soldiers with skills needed in the civilian workforce. Every effort should be made to ensure not only that the spouses of active duty military members are employable, but also that separating or retiring soldiers are employable so that they can continue to be productive members of the community.

Housing

The Growth Plan's Housing Technical Report evaluates access to housing for troops and families. The housing paper includes information on affordability, expected need for rental units and home ownership, and projected housing inventories. In general, the paper indicates that the local housing market will be able to accommodate Fort Carson growth through 2012 in terms of capacity. However, affordability gaps for some soldiers and families are evident in the region. When income and the basic allowance for housing are considered, soldiers are not eligible for subsidized affordable housing. However, some soldiers' salaries may be insufficient based on family size, or their debt loads and credit problems may be so great, that they cannot qualify for acceptable quality market rate rental housing or mortgages.

Key trends, including a tightening of credit markets affecting both builders and potential homebuyers, may also affect the availability of financing opportunities for military families. A more detailed analysis of soldier and family debt issues and lending practices in the community would provide beneficial information to meet the housing and other needs of incoming troops.

C. EXISTING SERVICES

The needs for social services in Fort Carson study area are varied and complex, as well as significantly under-funded. Additionally, military families coming to Fort Carson face unique challenges based on the nature of military life, including numerous transitions and deployments. Federal, state, and local government agencies, as well as community-based non-profit service providers have developed a myriad of services to address the needs of the military community. Because publicly-funded and community-based organizations in the Fort Carson study area do not have sufficient resources to meet current needs, these agencies must work collaboratively to

[31] El Paso County Veteran and Military Affairs Office.

[32] "Charities Scramble to Provide Housing and Health Care to Veterans," Denise Kersten Wills, The Chronicle of Philanthropy, March 20, 2008.

address military-specific needs and ensure the availability of services to accommodate Fort Carson growth. An overview of these services is provided in this section.

On-Post Services

Fort Carson provides a range of services to help meet the needs of soldiers and their families. A brief overview of the services affecting the health and well-being of the Fort Carson community are provided in the following sections.

Army Community Service Center

Army Community Service Center (ACS) provides a wide array of programming and referrals to on-post and community-based services to support the health and well-being of soldiers and their families. Services provided by ACS include financial education and assistance, employment assistance, and family advocacy and educational programs. The services focus on training, education, and prevention to enhance and maintain mission readiness and quality of life for soldiers and families. A more detailed description of these programs can be found in Appendix A.

Fort Carson Child & Youth Services

The mission of Child & Youth Services (CYS) "is to provide seamless delivery of quality care and services for eligible children and youth (6 weeks through 18 years of age) that enhance readiness and well being of the workforce and their families reducing conflicts between parental responsibilities and their on-the-job mission requirements."[33]

Fort Carson Child & Youth Services works with multiple military programs to provide services to military children. Traditional child care services are available to children aged six weeks through kindergarten through on-post Child Development Centers or Family Child Care facilities located within homes on-post. The School Age Services Program provides before- and after-school child care for elementary school children during the school year and full day camps during the summer. Youth services include recreational, educational, and social programs for middle and high school age children. CYS also has school liaison services to link families with all school districts and private and parochial schools in the region, providing support for military family members receiving off-post education. Free child care is offered to families of deployed soldiers and consists of five free hours of care per child per month on first and third Saturdays. The post currently serves over 2,200 children through CYS children, school age, and youth programs, not including after hours respite care services.

Mountain Post Wellness Center

The mission of the Mountain Post Wellness Center is to "operate a state-of-the-art Wellness center that identifies health risks and improves the health behaviors and readiness of the Total Army Family."[34] The center provides a comprehensive wellness program to promote healthy behavior, enhance readiness, and improve quality of life on the post. Services include counseling, fitness evaluations, exercise prescriptions, health education, smoking cessation, and stress management.

Medical Services/ Mental Health Counseling

Medical and mental health services provided by Fort Carson through Evans Army Community Hospital and the MEDDAC unit are detailed in the Fort Carson Regional Growth Plan Health and

[33] Fort Carson Child and Youth Services website (http://community.carson.army.mil/cys/about.html).
[34] Mountain Post Wellness Center website (http://www.evans.amedd.army.mil/wellness/).

Behavioral Health Technical Report. The post offers services to soldiers and their families and has instituted a Warrior Transition Unit for ill or wounded soldiers undergoing rehabilitation. The post has developed a family assistance center which combines a variety of resources to help soldiers returning from deployments and their families in order to connect soldiers to the health and behavioral health services they need. The Health and Behavioral Health Technical Report notes the critical need for coordinated efforts between the post, the community, and veterans' services to address soldier and family needs, particularly those with PTSD or TBI. These coordinated efforts should continue to help provide the best possible care on-post and in the community.

Wounded Warrior Program

Initiated by the Army in 2004, the program enhances the care and support of its severely wounded warriors and their families. This system of support guides soldiers and family members from evacuation though treatment, rehabilitation, and return to duty or military retirement and transition into the civilian community.

Army Substance Abuse Program (ASAP)

Fort Carson's ASAP services include efforts to educate soldiers regarding the effects of substance abuse, as well as identify and assist soldiers with alcohol or substance abuse issues. The program has clinical and non-clinical components.

Department of Ministry and Pastoral Care

The department provides a comprehensive program of ministry and pastoral care for patients, staff, and family members. Counseling services include marriage, family, individual issues, grief, spiritual, stress, military, pre-marital, depression, death, and suicide and crisis intervention.

Local Government Agencies

The El Paso County Department of Human Services (ECDHS) and the El Paso County Department of Health and Environment (ECDHE) have primary responsibility in meeting the social service and health needs of the community. ECDHS provides child and adult protective services, in addition to income and food assistance programs discussed previously. The department's mission includes strengthening families, assuring safety, and improving the quality of life in the community. ECDHE, whose mission is to promote and protect public health, offers programs that directly serve Fort Carson soldiers and families, such as the Health Care Program for Children with Special Needs and the Special Supplemental Nutrition Program for Women, Infants and Children (WIC), as well as tracks key public health issues and trends, including county-wide statistics on health and behavioral health. Appendix B provides an inventory of El Paso County programs.

Publicly-funded agencies, including ECDHS and ECDHE, continually face challenges in providing services. Tax limitation measures in the state of Colorado directly impact state and local agency budgets and limit the amount of federal dollars the state can access without matching funds. The following tables and figures illustrate the fiscal challenges of the El Paso County Department of Human Services and the El Paso County Department of Health and Environment. Impacts of both baseline growth and Fort Carson growth will exacerbate difficulties in meeting local needs.

EPCDHS is funded primarily through county property taxes, state and federal grants, and fees for service. Of the $42 million annual budget for 2007, $32 million was from state and federal sources which require a match from the county. Because of declining local revenues and strict tax limitation measures in Colorado, El Paso County has been unable to match all available federal funding that

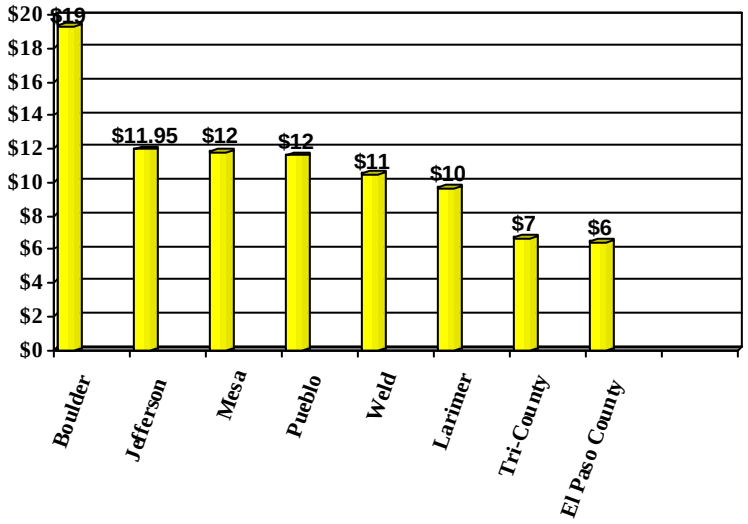
could come to the region. Between 2005 and 2008, the County faced a $16 million decrease in revenue collection, while county population has grown nearly 2% per year (see Table 9 for details on EPCDHS budget trends).

Table 9: El Paso County Department of Human Services Budget 2004-2007

	2004 Actual	2005 Actual	2006 Budget	2007 Budget
TOTAL BUDGET	$37,696,984	$37,871,540	$44,039,710	$42,283,983
AUTHORIZED POSITIONS	369	367	367	367
El Paso County Population Estimates (DOLA)	554,585	565,350	576,240	595,861

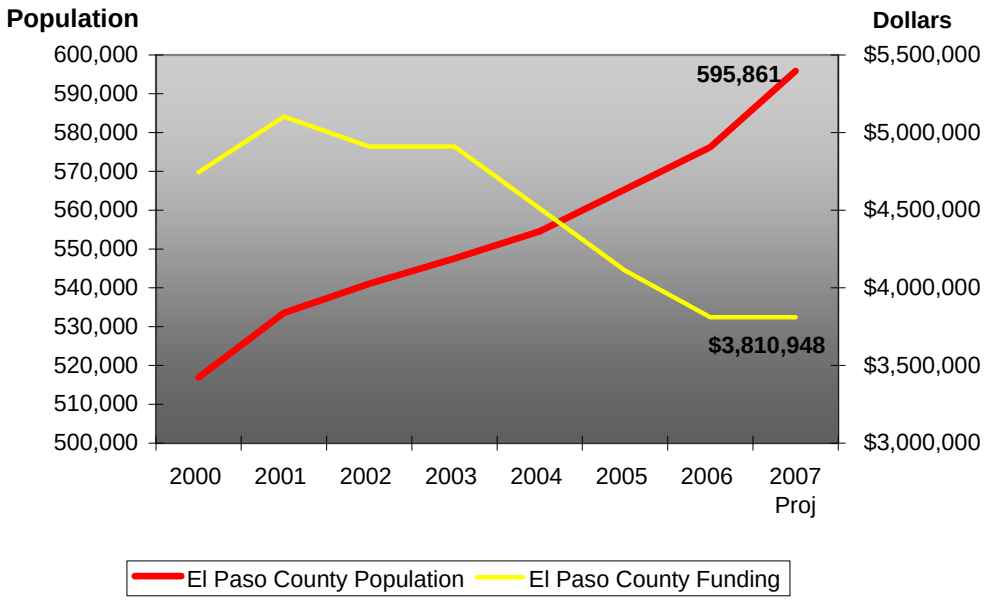
Source: El Paso County 2007 Budget

The El Paso County Department of Health and Environment (ECDHE) has faced similar budget constraints, as outlined in Figures 10 and 11. Per capita spending in El Paso County is significantly lower than other counties in the state, and funding levels have decreased while the county population has increased. Fort Carson growth will certainly impact the department's ability to meet future service needs.



Source: El Paso County Department of Health and Environment presentation to PPACG, 2007

Figure 10: Comparison of El Paso County Department of Health and Environment Per Capita Expenditures to other Counties in Colorado.



Source: El Paso County website

Figure 11: El Paso County Department of Health and Environment Funding

Because public funding does not currently match community needs, local and state governments rely heavily on community-based organizations to provide health, behavioral health, and social services in the region. Fort Carson also relies on these service providers. An overview of military support organizations and community-based organizations that serve the general public and the military are discussed below. Appendix C provides a listing of community-based organizations that serve the Fort Carson region.

Military Support Organizations

A variety of non-profit entities and even ad-hoc groups have formed to assist military personnel and their families. Some organizations have a local focus, serving the Pikes Peak region and Fort Carson in particular. Others are state-wide or national organizations that offer support and services. A sample of these organizations is provided below.

Locally-Based Organizations

Citizen Soldier Connection

The Citizen Soldier Connection (http://www.citizensoldierconnection.org/) connects Fort Carson soldiers and their families with volunteer citizens in the community for the purpose of providing a local support network for soldiers and their families. The purpose of this program is to enhance and enrich the quality of life for military personnel, their families, and involved citizens.

The Home Front Cares, Inc.

The Home Front Cares (http://www.thehomefrontcares.org/) provides support for military families in the Pikes Peak Region from all service branches who have been impacted by deployments. Services include grants to families for family emergencies, assistance for families of wounded or deceased soldiers, energy bill assistance, and adaptive housing and vehicle modification assistance for wounded warriors. To accomplish this mission, funds, goods and services are solicited from the community and distributed to needy families through non-profit and support organizations that serve the military.

Pikes Peak Alliance
The Pikes Peak Alliance addresses military child education issues and works to facilitate coordination between multiple school districts within the region.

Pikes Peak Region Military Spouse Career Committee
The committee's mission is to strengthen the career sustainability of military spouses through education, training, and networking opportunities. Representation includes local military installation Military Spouse Employment Coordinators, the Pikes Peak Workforce Center, Pikes Peak Community College, and local businesses such as Add Staff, Inc., Career Informant, Inc., and the Colorado Springs Military Newspaper Group.

State and National Organizations

Colorado Inter-Service Family Assistance Committee (COIFAC)
This committee offers coordination, collaboration, and networking opportunities across a wide spectrum of agencies that support soldiers and families.

Colorado Military Family Alliance
The CMFA is an emerging group modeled on the National Military Family Association (NMFA). The local group's goal is to address policy issues regarding military families at the state and local levels. CMFA's efforts are modeled on NMFA activities that educate the public, the military community, and legislative bodies on the rights and benefits of military families, as well as advocate for an equitable quality of life for those families. These issues include meeting military children's educational needs, spouse employment opportunities and unemployment compensation, and assistance to severely injured military members.

National Military Family Association (NMFA)
The NMFA addresses military family policy issues at the federal level. NMFA's goals include educating military families regarding available services, benefits and rights and promoting and protecting military family interests by influencing legislation and policies at the national level.

Military OneSource
Military OneSource (http://www.militaryonesource.com), funded by the Department of Defense, provides free 24/7 information and referral services to active duty military members via a toll-tree telephone line and website. Information and referral services cover a wide range of issues, including parenting and child care, financial and legal concerns, emotional well-being, substance abuse, military life, TRICARE and other services.

Sentinels of Freedom
Sentinels of Freedom helps address the needs of severely wounded soldiers and their families. The organization provides four-year "life scholarships" to help wounded veterans attain self-sufficiency.

Community-Based Service Providers

While the Army offers a great deal of services to soldiers and families, many soldiers are referred to community-based providers by the post or seek assistance from community organizations on their own. Further, publicly-funded agencies, such as the El Paso County Department of Human Services, have limited budgets and resources. Therefore, non-profit organizations provide critical resources within the Fort Carson study area.

These community-based organizations provide services to the entire region. However, some of these agencies, such as TESSA and the Boys and Girls Club of the Pikes Peak Region, have also partnered with Fort Carson to meet specific demands of soldiers and their families. Please see Appendix C for a list of key service providers in the region. Please note that, because of the myriad of service providers and the continuing emergence of new organizations addressing the needs of military families, this appendix does not provide a comprehensive list of community-based organizations.

Veterans Services

U.S. Department of Veterans Affairs

While the VA provides some services to active duty military members (such as home loans), the mission of the U.S. Department of Veterans Affairs is to care for veterans and their families. The growth of active duty Fort Carson soldiers will also impact VA services in the long-term, as many soldiers may choose to remain in the region when they retire or are medically discharged. As of 2006, over 2,000 active duty service members and veterans of the Global War on Terrorism were enrolled in VA health care in Colorado.

In 2006, the VA spent over $1.7 billion in Colorado, serving approximately 420,000 veterans who live in the state. In 2006, the VA provided the following services in Colorado[35]:

- 64,096 veterans and survivors received disability compensation, dependency and indemnity compensation, or pension payments.
- 12,149 veterans, reservists and survivors received education benefits through the GI Bill.
- 62,124 owned homes with active VA home loan guarantees originally valued at $2.2 billion.
- Colorado veterans held more than 24,000 VA life insurance policies valued at more than $279 million.
- 3,529 veterans were interred in Ft. Logan and Ft. Lyon national cemeteries.
- 6,298 veterans received inpatient hospital care and facilities provided 596,496 outpatient visits.
- 8,574 Colorado veterans applied for new or renewed disability compensation claims.
- Over 2,500 veterans participated in VA's Vocational Rehabilitation and Employment program.

The VA also reports that nearly one-fourth of homeless adults are veterans, and the VA provides resources to assist homeless veterans. In Colorado Springs, Denver, Pueblo and Grand Junction, VA facilities provide services to homeless veterans, including hosting "standdowns" which provide basic necessities, including clothing, and connections to other support agencies.[36]

El Paso County Veteran & Military Affairs Office

This office, established by state law, serves as a liaison between veterans seeking benefits and the VA. The office advises and assists veterans, dependents, and survivors regarding benefits to which they may be entitled.

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[35] United States Department of Veterans Affairs, Public and Intergovernmental Affairs, VA Background, State-by-State Summary of VA Programs and Facilities. (http://www1.va.gov/opa/fact/statesum/coss.asp).

[36] United States Department of Veterans Affairs, Public and Intergovernmental Affairs, VA Background, State-by-State Summary of VA Programs and Facilities. (http://www1.va.gov/opa/fact/statesum/coss.asp).

D. RECOMMENDATIONS

Social services in the Fort Carson study area are provided by a range of entities, including the post, publicly-funded local agencies, and a myriad of community-based non-profit organizations and private businesses. Determining specific needs related strictly to Fort Carson growth is difficult because Fort Carson soldiers and families sometimes choose not to seek services from the post and because many community-based service providers do not collect military-specific data. Further, as soldiers leave and return from repeated deployments, family stress and financial strain are leading to emerging issues regarding soldier and family behavioral health and social service needs. In order to address the social service needs of Fort Carson troops and families more effectively, the following actions are recommended.

Issue: Assessing and quantifying specific military impacts on social services is challenging.

Recommendation #1: Conduct a comprehensive community needs assessment for social services accessed by Fort Carson soldiers and families.

Providers have noted an increase in services to Fort Carson soldiers and families. Growth in the baseline population, as well as the increase in Fort Carson troops will increase demand for already-strained services. A comprehensive needs assessment will help determine gaps in service and identify the specific issues and amount of services needed to assist Fort Carson soldiers and families. The needs assessment should include the following actions:

- Conduct an inventory of service providers in the Fort Carson study area, including a review of on-post levels of service, to determine service gaps and identify specific needs of Fort Carson soldiers and families, service levels needed, including resources, such as staffing, equipment, and space requirements, for community-based organizations. This inventory should include a survey of service providers to identify the type of information agencies need to improve service provision to soldiers and families.
- Contract with the El Paso County Department of Human Services to assess the impacts on the department's child, youth, and assistance programs from Fort Carson growth.
- Assess resource needs of impacted school districts to ensure adequate space and staffing to meet needs of Fort Carson students and families with social, emotional, or special needs.
- Conduct an agency capacity assessment, including funding potential, for key areas. This assessment should include the results of a 2004 Pikes Peak Community Foundation survey on community giving.

Recommendation #2: Coordinate data collection and sharing.

- Develop a standardized intake survey/questionnaire to identify demographic details of clients served, including military branch and status of service, and to identify specific military needs and emerging issues.
- Establish a data collection, analysis, and reporting system to ensure timely dissemination of information regarding specific issues and service levels required to meet Fort Carson soldier and family needs.
- Identify an agency, such as the Military Community Collaborative (MCC), to coordinate with Fort Carson and community service providers and collect and report information to raise awareness and address emerging impacts as additional Fort Carson troops return from deployments and soldiers and families move into the area.

Issue: There is an increased need for enhanced communication and coordination between child development providers and social service providers.

Recommendation: Develop more systematic coordination between child development and social services for Fort Carson families.

- Conduct an inventory of child/family-related social services provided to Fort Carson families as part of the community-wide needs assessment on social services to determine specific Fort Carson needs and identify resources to provide coordinated services.
- Coordinate efforts between Fort Carson, the Military Child Education Coalition, community-based providers, schools and the Colorado Springs Chamber of Commerce to provide "Living in the New Normal" training for child care providers and educators to support children struggling with deployment issues, including injury, illness, and death.

Issue: The fragmentation of service providers hinders provision of social services.

Recommendation #1: Increase military and community partnering.

It is critical for those in the Fort Carson study area to continue fostering formal relationships among local public, non-profit, and business organizations and military officials to support military families. Access to support systems, as well as early intervention in addressing health, behavioral health, and social service needs can help soldiers and families, as well as help minimize impacts of "downstream effects". Areas for stakeholder action should include:

- Formalize partnerships between Fort Carson and the community through the Military Community Collaborative (MCC) to enhance information-sharing between the post and the community and between the wide array of service providers in the study area. This collaborative should include health, behavioral health, and social service providers, as well as impacted school districts. Collaborative efforts should reduce duplication of efforts, centralize data collection and dissemination, leverage other funding sources, and lead to enhanced service levels.
- Using other successful models, such as Fort Carson's school liaison program, establish institutionalized points of contact between the post and the community (through the MCC) in all key areas (such as Army Community Services, including the Exceptional Family Member Program, the Warrior Transition Unit, etc.) to ensure information-sharing and continuity of services on- and off-post.
- Obtain funding to provide staff support for the MCC.

Recommendation #2: Establish the Colorado Military Community Assistance Center (modeled on Fort Carson's Family Assistance Center serving the Warrior Transition Unit) to coordinate health, behavioral health, and social services and referrals for soldiers and families.

- Develop a business and organizational plan for the assistance center that would include establishment of a centralized call center and website for one-stop access to information and referrals, and services, including warm hand-offs and case management services.
- Obtain funding to set up the centralized call center, including hardware, software and staffing needs.
- Obtain funding to set up the website, including content management, an e-newsletter, tracking and measurement.

- Develop a shared electronic record of health and social services for warm hand-offs, modeled on Health Track and in compliance with the Health Insurance Portability and Accountability Act of 1996 (HIPAA).

Issue: The financial stability of soldiers, particularly young soldiers with families, directly impacts the need for social services in the Fort Carson area.

Recommendation #1: Assess the financial well-being of Fort Carson soldiers and families.

Many issues affect the financial stability of soldiers and families. Deployments place additional stresses on families, sometimes limiting spouses' ability to work, and creating other financial hardships. High debt loads and unexpected family emergencies can cause additional financial strains. Determining the financial status of Fort Carson soldiers and families can help identify those at risk of financial hardship and identify opportunities to assist these soldiers and families, minimizing their need to seek additional services and minimizing future "downstream effects". The financial assessment should include the following:

- Conduct an assessment of Fort Carson soldier and family incomes and debt loads, including salaries and benefits of soldiers and spouses, access to credit, and amount and types of debt in order to identify key issues and assist soldiers and families in, or at risk of, financial hardship.
- Identify additional financial strains of deployments for military families, such as spouse employment issues, house payment or car repair needs, and child care needs in order to link families of deployed soldiers to appropriate assistance.

Recommendation #2: Develop and enhance programs to improve the financial stability of Fort Carson soldiers and families.

- Continue and enhance partnerships between the post and community-based organizations to provide financial information and planning services and consumer assistance for Fort Carson soldiers and families.

Issue: There is a chronic shortage of funding for social services in the Pikes Peak region.

Funding shortages have resulted in a current gap in services. For example, waiting lists for early intervention services for children with developmental disabilities continue to grow. Also, separating or medically discharged soldiers and families waiting for veterans benefits also must rely on community organizations for interim services. Fort Carson growth will increase demands for already strained services. Resources must be identified to address current staffing shortfalls to meet community needs, and specific resources must be identified in order to provide services to Fort Carson soldiers and families.

Recommendation: Seek additional funding for social service programs to establish a level of support that meets community expectations.

- Disseminate information regarding funding shortages, and educate officials at the local, state, and national levels, including public and private sector funding sources.
- Research strategies for funding social services that respect local support for tax limitation and that include the need to leverage matching funds.

- Conduct a cost-benefit analysis of treatment and prevention services in the Fort Carson study area, identifying the costs of treatment and prevention services versus future long-term costs, such as incarceration, foster care, or other consequences of the lack of treatment or prevention programs for Fort Carson soldiers and families.
- Create public awareness of the costs and benefits of treatment and prevention of social service issues.
- Support the creation of a state military council which can help influence policy and legislation in support of military needs in the state and region.
- Support efforts to change the types of services covered by TRICARE and TRICARE reimbursement rates in order to attract more service providers.

Issue: The stigma associated with seeking behavioral health and social services is a barrier to service.

Recommendation: Develop strategies to encourage soldiers and families to seek services on- and off-post.

- Develop strategies to minimize the perceived stigma associated with seeking mental and behavioral health and social services within the military and general populations.
- Continue and enhance efforts, including marketing programs, to encourage Fort Carson soldiers and families to utilize on- and off-post resources, such as the Exceptional Family Member Program and other behavioral health and social services.

Issue: The community's quality of life is affected by adequate provision of health, behavioral health, social and other services.

Recommendation: Continue to measure quality of life indicators in the Fort Carson study area to assess the community's "wellness" and identify emerging issues and needs.

- Identify, collect, report and update data for a common set of indicators that can help the community at large understand the impacts that social service provision has on the economy and quality of life in the region. Indicators should include Fort Carson to identify military components and help determine if the community is equipped to meet the needs of troop increases over the next five years.

APPENDIX A: ARMY COMMUNITY SERVICE CENTER INVENTORY OF PROGRAMS

This appendix provides a brief overview of the many services provided by Fort Carson's ACS. For more details on these services, please visit the ACS website (http://community.carson.army.mil/ACS/).

Financial Readiness Program

The Fort Carson ACS Financial Readiness Program provides a range of services, including education and budget assistance and counseling, as well as financial assistance programs. These programs include:

- Army Emergency Relief – The Army's financial assistance programs, providing emergency funds through the command system to soldiers with documented need.
- Budget Counseling – Provides financial counselors to assist soldiers and families with personal finances.
- Debt Management – Financial counseling regarding debt consolidation.
- Command Financial NCO – Part of each battalion, a CFNCO provides financial and consumer counseling to personnel.
- Assistance Programs – Links and referrals to various Army and community assistance programs, ranging from food stamps and emergency food services to energy assistance, Head Start, and school supply assistance.
- Consumer Affairs – provides assistance with consumer complaints and resolution of issues involving local businesses.
- Financial Literacy Program – Assists soldiers and families regarding financial skills, including savings, debt reduction, and protection from predatory lending.

Soldier and Family Readiness

Several programs provide services and support to prevent domestic violence, child abuse, and sexual assault, as well as assist soldiers and families affected by PTSD. These programs include:

- Family Advocacy – A range of programs to prevent intimate partner violence and child abuse, including child safety, marriage enrichment, and parenting programs.
- New Parent Support Program – Home visitation by nurses and social workers to provide support and referrals.
- Victim Advocacy Program – Victims advocates provide information, education, and emergency assistance for victims of domestic violence and provide links to other service providers, such as TESSA.
- Sexual Assault Prevention and Response Program – Provides 24/7 crisis intervention and support to victims of sexual assault.
- Post Traumatic Stress – Provides links to Hearts on the Home Front, a training program for family members of deployed troops, particularly to help recognize signs of PTSD.

Employment Readiness Program

The Employment Readiness Program provides employment assistance to soldiers, dependents, retirees and DoD civilian personnel. This program includes spouse employment assistance in partnership with

the Pikes Peak Workforce Center, job counseling and employment information services, education information, and other resources to assist individuals in finding employment.

Exceptional Family Member Program

The EFMP is an enrollment program for soldiers who have family members with special needs. The program provides comprehensive and coordinated medical, educational, housing and other services for these families. EFMP provides information and referral, advocacy and support services, links for canine assistance services, and links to other providers, including school districts, TRICARE, and The Resource Exchange, to meet the needs of Fort Carson families with special needs.

Mobilization and Deployment Readiness

This program provides support services for families before, during, and after deployment, including reunion and reintegration adjustment assistance, support for activated Army reservists and National Guard troops, financial preparedness, information and assistance regarding legal rights, and referrals to other military support services.

Other Programs

Fort Carson ACS provides an array of other programs to improve the quality of life of Fort Carson families. These programs include volunteer opportunities, Army Family Team Building, Relocation Readiness to assist incoming and outbound soldiers and dependents, and the post's Mayoral program, which engages members who live in each of the villages on-post.

APPENDIX B: EL PASO COUNTY PROGRAMS

Department of Human Services

The El Paso County Department of Human Services (ECDHS) provides a range of services and support addressing poverty, abuse, and neglect. Below is a brief overview of these programs. For comprehensive information regarding ECDHS programs please see the El Paso County Department of Human Services website (http://dhs.elpasoco.com/).

Assistance Programs

The department's assistance programs help individuals and families who meet certain eligibility criteria. These programs include food stamps, Temporary Assistance for Needy Families, low income child care assistance, and family and adult medical programs, including Medicare and Medicaid.

Child and Adult Protective Services

The department provides a variety of services to ensure the safety and well-being of children, youth, and vulnerable adult populations. Services range from child protection, to teen self-sufficiency, sexual abuse intervention and family education, home-based youth and family assistance, foster care and child placement monitoring. A brief overview of services that may be most impacted by Fort Carson growth including the following:

- Child Protective Intake Services – The department checks into and assesses all allegations of child abuse and/or neglect to ensure that children are safe and families receive needed services.
- Child Protective Ongoing Services – The department provides home-based services to families with allegations of, or who are at high risk for, abuse and neglect. Families are referred to a range of services, including crisis intervention, therapy, substance abuse and other programs.
- Child Support Services – The department oversees a contractor who manages the county's child support enforcement program and collects child support payments for families.
- Adolescent Intake and Ongoing Services – The department provides services to families whose youths are experiencing severe parent-child conflicts, truancy, or delinquency. On an average, 115 new referrals are made monthly. The average ongoing caseload is 287 families per month with an average of 499 children served per month.

Department of Health and Environment

The El Paso County Department of Health and Environment is organized into four divisions: *Health Promotion, Environmental Health, Clinical Services* and *Epidemiology and Research*. The department provides numerous services to promote and protect public health in the region, as well as offers programs utilized by Fort Carson soldiers and families. An overview of these divisions is provided below.

Health Promotion

The Health Promotion Division focuses on programming and services to prevent and control chronic illness and cancer; improve access to health care for children with special needs; reduce risk for low-

birth weight babies and infant mortality; and improve nutrition for women, infants and children. This division is also responsible for inspecting child care facilities and initiates partnerships in the community to address a myriad of education and prevention activities for all age groups.

Environmental Health

The Environmental Health Division focuses on the safety and quality of the environment (air, water and hazardous waste), preventing the transmission of diseases from animals to humans (such as West Nile virus, plague and rabies) as well as assuring the safety of the community's retail food establishments, swimming pools, and spas.

Epidemiology and Research

The Epidemiology and Research Division focuses on the surveillance and control of communicable diseases, maintenance of vital records for the county, and the collection and analysis of health data.

Clinical Services

The Clinical Services Division provides laboratory and clinical services to vulnerable and high-risk populations for women's health, control of bloodborne pathogens and sexually transmitted disease, and immunizations.

The department provides an array of programs through the above divisions. A brief overview services is listed below. More detailed information can be obtained through the department's Web site (http://www.elpasocountyhealth.org).

- The Air Quality Program maintains and monitors air quality through education, enforcement and monitoring activities.
- The Water Quality Program protects the public and environment from water-borne diseases and contamination of drinking water supplies, streams and lakes and wastewater system discharges and regulates all onsite wastewater systems (OWS) through enforcement, education, and environmental planning.
- The Food and Living Environment Program prevents food-borne illness in El Paso County's more than 2,500 retail food establishments through regulatory and educational efforts, as well as monitors swimming pools, spas, body art establishments, correctional institutions, and public lodging facilities through regulatory inspections and/or consultative visits.
- The Communicable Disease(CD)/Epidemiology Program protects and promotes the health of the community by way of detection, surveillance, investigation, prevention and control of communicable diseases—including outbreaks and infectious diseases of new and increasing concern.
- The Tobacco Education Prevention Partnership (TEPP) provides educational information to deter people from using any form of tobacco, along with resource referral information to help users achieve tobacco cessation.
- The Special Supplemental Nutrition Program for Women, Infants and Children (WIC) provides vouchers for nutritious foods to supplement the diet of pregnant women, new mothers, infants and children under the age of five years, who both meet the income guidelines and qualify as "nutritionally at risk." As of 2007, enrollment for WIC in El Paso County is 13,700 clients. Approximately 48% of all infants in the county participate in the WIC program, along with 35% of pregnant women.

- The Women's Clinic provides low-income women access to reproductive and preventive health services, breast and pelvic examinations, cervical cancer treatment, screenings and medical referral assistance for expecting mothers.
- The Child Health Promotion Program addresses a wide range of health issues affecting children in El Paso County, with emphasis on improving health and safety initiatives in child care settings and child abuse prevention and advocacy. Program activities include:
    - Health and sanitation inspections of licensed child care facilities;
    - Participation in a variety of community committees focused on the health and well-being of children; and
    - Community education on issues such as child abuse prevention, positive parenting, health and safety topics, and children's health advocacy.
- The Health Care Program for Children with Special Needs (HCP) is a comprehensive program that focuses on improving the health, development and well-being of children from birth to 21 years of age who have special health care needs. The EPCDHE functions as the El Paso Regional HCP Office and serves residents of both El Paso and Teller Counties. Program activities include:
    - Information and referrals to community services for local families and providers;
    - Care coordination activities (including those specific to children enrolled in the Traumatic Brain Injury Trust Program); and
    - Local family-to-family support, training, consultation and capacity building with community partners.
- The Perinatal Health Program is a comprehensive program that addresses issues affecting women of child bearing age and infants less than one year of age, including community perinatal case management; outreach and education services; and the Fetal, Infant & Child Mortality Review Program.
- The Nurse-Family Partnership (NFP) is an evidence-based, home visitation program that improves the health, well-being and self-sufficiency of low-income, first-time parents and their children.
- The Sexually Transmitted Diseases (STD)/Bloodborne Pathogens Program provides education, diagnoses, treatment, medical referrals, investigations and reports as required by Colorado law; compiles statistics and closely monitors trends within El Paso County; and provides education, counseling, testing and referrals regarding other blood borne pathogens.

APPENDIX C: COMMUNITY-BASED SERVICE ORGANIZATIONS

The number of organizations providing services in the community and assisting Fort Carson soldiers and families in particular is very large, and the types of services provided cover a range of social service needs. Because of the myriad of agencies serving Fort Carson soldiers and families and the continuing emergence of new entities providing assistance to the military-related population, the following list is not exhaustive. This inventory provides a brief overview of key organizations that serve the Fort Carson community and will be impacted by Fort Carson growth.

American Red Cross, Pikes Peak Chapter	Provides emergency disaster relief to in the Pikes Peak region. Partners with military relief organizations, including Army Emergency Relief to provide financial assistance to active duty military, dependents, retirees and widows.
Big Brother, Big Sister	Helps children reach their full potential through professionally supported, one-to-one, volunteer mentoring relationships.
Boys and Girls Club of the Pikes Peak Region	Provides youth development programs, particularly working with young people from disadvantaged economic, social and family circumstances. Partners with Fort Carson for Army School Age Programs in Your Neighborhood, providing quality before and after school child care at selected elementary schools for 5-12 year-old students.
Catholic Charities of Colorado Springs	Provides social services to people in need, including emergency and transition services, such as basic necessities of clothing, food, and furniture; operates the Marian House Soup Kitchen.
Care and Share Food Bank for Southern Colorado	Southern Colorado-based food bank; distributes food to needy individuals and families through a variety of partnerships, including emergency food pantries, human service agencies, soup kitchens and other providers.
Court Appointed Special Advocates (CASA)	Trains and supervises volunteers who represent children's best interests in court, particularly those who are victims of child abuse and neglect or severe domestic conflict.
Child Care Connections	Provides comprehensive child care resource & referral services to parents, early childhood professionals, and employees, providing information on licensing requirements and educating parents on finding quality childcare.
Children's Advocacy Center	Provides education, training, and professional services, as well as prevention, intervention, and therapy services to fight child abuse and neglect.
Community Partners for Child Development	Using the Head Start model, provides high quality, comprehensive early childhood education and family development programs for young children and their families in El Paso County.
Ecumenical Social Ministries	Provides emergency assistance to low income and homeless individuals and families in the Pikes Peak region; the majority served are working poor. Services include basic necessities, rent and utility assistance, emergency food services, and mental health assistance.
Family Life Services	Provides residential facilities and counseling for single moms and their children, as well as counseling and outreach programs for people in the community.

Goodwill Industries	Provides a range of services, including job training and employment services, for individuals with disabilities, individuals with disadvantages, seniors and families.
Greccio Housing	Provides affordable rental housing to individuals and families, as well as referral programs and enrichment services to help residents become self-sufficient.
Griffith Centers for Children/ Chins UP Youth and Family Services	Provides a full continuum of therapeutic and academic services to children and families with behavioral or emotional problems. Services include residential programs, foster care, and community outreach.
Lighthouse Detox facility	Combines detox, acute mental illness and crisis services, and a locked unit for people deemed dangerous.
Partners in Housing	Provides transitional housing and support services to homeless families with children to help them achieve self-sufficiency.
Pikes Peak Community Action Agency	Provides a range of services, including rental and utility assistance, clothing, emergency food, and budget counseling services, to low-income individuals and families.
Pikes Peak Partnership	A family of agencies that assists people with physical, mental or cognitive disabilities, including assistance with information and referrals, transportation, and assistive equipment.
Pikes Peak Workforce Center	Helps businesses solve their workforce-related business problems and helps residents of El Paso and Teller counties with career transition; through grants, including a BRAC grant, provides workforce training assistance to spouses of Fort Carson soldiers.
Southern Colorado AIDS Project	Provide services and support those infected with and affected by HIV/AIDS, including delivering effective, research-based prevention programs that target high risk populations and educating communities regarding HIV transmission.
Suicide Prevention Partnership of the Pikes Peak Region	Provides education, intervention, and survivor support services to reduce the incidence of suicide in the region. Services include treatment, education, intervention training and first responder training.
TESSA, Sexual Abuse and Domestic Violence Prevention	Provides prevention, intervention, and treatment services to victims of domestic violence and sexual assault, as well as services for offenders. Counseling and assistance programs help clients obtain long-term safety and self-sufficiency. Fort Carson refers soldiers and dependents to TESSA for services.
The Resource Exchange	Assists people with developmental disabilities through a range of programs, including early intervention, family support, extended care and transportation services.
United Way of the Pikes Peak Region/ 211	Provides funding to community agencies, particularly focusing on tools for living, building strong families, community wellness, and successful children in order to help create the best quality of life for the entire community. The agency's 2-1-1 service provides toll-free information and referral to over 400 service providers in the region to help those in need get easy and quick access to agencies that can assist them.
Urban League of the Pikes Peak Region, Inc.	Promotes equality by securing equal opportunities for African-Americans, other minorities, and the disadvantaged through programs of education, economic self-sufficiency, community-building and advocacy.
Women's Resource Agency, Inc	Helps women attain and maintain self-sufficiency; provides individualized services to help women identify and expand on existing knowledge, talents, skills and strengths to help them achieve economic independence.

YMCA of the Pikes Peak Region	Provides a variety of services for the region and for Fort Carson soldiers and families, including education, recreation and referrals. Active duty Fort Carson soldiers are eligible for a free YMCA membership through a contract with the Department of the Army.

Child Care and Development Technical Report

Fort Carson Regional Growth Plan

December 15, 2007

Pikes Peak Area Council of Governments

Communities Working Together

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A. INTRODUCTION AND METHODOLOGY

Child care is a vital need for many families of the study area, but especially for the families affiliated with Fort Carson. During times of deployment, many families in effect become single-parent households that require adequate child care in order for the remaining parent to continue working or running a household effectively. Population and economic growth associated with the troop increase at Fort Carson will in turn increase the demand for child care programs. Broader demographic trends within the community, including the rise of two-worker households and single-parent households, further reinforces the need for quality, affordable child care services in the study area.

Research continues to uncover the link between quality child care, particularly in a child's early years, and educational and social development. As troops are reassigned to Fort Carson and parents continue to be deployed, a quality child care program can assist in smooth transitions and adjustment periods for the children. Well administered and supervised child care also improves the physical health of children, providing numerous cascading advantages. The provision of quality child care benefits not only the children involved, but also the family and the entire community by creating an economically healthy environment, including increasing the size of the skilled workforce. The availability of affordable, high quality child care is an attractor to families and businesses moving to the area, and accessible and adequate child care is a quality of life priority for the region and the Army.

The purpose of this technical report is to assess 1) child care issues relating to the Fort Carson troop increase and their relative importance to the community, 2) estimates of demand for child care (ages 0 through 9), 3) the available capacity of on-post providers, and 4) recommendations relating to capacity, affordability, and quality of child care as well as resources for training service providers. The listed recommendations apply more appropriately to providers and stakeholders, yet the result of their application will directly benefit military families and the community through increased capacity, elevated quality of care, and improved access to specialized resources for children in need.

Fort Carson's Child and Youth Services program is the military family's first step to finding child care. Data provided by the program were utilized to assess the installation's capacity to accommodate child care demand resulting from the troop increase. The analysis also includes the results of a review of state, federal, and non-profit training, funding, and resource referral programs in the study area that directly relate to child care issues, as well as a review of journal articles on best practices for providing child care to military dependents. The project team continues to conduct interviews with local leaders in the child care field to understand current community efforts, practices, and challenges.

Demographic Projection Summary

This section summarizes the demographic projections and assumptions as they relate to child care forecasts.

New troops, civilians, and dependents are beginning to arrive at Fort Carson as a result of directives on troop movements due to Base Realignment and Closure (BRAC), Integrated Global Presence and Basing Strategy (IGPBS), and Army Modular Force (AMF). An estimated 12,600 military personnel were authorized for Fort Carson at the end of Fiscal Year (FY) 2006, with an

estimated 23,000 dependents living within the study area. Thus, the population of the Fort Carson community at the beginning of FY 2007 was approximately 36,000 persons.

A range, which establishes an "upper" and a "lower" number for the projected increase in military personnel, was established, referred to as the "Expected Growth Scenario" and the "Alternative Growth Scenario." The "Expected Growth Scenario" assumes 11,400 additional troops will be assigned to Fort Carson. A second scenario, referred to as the "Alternative Growth Scenario", assumes a reduction to 75% of the "Expected Growth Scenario" in troop assignments each year. The "Expected Growth Scenario" was based on information provided by officials at Fort Carson, and will function in this document as the projected total number of troops that will be authorized for the installation through FY 2011. Thus, total population growth associated with the troop increase at Fort Carson is expected to be roughly 33,800, consisting of approximately 11,400 newly authorized troops, 21,300 military dependents, 430 civilians, and 690 civilian dependents (see the Demographic Technical Report).

Two large surges of troop arrivals are anticipated through 2011. The first increase in troops, currently underway, is expected to add 4,700 troops by the end of FY 2007, which is equivalent to the end of September, 2007. The second increase, expected to occur before the end of FY 2009, will add an additional 5,200 new troops. FY 2008, 2010, and 2011 are expected to add 100, 700, and 700 new soldiers, respectively.

New population growth associated with the forecast troop increases (including military personnel, civilians, and all dependents) will add approximately 33,800 new persons to the study area population, and the total Fort Carson related population will make up over 8% of the total study area population by 2011.

These new residents will impact all aspects of the regional community, including the housing market, local school systems, state and local municipal services, quality of life, etc. The demographic forecasts provide the base assumptions used to create the Fort Carson Regional Growth Plan.

B. KEY ISSUES AND ASSUMPTIONS

Child Care Delivery Factors - General Considerations

Quality, Accessibility, Affordability

In the child care arena, quality, accessibility, and affordability are inextricably linked. Efforts to address any one piece of the child care puzzle will affect other aspects. If quality is improved by increasing the minimum standards and professional qualifications, the cost of child care will rise, decreasing availability for working parents. Similarly, an exclusive focus on increasing the number of child care spaces may diminish quality, with children participating in programs that are underdeveloped and understaffed. Finally, even if both quality and affordability are addressed, working parents must be able to access these programs. With scarce time and money, as well as the probability of a parent in the family being deployed, parents cannot afford to make lengthy car trips to distant or multiple child care options. Child care subsidies that reward quality with higher reimbursement rates are a good example of addressing quality and affordability simultaneously. The provision of on-base, local, and neighborhood child care, or on-site after school care, as well as employer-based facilities, can also reduce the amount of

time parents spend shuttling children. Effective strategies should seek to address all of these issues in concert.

Child Care is a Public and a Private Good

It is important to note that child care is both a private and a public good. As a private good it benefits parents and employers, and as a public good it produces gains for all of society through related effects. Army parents have a stake in quality child care because it enables their participation in the workforce, supports their continued workforce participation while a family member is deployed, helps their children to make smooth transitions and stay healthy during times of stress, and establishes security and stability. The ability of quality care to strengthen child developmental and health outcomes and improve worker productivity suggests a strong and needed role for the public and private sector in promoting accessible, affordable, quality child care.

Economic Development and Child Care

Researchers in the economic development field have found that child care has three significant, distinct impacts on regional economies.[1] First, quality child care promotes child development and educational advantages, which have a number of important, mostly long-term economic impacts. Second, the quality and availability of child care helps to mobilize the adult Army and spouse labor force and maintains or increases its productivity, which is particularly supportive during times of deployment. And third, child care is a major industry in its own right, with a large private expenditure, many employees, and many establishments, which in turn invest in a wide variety of other industries and circulate money through the economy. An example of an important type of private industry related to Fort Carson is the establishment of on-post Family Care Centers which are child care facilities individually owned and typically run by spouses of enlisted Army personnel in their homes. Family Care Centers accounted for 21% of the total Fort Carson on-base child care capacity in FY 2007.

Research increasingly shows the importance of childhood care and education, yet the public does not invest nearly as much in early childhood as it does in school-age children. The benefits of quality childhood care can be difficult to measure quantitatively, and are usually considered long term benefits, however, documented benefits include reduced reliance on social services as adults, reduced rates of crime and delinquency, and better preparedness for schools and therefore savings in the public school system.[2] Various early childhood researchers have estimated the benefit-to cost ratio of investment in quality childhood care and education to be between 1:4 and 1:17, with an average of 1:7 – meaning seven dollars are saved for every dollar invested in quality childhood care.[2] The numbers are not currently available to estimate the percentage of Fort Carson education funds that are spent on child care through Child & Youth Services, but the post has voiced its commitment to funding needed child care services in addition to the six active school-aged child and teen programs currently in operation.

The quality and availability of child care also affect the availability and productivity of the adult workforce. Parents may choose to enter the workforce if affordable, quality child care is available, and they may choose to leave the workforce if these options decrease. Employers in

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[1] Cornell Planning Department, Linking Economic Development & Child Care Research Project

[2] Miles K. Light, University of Colorado, The Economic Impact of Child Care in Colorado, 2004.

competitive, knowledge-based fields often offer child care benefits to attract and retain employees, and Fort Carson is keenly aware of the needs of military and contracted civilian families when a spouse is deployed. Nearly one-third of Fortune Magazine's Best Companies to Work For offered on-site child care centers. Fort Carson offers accessible on-post child care in the form of Child Development Centers and Family Care Centers that accommodate the schedule of parents working on-post. The availability of child care can also reduce employee turnover, lower absenteeism, and increase productivity. In short, quality child care can help a region, a company, or an installation attract and retain valuable employees.

The child care industry is a significant industrial sector of the economy in its own right. In 2001, more than $1 billion was spent on child care related services in Colorado, and more than 18,000 Coloradans were employed by the child care-related industry. Money spent in the child care industry cycles through the economy, and some studies show that money spent on child care has a greater impact on the economy than other industries traditionally supported by economic development efforts. From 2000-2006, fifty eight states and counties have conducted studies of the impact of the child care industry on their economy, including the State of Colorado in 2004.

Child Care Issues Relating to the Fort Carson Troop Increase

Stakeholders identified the following issues and concerns relative to the troop increase.

- The need for early identification and intervention for children with special needs, such as developmental delays and/or disabilities, and the education of parents in this regard – combined with a lack of trained providers and affordable facilities to serve children and families with special needs.
- A deficit of providers and facilities for infant and toddler care, the corresponding affordability, and the proximity of those facilities that are qualified to care for infants. Care for infants and toddlers with special needs is in extremely short supply. With the demand for infant and toddler care so great that centers are able to fill all of their slots, many centers avoid accepting children with disabilities or other special needs even though centers cannot deny access to children simply because they have special needs.
- Parents who have children with disabilities or other special needs struggle to balance work and family, and benefit from respite care. However, the high cost and lack of parental respite child care for parents with children who have special needs makes respite care inaccessible to many parents, especially during spousal deployments.
- The lack of public awareness of the multiple options available for child care, including infant care, after-school care, and child care programs for children with special needs, and subsidy programs. This includes education for new parents coming on-post about the many child care resources available to them through both military and community programs. Lack of knowledge by parents as to the availability of federal Head Start and Early Head Start programs and the qualifications needed to take advantage of these programs. Subsidy and benefit programs, high quality child care, and other referral assistance are available to newly-assigned parents at Fort Carson.
- Competition for, and lack of dispersal of, professional development funding, as well as few career ladder opportunities encouraging professionals to further their education and training and remain in the child care field. The need for professionals trained to deal with children experiencing the effects of parental deployments.
- A potential strain on after school programs or child care centers overall. Specifically, there is a lack of capacity and distribution of child care providers in the Fountain, Security, and

Widefield areas that may receive the majority of new housing from the troop increase. A compounding issue is that child care facilities are rarely incorporated into housing developments (adjacent to source neighborhoods).

- Assisting all qualified parents in accessing high quality child care through the Army Child Care in Your Neighborhood subsidy programs for the use of off-post child care providers. The quality of off-post providers is an issue: If child care at a facility does not meet military standards, the subsidy cannot be awarded to the parents for care in that facility. This quality standard is a benefit to parents but may also be a limitation at the same time if there are no qualifying facilities in the parents' vicinity.

C. EXISTING INVENTORY

Various public and non-profit organizations provide critical resources and lead initiatives to support child care providers within the study area. Significant local, regional, state, federal, and non-profit resources are described in this section. An attempt was made at this time to focus primarily on advocacy and support organizations, such as referral agencies, rather than on child care service providers. Typically, financial and support resources are provided by federal, state, local, or non-profit groups and are administered to local child care providers through referral agencies, non-profit organizations, and government entities.

Federal Programs

Federal Programs include funding, programs, or support services offered or administered by any branch of the U.S. government, including the military forces. The following list describes federal programs that pertain directly to children and child care for families stationed at Fort Carson.

U.S. Army Child & Youth Services

"Our mission is to provide a seamless delivery of quality care and services for eligible children and youth (6 weeks through 18 years of age) that enhance readiness and well being of the workforce and their families reducing conflicts between parental responsibilities and their on-the-job mission requirements."

Fort Carson Child & Youth Services (CYS) works with multiple military programs to provide services to military children from the ages of six weeks through 18 years of age. Fort Carson CYS is a first stop for information and services for many families on and off-post. Traditional child care services are available to children aged six weeks through kindergarten and are available through on-base Child Development Centers or Family Child Care facilities within on-post military homes. Before- and after-school child care for elementary school children is offered during the school year. Extracurricular activities and classes are available to military children of all ages and are available during after-school hours and summer sessions. Free child care is offered to families of deployed soldiers and consists of five free hours of care per child per month on 1st and 3rd Saturdays.

- Child Development Services - Serves children 6 weeks through Pre School Age (6 weeks – 4 years).
- School Age Services - Serves children from Kindergarten through 4th grade (5 – 9 years)

Army Child Care in Your Neighborhood, Military Child Care in Your Neighborhood, and Operation Military Child Care

The Army Child Care in Your Neighborhood program provides a subsidy for Fort Carson military families who use local child care providers. The program is notable in that it encourages military families who live off-post to use existing local child care services and existing resource and referral agencies, therefore strengthening the community system of child care provision. The subsidy provided depends upon total family income, geographic location, and Department of Defense policy, and makes off-post child care available at approximately the same price as on-post child care. The program also encourages quality child care because only nationally accredited services can receive the subsidy. The program requires the local child care resource and referral agency to provide enhanced service, in the form of additional contacts and confirmations to ensure that qualifying families have been able to find the child care they need.

The Military Child Care in Your Neighborhood program only differs from Army Child Care in Your Neighborhood in that it applies to active duty soldiers in all military branches and does not require off-post residence. A similar program, Operation Military Child Care, provides child care subsidies specifically for deployed parents in the active duty military. This program can help the non-military spouse seek and keep employment while their spouse is deployed abroad.

Title I Services

In Colorado, Title I funding is used to support the operational costs of Colorado Preschool and Kindergarten Programs, Head Start programs, and Even Start programs.

Child Care and Development Fund

The Child Care and Development Fund (CCDF) is managed by the US Department of Health & Human Services, Administration for Children & Families. The purpose of this fund is to assist low income families in obtaining child care so that they can pursue work, training, or education. The program is administered by state agencies. States must create plans on how they plan to use the funds every two years, and these plans must be open to public input. At least 70% of the fund must be spent to assist low-income families with child care. Also, a minimum of 4% of funds must be used for improving child care quality. The federal government has performance measures against which it is benchmarking the performance of this funds, and some of these benchmarks may prove useful as models for Fort Carson families. Federal performance measures include:

- Improve school readiness among children from families under 150% of the U.S. poverty level
- Increase number of states with early learning guidelines
- Increase by 10% the number of accredited child care centers & homes
- Reduce the number of Temporary Assistance for Needy Families (TANF) families without access to child care to 1%
- Maintain the proportion of children served by CCDF of those under 150% of the poverty level
- Increase the proportion of child care centers serving subsidized families

Nonprofit Programs

Several non-profit and military-based organizations, such as the National Military Family Association and Military OneSource, provide additional information pathways to child care programs and services available to Fort Carson families. Non-profit programs, further described

under Local and Regional Programs, contribute a major role in identifying community needs, coordinating community resources, providing referral services for parents, and supporting providers through training and advocacy. There are many non-profit organizations effectively operating together in El Paso, Fremont, and Pueblo counties, such as the Early Childhood Councils in each county.

National Association of Child Care Resource and Referral Agencies (NACCRRA)

The National Association of Child Care Resource and Referral Agencies is the national representative of all the state and local resource and referral agencies throughout the United States. NACCRRA is involved in professional development, parent education, research and advocacy on child care issues. NACCRRA is one of the best sources of information for current data on child care and state and federal policy. Current programming includes:

- Child Care Aware – A national program to promote parent awareness of child care options and information on selecting quality child care. The Child Care Aware website (described below) is part of this program.
- Quality Assurance Program – This program monitors and sets minimum standards for local and regional resource and referral agencies.
- Early Childhood Focus – This program consists of newsletters and e-news keeping child care professionals and parents up to date on the latest news on early childhood development.
- Military Programs – NACCRRA has several programs to promote quality child care provision to military personnel and collaborations with the Department of Defense.
- NACCRRAware – This is support software for child care resource and referral agencies that is only available to active members of NACCRRA.
- Wounded Warriors – NACCCRA also provides financial assistance for six months of child care services to families of severely injured military members. Extensions beyond six months are considered based on a physician's reassessment.

Child Care Aware includes a website created by NACCRRA for parents that serves as a resource clearinghouse on learning about child care issues. The website has a variety of publications and videos that educate parents on child care options, expenses, and quality. The website includes calculators that help parents budget for child care or make decisions about whether they should return to work. Child Care Aware provides information on how to select and review a child care provider. Information on other specific topics such as fatherhood and help for military families is also provided. Regular online publications are provided to engage parents in an ongoing understanding of their child's developmental needs.

National Military Family Association

A non-profit organization dedicated to the education of military families as to their rights, benefits, and available services, and as a source of information that may pertain to them. NMFA is also an advocacy group for military families in the legislation and policy arena.

Military Child Education Coalition

A non-profit "organization that identifies the challenges that face the highly mobile military child, increases awareness of these challenges in military and educational communities and initiates and implements programs to meet the challenges. MCEC's goal is to level the educational playing field for military children wherever they are located around the world and to serve as a

model for all highly mobile children." MCEC facilitates the sharing of relevant or pertinent information between transitioning parents, school systems, and military installations.

Qualistar Early Learning

Qualistar Early Learning is a state-wide non-profit organization that works with communities, families, child care providers, and referral agencies to improve the quality and accessibility of child care throughout the state. Qualistar Early Learning developed and maintains the Qualistar Rating, which measures the quality of child care in licensed child care centers and home-based facilities based on five components. The rating can be accessed by the public for programs that participate in the evaluation.

Colorado Association of Family Child Care

The Colorado Association of Family Child Care (CAFCC) is a non-profit organization that supports licensed family child care providers in the state of Colorado. CAFCC also assists families in locating child care by providing lists of referral agencies in their area.

Colorado Children's Campaign

The Colorado Children's Campaign is a statewide non-profit organization that leads in bi-partisan advocacy and legislation for children issues in the state, focusing on expanding access to quality healthcare, early childhood experiences, and K-12 education.

Colorado Child Care Association

The Colorado Child Care Association is a non-profit professional organization dedicated to providing support and guidance in the management and administration of child care centers. This is achieved through education, networking and legislative representation. As the state chapter of the National Child Care Association (NCCA), CCCA has become the second largest state child care association in the nation and represents over 500 licensed child care centers, preschools, and school-age programs, since being established in 1985. CCCA membership is comprised of licensed child care centers, encompassing single and multiple centers, profit and non-profit centers, faith-based and secular centers, preschool and school-age programs.

Colorado Child Care Association's objectives are as follows:

- To perpetuate licensed child care in private sector centers and programs.
- To encourage excellence, education and professionalism within the child care industry.
- To encourage uniformity and fairness within the child care regulatory process.
- To encourage and support creativity, individuality and innovativeness within the child care industry.
- To provide a forum for the free sharing of knowledge, ideas, experiences and resources.
- To educate the public and foster a positive image of early care and education.

State Programs

The Colorado state programs listed below include direct and indirectly funded initiatives and programs which are available to communities state-wide. Several of the initiatives are directed through the Colorado Department of Education, and many of the programs act as state-level dispersers of federal funds and grants. Fort Carson families would benefit from or access these programs through their local communities.

Colorado Department of Human Services, Division of Child Care

The Colorado Department of Human Services, Division of Child Care, is the State's lead agency in planning and implementing public child care policy. The Division of Child Care is responsible for the licensing and monitoring of child care facilities; managing the child care assistance program for eligible families; administering child care grants and quality initiatives; and serving as the lead in implementing federal child care programs. The Department is also the lead agency for the Colorado Child Care Assistance Program (CCCAP), which provides financial assistance for child care services to low-income families who qualify for the program. The program is administered directly through county social service departments, who also set the eligibility requirements for families.

Colorado Early Childhood Councils

An association of statewide organizations which promotes collaboration between public and private stakeholders to ensure delivery of early care and education services to children aged birth to eight. Local early childhood councils operate 17 Community Consolidated Child Care Pilot Programs serving 30 counties in the state. The pilot programs provide services for early childhood professionals, families, and their children. The majority of the pilot funding comes from the federal Child Care Development Block Grant, with supplemental private and public funding sources.

More information about Early Childhood Councils for El Paso, Fremont, and Pueblo counties are found under Local and Regional Programs, below. The El Paso County Early Childhood Council is Alliance for Kids, described under Local and Regional Programs below.

Colorado Department of Education

The Colorado Department of Education is the lead administrator for early child education and development initiatives such as the Colorado Preschool & Kindergarten Program, Smart Start Colorado, Even Start, and federal Head Start programs. There are criteria for eligibility, and programs are available for specific age groups.

- Colorado Preschool and Kindergarten Program - This program was developed to serve four and five year old children who may lack learning readiness or be at-risk for school failure due to financial or family factors. The program provides funding for preschool and all-day kindergartens and is currently capped at 9,050 participating children.
- Smart Start Colorado - Smart Start Colorado is a state-wide initiative to maintain an association of early childhood education and child care partners working together to promote high quality programs and make them available to all children, from birth to eight years old.
- Colorado Even Start Program - The Colorado Even Start Program distributes Federal Even Start funds through early childhood education organizations across the state. The Even Start program supports children ages birth through seven.

Colorado Early Childhood Connections

The Colorado Early Childhood Connections (ECC) program enhances the development and education of developmentally-disabled or delayed children, aged birth to three. This interagency program is the State of Colorado's infant and toddler initiative under the Individuals with Disabilities Education Act.

Local and Regional Programs

Other than School District Programs (described below), and Fort Carson's Child and Youth Services programs, local and regional programs are parents' most direct link to available services and resources for child care in the Pikes Peak area.

El Paso County Early Childhood Council - Alliance for Kids

Alliance for Kids is a Colorado Consolidated Child Care Pilot and is El Paso County's early childhood council (ages 0-8 years), developed by the El Paso County Department of Human Services. Its mission is to serve as a vehicle that brings together organizations and individuals to work collaboratively on a seamless system of care for the young children (0-8 years) and families of El Paso County, Colorado.

The Alliance is implementing an extensive strategic plan with the involvement of more than 70 key stakeholders concerned with early childhood development. The Alliance works to positively impact the early childhood community by developing true collaborations, blending existing projects with new programs and initiatives, and drawing upon the strength of its community partnerships. As a Smart Start Colorado partner, Alliance for Kids addresses health, mental health, early care and education, and family support.

Fremont County Early Childhood Council - ECHO & Family Center Early Childhood Council

ECHO and the Family Center ECC is Fremont County's Early Childhood Council, sponsored by Fremont County School District RE-1. Its mission is to promote and sustain a comprehensive, high quality, early childhood system to support families and prepare children for success in school and life.

Pueblo County Early Childhood Council

Formerly the Pueblo Consolidated Child Care Pilot, Pueblo County's Early Childhood Council is sponsored by the Pueblo Community College and focuses on the following seven community needs: professional development, public awareness and engagement, mental health, community health, before and after school, infant and toddlers, and family support.

Community Partnership for Child Development

The Community Partnership for Child Development (CPCD) organization provides the administration in the Pikes Peak area of the Federally-funded Head Start, Early Head Start, and Even Start programs, and the State-funded Colorado Preschool and Kindergarten Programs. CPCD also assists families by directing them to appropriate services for their situations, including child care, medical, dental, and mental health services, early childhood education, nutrition, and transportation issues.

Child Care Connections

Child Care Connections is a child care resource and referral agency based in Colorado Springs and is the lead referral agency serving Fort Carson. They are a Qualistar Early Learning partner which serves Elbert, El Paso, Kiowa, and Teller counties.

Children First Child Care Resource & Referral

Children First Child Care Resource & Referral is a Qualistar Early Learning partner with offices located in Pueblo and Canon City. The agency serves Baca, Bent, Chaffee, Crowley, Custer,

Fremont, Huerfano, Las Animas, Otero, Prowers, and Pueblo counties as a child care resource and referral agency for southeastern Colorado.

Pikes Peak Region Family Child Care Association

The Pikes Peak Region Family Child Care Association (PPRFCCA) assists families with locating available child care in licensed family care facilities in the Colorado Springs area and also supports family care providers who are members of the association.

School District Programs

All five of the school districts reviewed in the Education Technical Report provide some aspect of child care in the form of preschool or kindergarten programs, before- or after-school day care, or special programs such as summer day-camps. These education-based programs are important sources of child care coverage. There is public debate for universally-accessible all-day preschool programs which would affect the demand for and capacity of preschool private programs, as well as K-6 public school facility capacities.

Colorado Springs District 11

The District offers free full-day kindergarten in all elementary schools, including transportation, as well as traditional half-day classes at two of the elementary schools, without transportation. Expanded preschool services are offered in 34 elementary school buildings by the Early Childhood Office in partnership with Community Partnership for Child Development (CPCD). Preschool is designed to serve children ages 3-5 who may lack overall learning readiness or have special needs.

- Blended preschool programs are available for morning and afternoon sessions four days a week, including transportation for children with special needs. These programs hold 15 students per session with a minimum of four special needs children per session.
- The CPCD partnership provides a Head Start program with morning sessions four days a week, including transportation. These programs hold 17 students per session including 3 to 5 children with special needs.
- The Colorado Preschool and Kindergarten Program (CPKP) provides funding for morning or afternoon preschool sessions, without transportation, serving 15 children per session, none of whom has special needs. The morning session is funded specifically for children who are determined as at-risk for educational issues. Wrap-around services are available for the morning sessions at eight locations. The CPKP also provides funding for full-day kindergarten in eight elementary schools and one charter school for five year olds who lack learning readiness.
- The Tesla Early Learning Center provides child care five days a week for seven hour sessions, without transportation. The Center serves twenty infants and toddlers of teen parents who are seeking high school graduation at district schools. Sixteen of the twenty children can qualify for Early Head Start services funding.
- The Early Childhood Office is partnered with Child Nursery Centers to provide two classrooms for full-day, full-year preschool programs for children at risk for school failure.

Widefield School District 3

- All nine of the District's elementary schools offer before- and after-school grades K-6 child care for a fee.

- Full-day kindergarten is available for a partial, tiered system fee, and at least one full-day program is available at each elementary school with a 12-seat minimum capacity.
- Preschool for 3-5 year olds is available at one preschool site and also at one elementary school.
- CPCD provides Head Start services in this school district.

Harrison School District 2

- The Harrison School District offers before and after-school child care for a fee at seven school locations. The services provided vary by location.
- Extended-day kindergarten (two longer half-day sessions) is offered at two school locations for a fee.
- The school district offers summer day camp programs on a weekly fee basis.
- The District has partnered with Child Nursery Centers to provide classroom space for the Sand Creek Family Center with Child Nursery Centers providing services on a sliding fee scale.
- CPCD provides Head Start services in this school district.

Fountain – Fort Carson District 8

- Preschool services are available at four schools to 3-5 year olds with educational disabilities.
- CPCD provides Head Start Services in this school district.

Cheyenne Mountain District 12

- Three early-intervention preschools are available without cost for 3-5 year olds with educational disabilities. Two of these schools also accept non-disabled children for a fee.

D. NEEDS ASSESSMENT

Dependent Forecast

As described in the Housing and Demographics Technical Reports, forecasts are calculated for children generated from growth at Fort Carson, as well as baseline growth in population that would occur regardless of Fort Carson troop increases. Baseline numbers are based on projections made by the Colorado Department of Local Affairs.

Forecasts for the number of children are based on demographic projections, adjusted for existing apartment locations, future housing developments, and input provided by local stakeholders. The calculation for the children of military families is derived from the number of troops and dependent multipliers and can be found in the Demographic Technical Report of the Fort Carson Regional Growth Plan. Housing units and multipliers are used as the basis to estimate the number of children that can be expected. As with all forecasts, these forecasts are subject to change based on variable factors such as troop deployment, changes in military assignments, overseas conflicts, rebuilding of brigades, etc.

Child dependents will be generated from three primary areas: military personnel living on-post, personnel and civilians living off-post and renting, and military and civilians living off-post and owning homes. Over 14,800 child dependents will be added to the local community from both

baseline and Fort Carson growth. Table 1 presents the allocation of total dependents, ages 0 through 24, by housing type, and the proportion from baseline or Fort Carson troop growth. An estimated 757 dependents will come from military families on-post, 5,060 from military and baseline growth in rental units, and 9,013 from military and baseline growth in single family (and townhome style) homes. Thus, an estimated 14,831 dependents will be added to the region over the next five years due to growth in the Fort Carson study area (i.e., baseline and Fort Carson growth).

Table 1. Child Dependents Generated by the Troop Increase in the Fort Carson Study Area

Years	2007	2008	2009	2010	2011	Total
On-Post Children	266	69	423	0	0	**757**
From Rentals						
Baseline	304	298	299	301	303	**1,504**
Direct Growth from Fort Carson	1,237	0	1,706	306	306	**3,556**
Subtotal - From Rentals	1,541	298	2,004	607	609	**5,060**
From Homes						
Baseline	716	691	692	698	702	**3,489**
Direct Growth from Fort Carson	2,227	94	2,489	372	372	**5,525**
Subtotal - From Homes	2,933	784	3,152	1,070	1,074	**9,013**
Total Children	**4,740**	**1,151**	**5,579**	**1,677**	**1,684**	**14,831**

Source: RKG Associates, Inc.; EDAW, Inc.

Child Care Demand Forecast

Data from the Department of Defense suggests that over 32% of military children dependents are under the age of 5, possibly requiring child care and preschool programs, and 29% are ages 5 through 9, possibly requiring kindergarten and after-school programs. The number of child care-aged military and baseline children, ages 0 through 9, projected from the increase in troops on Fort Carson, equals an increase of approximately 8,573 children through FY 2011. This number of child care-aged children is approximately 58% of the total dependents predicted for the study area, just a few percentage points lower than the DOD average of 61%.

For consistency, the following forecast tables classify children ages 0-1 as infants, ages 1-2 as pre-toddlers, ages 2-3 as toddlers, ages 3-5 as pre-school, and ages 5-9 as school age children. These age classifications are consistent with those used by Fort Carson Child and Youth Services. Table 2 displays the total number of children arriving from baseline and Fort Carson growth. Table 3 displays the total number of children matriculating (i.e., maturing through the system) each year by age class.

Table 2. FY 2011 End-State Summary of Forecasted Child Care Age Dependents from Baseline Growth and Fort Carson Troop Increase.

	Infants 0-1	Pre-Toddlers 1-2	Toddlers 2-3	Pre-Schoolers 3-5	School-Age 5-9	Total
BASELINE ONLY						
Total	265	265	265	514	1,253	**2,562**
FORT CARSON GROWTH ONLY						
Total	659	659	639	1,240	2,814	**6,011**
TOTAL GROWTH						
School District						**Total**
Total	924	924	904	1,754	4,067	**8,572**

Source: RKG Associates, Inc., EDAW, Inc.

Table 3. Annual Matriculation of Child Care Age Dependents from Baseline Growth and Fort Carson Troop Increase

Age	2007	2008	2009	2010	2011
Infants, 0-1	303	63	360	98	99
Pre-Toddlers, 1-2	303	367	423	458	197
Toddlers, 2-3	296	366	717	520	556
Preschoolers, 3-5	574	358	712	813	616
School-Age, 5-9	1,320	1,648	3,246	3,766	4,300
Total	**2,797**	**2,803**	**5,458**	**5,656**	**5,767**

Source: RKG Associates, Inc.; EDAW, Inc.

It is challenging to quantify the current rate of child care utilization in the Fort Carson study area. Experience suggests that for the general public, approximately 20% to 30% of children will be enrolled in child care annually. For military families at Fort Carson, anecdotal evidence indicates that child care enrollment can experience dramatic fluctuations annually, from 30% to 50% depending on the frequency and length of deployments, spousal employment, the duration of the current Global War on Terror, and other compounding factors. Stakeholders noted that the high enrollment variability limits the ability of child care providers to anticipate and invest in long-term facility expansions.

According to CYS, approximately 52% of active-duty spouses at Fort Carson are employed, suggesting a high ratio of increased demand for child care programs as troop numbers rise at Fort Carson. Should 30% to 50% of new families utilize child care, between 2,558 and 4,264 additional children would enter the child care system by 2011.

On-Post Child Care Facility Capacity

Child care is provided on-post by the Fort Carson Child and Youth Services at Child Development Centers (CDC) and Family Child Care homes (FCC). CYS staff estimates that approximately 50-60% of off-post parents that need child care use on-post CYS services. With six on-post CDC facilities, Fort Carson had an operational capacity of 782 spaces in 2006, based on square footage and ratio requirements, as shown in Table 4. This number does not include Head

Start, State Universal Pre-School Spaces, or other agency spaces. Of these operational spaces, 674 (or 86%) were actually filled (paid enrollment) 85% of the time during 2007.

Table 4. On-Post Child Development Center Capacity for 0 through 4 Year Olds

Bldg #	Bldg Name	Infant	Pre-Toddler	Toddler	Pre-school	Total Capacity
6058	East CDC	32	65	54	120	**271**
6060	West CDC	24	55	63	120	**262**
7790	SouthWest HC	8	15	14	50	**87**
2766	SouthEast CDC	12	15	14	40	**81**
4355	North CDC	12	15	14	40	**81**
						782

Source: RKG Associates, Inc.; Fort Carson Child and Youth Services

At the time of this analysis, current plans for expansion of the Fort Carson child development center program include proposals for additional capacity on-post:

- three modular units to accommodate 215 infant to five year olds in FY 2009,
- one 195 space school center for 6-10 year olds in FY 2011, and
- one 303 capacity center for 0-5 year olds in FY 2012.[3]

These proposed facilities would create a total 1,495 operational spaces by FY 2012. Proposed CDC facilities such as these have been included in capital improvement plans since the troop increase was announced. However, the construction of additional child care facilities is dependent on other competing capital and operational demands, as well as funding authorization by Congress. These projections should be updated as facilities are approved and completed.

Family Child Care (FCC) is a U.S. Army program locally administered by each post's Child and Youth Services division. The FCC program provides child care in homes of military personnel or contractors, run as private businesses, which are licensed by the state and certified by the post. FCC homes provide quality child care to children between the ages of four weeks and 12 years old, and often offer flexible schedules, a home-like environment, and smaller groups for parents who prefer this environment. The Fort Carson Family Child Care program offered a total of 210 daily child care spaces in FY 2006 and had an average attendance of 78 children (Table 5). Although two-thirds of the available child care was in on-post homes, the majority of FCC use was in off-post locations. Child and Youth Services (CYS) back-up homes had a capacity for 30 additional children (six children per home) but were not used in FY 2006.

At the time of this printing, the number of family child care homes is predicted to increase to 45, including the back-up homes, in FY 2007. The FCC program is strongly affected by the deployment schedule on Fort Carson, and the number of providers may fluctuate during the

[3] Jan McConnell, Fort Carson Child and Youth Services, personal communication.

year because providers with deployed spouses often feel pressure to close their businesses in order to take care of their family's needs.

Table 5. Family Child Care Operational Capacity and Attendance FY 2007

Date of Census	On-Post FCC and QCCS Satellite Homes	Off-Post FCC Homes	CYS Back-up Homes	Total FCC Homes	Attendance in On-Post Homes	Attendance in Off-Post Homes	Total Attendance
March 2007	19	11	5	35	29	47	**76**
Feb. 2007	18	9	5	32	32	39	**71**
Dec. 2006	18	10	5	33	37	47	**84**
Oct. 2006	19	8	5	32	45	36	**81**

Source: Fort Carson Child and Youth Services

The above analysis suggests that forecasted demand for child care (ranging between 2,558 to 4,264 new children) will outpace existing and proposed on-post CDC and FCC capacity of approximately 1,600 operational spaces by FY 2012. The additional child care demand created by the troop increase at Fort Carson may increase strains on a limited on-post system, with child care openings becoming more scarce and competitive. Stakeholders in the child care industry and child advocates are concerned about adverse consequences within the community and the impending need for the balance of the additional demand for child care spaces to be borne by the broader community.

Off-Post Child Care Facility Capacity

According to statistical records maintained by Child Care Connections in Colorado Springs, licensed child care capacity in El Paso, Kiowa, Elbert, and Teller Counties is approximately 24,500 children, and overall, 80% of that capacity is filled. For children aged 0-12 months, capacity is at 85%; for children 1-2 years capacity is 90%; and for children 2-5 years capacity is 79%.[4] Most providers target 85% to 90% as the optimum capacity, which allows for increases without requiring additional facilities. These numbers are estimates due to constant fluctuations in enrollment numbers and operating service providers, as well as reporting consistencies.

At an overall average of 80% capacity, 4,900 child care spaces are available off-post within the four-county area if every available space were utilized. Such a scenario would be undesirable and unrealistic, as demand is significantly affected by location, with many providers currently at 100% capacity in prime locations or price points. Together, travel distance, cost, and quality affect utilization of specific providers. For this reason, stakeholders describe the current system's early care capacity as "severely strained."

[4] Deana Hunt, Outreach Specialist, Child Care Connections, Colorado Springs, CO. Personal communication, Dec. 2007.

Several current legislative initiatives under consideration in the State of Colorado, such as all-day kindergarten or smaller ratios of supervisors to children for infant and toddler care, would affect the area's capacity in ways yet to be determined.

Accurate child care enrollment and capacity data for school-aged children (aged 6-12) is difficult to gather due to the multiple types of after-school and child care services that are offered throughout the community.[5] The types of available school-aged care range from public after-school programs to private child care services and programs. In El Paso County, after-school programs are at approximately 50% capacity; however, the specific capacity of individual providers can range from just over 1% to almost 100%, depending on the location of the provider. The availability of transportation to after-school programs is a limiting factor for the use of private services, and programs that include transportation or chaperoning, or are located very close to elementary schools, are typically at capacity. The popularity of private services is reported to be mostly due to their use of age-specific programs and provision of high-quality facilities.[5]

In summary, as the supply of on-post child care is estimated to be surpassed by demand, the ability of off-post providers to accommodate child care aged children will be affected by travel distance, cost, and quality. At current utilization rates, it is likely that off-post providers will be able to accommodate short-term increases for select age classes, but long-term capacity may become a critical issue that should be addressed, not only by providers, but also by Fort Carson, economic development interests, School Districts, and the broader community.

E. RECOMMENDATIONS

ISSUE: A POTENTIAL DEFICIT OF SUFFICIENT CHILD CARE FACILITIES.

RECOMMENDATION: CONTINUE AN OPEN DIALOGUE BETWEEN THE MILITARY AND OFF-POST PROVIDERS, AND INCREASE THE CAPACITY OF OFF-POST PROVIDERS.

Off-post providers expressed hesitancy to invest in staffing or facility expansions due to the traditionally high variability in military family child care needs. The variability is due primarily to frequent and unanticipated changes in spouse employment which often depends on length and frequency of deployments, the length of the current war, and disabled partners. Spouse employment numbers often directly relate to the need for child care, and family situations may change monthly. Specifically, Fort Carson should have representatives participate on the Fremont, Pueblo, and El Paso County Early Childhood Councils. With continual updates on expected troop increases and an understanding of the potential demand for child care, providers can better evaluate facility and staffing expansions. Off-post providers should have more material about on-post services and the military should continue to provide resources or support to community referral agencies during peak troop increases and deployments.

Municipalities and counties can assist in this effort by incorporating planning for child care into comprehensive plans and economic development plans for local governments, recognizing the crucial role child care plays in quality of life, workforce availability, and educational preparation. Municipalities and counties should encourage developers to partner with child care providers to build facilities in new housing developments and the facilities of major employers. Based on stakeholder comments, the community should focus on ensuring the availability of quality child

care programs in the Fountain, Security, and Widefield areas where facilities are currently lacking, and where the majority of growth is forecast to occur.

Increasing the capacity (i.e., funding) of off-post providers will require a comprehensive approach by local governments, developers and economic development interests, employers, School Districts, child care providers, and non-profit programs, and a variety of options are provided due to the diversity of programs in the three-county study area.

To coordinate child care facilities into housing developments and major employment facilities, local governments and child care providers should pursue the following:

- Include child care as an element in local government comprehensive plans
- Revise land use regulations that make it difficult to locate family day care facilities in residential areas
- Incorporate child care facilities into new for-profit and publicly-subsidized housing developments
- Use child care providers and advocates to train residential developers on how to integrate child care facilities into their developments
- Promote local government incentives such as density bonuses and housing subsidies to support the development of child care facilities
- Make family centers, especially infant and toddler rooms, a standard component to new school buildings

To increase funding for child care, economic development interests (Chamber of Commerce, Economic Development Corporations, etc.), child care providers, and non-profit programs should pursue the following:

- Advocate for additional on-post Child Care Centers, especially for infants and toddlers
- Increase parental investment in child care
- Increase employer investment in child care by publicizing best child care benefits among employers and creating matching public incentives
- Coordinate local initiatives with state and federal funding programs in order to maximize eligibility and competitiveness for grants and make sure providers are aware of funding programs
- Develop resources to support child care grant writers
- Research possible foundation support for child care affordability or quality initiatives
- Fully fund Head Start and Early Head Start programs (Federal) or increase local school investments in these programs
- Increase use of income subsidies for credentialed child care professionals (T.E.A.C.H.)
- Encourage employers to adopt best practices for providing the following child care benefits:
  - On-Site Child Care
  - Back Up Child Care
  - Sick Child Care
  - Resource and Referral Service

- Non Standard Hours Child Care
- Child Care Discounts and Subsidies

Similarly, School Districts, employers, local churches, and child care providers should pursue strategic partnerships to offset or avoid the capital costs of new facilities. To overcome the challenge of financing child care facilities, pursue the following:

- Encourage child care providers to seek out low interest loans for new facilities or facility improvements or expansions and the Small Business Child Care Grant Program for start-up costs, training, scholarships, or other related activities
- Seek Office of Economic Adjustment funds to help finance the large one-time cost of constructing new child care facilities
- Use Smart Start Colorado fund to create a low-interest revolving loan fund for new and improved child care facilities
- Extend all-day preschool programs to all of the area's public elementary schools
- Introduce or expand infant and toddler programs to area public elementary schools and churches
- Consider impact fees on new housing in order to create a child care facility trust fund
- Build public-private partnerships by encouraging employers to create their own daycare facilities as a benefit to employees, e.g. School Districts and hospitals.

ISSUE: CONCERNS ABOUT THE QUALITY OF OFF-POST PROVIDERS.

RECOMMENDATION: PROMOTE AWARENESS OF ALL QUALIFIED PROGRAMS AND SERVICES

With multiple referral agencies, on- and off-post programs, and focused need services available to parents, child care stakeholders in the community should continue to make a concerted effort to educate parents on the availability of the myriad of child care funding and facility choices. Lack of knowledge by parents as to the availability of federal Head Start and Early Head Start programs, and the qualifications needed to take advantage of these programs, should be addressed by both referral agencies and providers.

Information on ways to access additional services related to child care, such as childhood physical and behavioral health, parental literacy, or school-related services should be offered to parents by applicable agencies when parents request information about child care.

If child care at a facility does not meet military standards, the Army Child Care in Your Neighborhood subsidy cannot be awarded to the parents for care in that facility. This quality standard is a benefit to parents but may also be a limitation at the same time if there are no qualifying facilities in the parents' neighborhood. CYS should continue assisting all qualified parents in locating high quality off-post child care providers. If the subsidy cannot be awarded to the parents' chosen facility because it does not meet military quality standards, on-post councilors should make all attempts to assist with finding a provider that qualifies and is accessible to the family.

ISSUE: SUPPORT FOR CHILDREN AND FAMILIES WITH SPECIAL NEEDS, AND DEMAND FOR SPECIALIZED PROVIDERS.

RECOMMENDATION: PROMOTE EARLY INTERVENTION AND SUPPORT FOR CHILDREN WITH SPECIAL NEEDS

Early identification of children with special needs should be made a priority for all children enrolling in child care services. Early intervention can accurately assess a child's situation and place him or her appropriately in the best child care program to meet the child's needs. Education of parents for the need for assessment should occur prior to or during enrollment. Currently, many identification programs are provided free of charge or at little cost to the parent, and assessment participation should be highly encouraged for all potential at-risk children.

The Army recently recognized the emerging need identified by local stakeholders for parental respite child care for parents with children who have special needs, especially during deployments. Using Global War on Terrorism (GWOT) funds, the Army has distributed additional funding for up to forty hours a month of free respite care for each registered Exceptional Family Member Program (EFMP) child. Fort Carson families must find a provider that meets established criteria for this service in the community, and the program pays for it. Capacity for this type of service within the community should be assessed in more detail.

Funding for special needs child care programs should be continually pursued to provide children with the highest quality care available to meet their requirements. These funding programs should include provisions for offsetting the additional costs for these special programs so that parents on limited budgets can utilize child care for the same time and extent as regular programs.
Once a child's needs are accurately diagnosed, parents are often challenged in finding providers qualified to provide specialized care, due to the high costs and demand for trained providers – especially for infant and toddlers, evening, overnight, and parent respite care. Early Childhood Councils in each county should work to highlight this community need, recruit and train specialized providers, increase affordability or offset special needs costs, and strengthen relationships with universities to increasing enrollments in early childhood education and other applicable fields.

For more information on special needs, refer to the Social Services Technical Report.

ISSUE: NEED FOR ADDITIONAL STAFF, CAREER LADDER OPPORTUNITIES FOR CHILD CARE PROFESSIONALS, AND PROFESSIONAL DEVELOPMENT TRAINING.

RECOMMENDATION: PROMOTE PROFESSIONAL EXCELLENCE AND EDUCATION IN THE CHILD CARE FIELD.

Military issues about the availability of community-wide quality child care are directly related to the insufficient recruitment, education and training, and retention of child care professionals. Support for professional development and advanced or technical education funding, as well as the promotion of career opportunities, will encourage child care providers to advance personally and professionally, in turn providing higher-quality child care within the community. Strengthen relationships with universities to increasing enrollments in early childhood education degree programs, or to initiate early care (infant and toddler) programs that are absent in the

area. One of the most important advanced child care services currently needed is for professionals trained to deal with children from military families experiencing the effects of parental deployments. This need can be met by recruiting military spouses transferring to Fort Carson from other regions.

There are many non-profit, state, and federal programs dedicated to advancing the education and training of child care providers which should be promoted and utilized whenever possible. Examples of these types of training programs can be found in the Appendix under Education Information.

APPENDIX

Websites

State and Federal Government

- Colorado Department of Education, Colorado Preschool and Kindergarten Program, http://www.cde.state.co.us/cdeprevention/pi_colo_preschool.htm
- Colorado Department of Education, Early Childhood Initiatives, http://www.cde.state.co.us/early/early.htm
- Colorado Department of Education, 2006-2007 Even Start Map and Directory, http://www.cde.state.co.us/cdecare/esdirectory.htm#Colorado%20Springs
- Colorado Department of Human Services, Division of Child Care, Colorado Child Care Assistance Program, http://www.cdhs.state.co.us/childcare/CCCAP_home.htm
- Colorado Department of Human Services, Early Childhood Connections, http://www.earlychildhoodconnections.org/index.cfm?fuseaction=home.main
- Fort Carson Child & Youth Services, http://community.carson.army.mil/CYS/
- U.S. Department of Health & Human Services, Administration for Children & Families, Child Care Bureau, http://www.acf.hhs.gov/programs/ccb/index.html
- U.S. Army MWR, Child and Youth Services, Community Care Resources, http://www.armymwr.com/portal/family/childandyouth/resources/default.asp
- U.S. Army and Fort Carson Child & Youth Services, October 2004, Parent Handbook: The First Choice for Military Families
- U.S. Army Wounded Warrior Program, http://aw2portal.com/VAResources.aspx

School Districts and Education

- Harrison School District 2 Child Care Information, HSD2 Day Care Information, http://www.harrison.k12.co.us/finance/Daycare/ChildCareInfo.htm
- Cheyenne Mountain School District 12, Special Education, Early Intervention/Preschool Services, http://www.cmsd.k12.co.us/sped/default.html
- Colorado Community Colleges Online, Early Childhood Education program, http://www.ccconline.org/courses/cert_ece.htm
- Colorado Springs School District 11, Division of Operations & Instruction, Early Childhood & Preschool, http://www.d11.org/DOI/earlychildhood/index.htm
- Colorado Springs School District 11, Division of Operations & Instruction, Kindergarten, http://www.d11.org/DOI/kindergarten/
- Widefield School District 3 , District Programs: Child Care, http://www.wsd3.org

Non-Profit & Advocacy

- A CareGiver Network for Child Care Professionals, Professional Development webpage, http://www.caregivernetwork.org/training.htm
- American Business Collaboration for Dependent Care, http://www.abcdependentcare.com/docs/index.htm

- Child Care Aware, http://www.childcareaware.org/en/
- Child Care Connections, http://www.childcareconnections.net/
- Children's Defense Fund, http://www.childrensdefense.org
- Children First Child Care Resource & Referral, http://www.pueblocc.edu/CommunityOutreach/ChildrenFirst/
- Colorado After School Network, http://www.coloradoafterschoolnetwork.org/index.asp
- Colorado Association of Family Child Care, http://www.coloradochildcare.com/
- Colorado Children's Campaign, http://www.coloradokids.org
- Community Partnership for Child Development, http://www.cpcdheadstart.org/Default.aspx
- Cornell University: Linking Economic Development and Child Care, http://government.cce.cornell.edu/doc/reports/childcare/
- Council for Professional Recognition, http://www.cdacouncil.org/
- El Paso County Early Childhood Council - Alliance for Kids, http://www.allianceforkids.org/
- First Children's Finance, http://www.firstchildrensfinance.org/
- Fremont County Early Childhood Council, http://projectecho-familycenter.com/index.htm
- Low Income Investment Fund, http://www.liifund.org/index.htm
- Military Child Education Coalition, http://militarychild.org/Index.asp
- National Association of Child Care Resource and Referral Agencies, http://www.naccrra.org/ and http://www.naccrra.org/MilitaryPrograms/
- National Military Family Association, http://www.nmfa.org/site/PageServer?pagename=reus_childcareintro
- Pikes Peak Region Family Child Care Association, http://www.coloradospringschildcare.com/
- Project Bloom, http://www.projectbloom.org/about.htm
- Pueblo County Early Childhood Council, http://www.pueblocc.edu/CommunityOutreach/ChildrenFirst/
- Qualistar Early Learning, http://www.qualistar.org/
- Smart Start Colorado, http://www.smartstartcolorado.org/

Reports

"Children with Disabilities and Other Special Needs: Opportunities to Participate in Quality Programs Must Be Expanded." Children's Defense Fund, 2003.

"The Economic Impact of Child Care in Colorado," Colorado Children's Campaign, Miles K. Light, University of Colorado, December 2004.

"Linking Child Care Development and Housing Development: Tools for Child Care Providers and Advocates," National Economic Development & Law Center, September 2002.

"Meeting the Needs of Today's Workforce: Child Care Best Practices," US Department of Labor, 1998.

"Partnerships for Quality: Improving Infant-Toddler Child Care for Low-Income Families." D. Paulsell, J. Cohen, A. Stieglitz, E. Lurie-Hurvitz, E. Fenichel, and E. Kisker. (March 2002). Washington, DC: Zero to Three and Mathematica Policy Research, Inc.

FY07 Child Space Allocation Accountability Report for Fort Carson, Point of Contact: Jan McConnell.

Education Information

- Training and professional development offered through A CareGiver Network.
- El Paso County School Readiness Project, Early Care, and Education Conference, grants for child care professional development, and infant toddler supervisor training, and others offered by El Paso County's Early Childhood Council.
- Child Development Associate training sessions and credentialing for early childhood educators offered by the Council for Professional Recognition.
- Training and technical assistance to states, territories, tribes, and local communities through the federal Child Care Bureau's Child Care Technical Assistance Network.
- Teacher Education and Compensation Helps (TEACH) scholarships for college education funding assistance to earn early childhood credentials and degrees.
- Connecting with Connections "Summer Sessions" provided by Child Care Connections to assist childcare providers and staff to fulfill their training requirements and gain knowledge in specific subjects.
- The Colorado Community College system offers web-based training through the Early Childhood Online Distance Learning Program.
- Free training offered to caregivers by the Colorado Department of Education to increase the quality and availability of infant toddler care.
- Military Child Education Coalition Transition Counselor Institutes offer training courses "to prepare education and installation professionals to recognize and address school transition issues that impact mobile military students" and Special Education Leaders Institute offers similar training for children with special needs.
- Conferences, workshops, and peer-to-peer training organized by the Pikes Peak Region Family Child Care Association.
- An on-line training calendar maintained by Qualistar Early Learning lists all published professional development opportunities in each state.
- The Office of Professional Development at Smart Start Colorado provides services and support to enhance the knowledge and skills of child care and education professionals.
- Project Bloom, in partnership with the Colorado Department of Human Services Mental Health Division, offers training to providers to improve the quality of service given to children with social, emotional, and behavioral needs.

Public Safety and Emergency Services Technical Report

Fort Carson Regional Growth Plan

April 28, 2008

Pikes Peak Area Council of Governments

Communities Working Together

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A. INTRODUCTION AND METHODOLOGY

The Fort Carson study area encompasses three counties: El Paso, Fremont and Pueblo. There are seventeen municipalities in this region, nine with municipally-supported police service and eight served by county Sheriff's departments. There are over thirty fire protection districts and fire departments, as well as five military installations that have on-post police and fire services. Consequently, provision of law enforcement and fire and emergency services requires a high level of coordination and excellent communication across many jurisdictions and Fort Carson.

Each public safety agency faces its own set of challenges in meeting the needs of the existing population, and each will experience varying amounts of growth during the Growth Plan study period, FY 2006 through FY 2011. Specific needs directly related to Fort Carson are difficult to determine because most jurisdictions do not currently collect or report data regarding military members as a separate demographic. Therefore, assumptions in this technical report are made based on the Fort Carson Regional Growth Plan Demographics and Housing Technical Reports, which assume that the new troops will be similar in demographic characteristics to the current Fort Carson population and will choose to reside in generally the same areas as current soldiers and families.

Providing adequate public safety service is a core function of local government. This paper assumes that, as population and service areas increase, public safety funding will also need to increase in order to maintain current levels of service. Even with technological innovations that make service provision more efficient and effective, public safety budgets and infrastructure needs must increase in order for jurisdictions to continue to provide adequate public safety services.

Per capita cost estimates developed for this report are based on the above assumptions and are utilized to determine Fort Carson growth impacts on public safety services. Costs are based on 2006 spending levels and assume no increases in service levels through FY 2011. Please see Appendix A for specific cost estimates for the jurisdictions addressed in this paper. Additional cost estimates are provided for agencies that have reported the need for greater funding and increased service levels in future years. Those cost breakdowns are provided in Appendix B.

It is estimated that approximately 76% of incoming Fort Carson soldiers and families will live off post, and nine out of ten families currently live within twenty miles of Fort Carson. Therefore, this assessment focuses on the service providers in communities expected to experience the majority of the impacts of Fort Carson's growth. These jurisdictions include the City of Colorado Springs, the City of Fountain, unincorporated El Paso County, the Stratmoor Hills Fire Protection District and the Security Fire Department (see Map 2: Public Safety Service Areas Around Fort Carson). Other jurisdictions, such as the Hanover Fire Department, Pueblo West, the Colorado Centre Metropolitan District Fire Department and Fremont County communities, may also be impacted by Fort Carson growth, but to a lesser degree, and may experience many of the same issues identified in this assessment. Impacts to these jurisdictions will depend on future growth patterns in the region, and affected agencies will also need to assess budget requirements and coordinate with Fort Carson to ensure public safety needs are met.

The goals of this technical report are to 1) identify existing service levels, estimate growth-related costs, and assess the ability of the jurisdictions most impacted by Fort Carson growth to meet the expected increase in demand for law enforcement and public safety services; 2) identify unique areas of concern regarding military personnel in relation to public safety; and 3) make recommendations to meet the public safety and emergency service needs from post-related growth impacts, including needs for regional coordination.

Stakeholder interviews were conducted in February, March, and September, 2007 and February and March, 2008 to identify the impacts of Fort Carson population growth on service provision over the next five years. Information was gathered from interviews with local public safety officials and from publicly-available records. The Fort Carson Regional Growth Plan also convened a public safety partnership group to identify key issues, consider recommendations made in the technical report, and develop action steps toward implementing those recommendations.

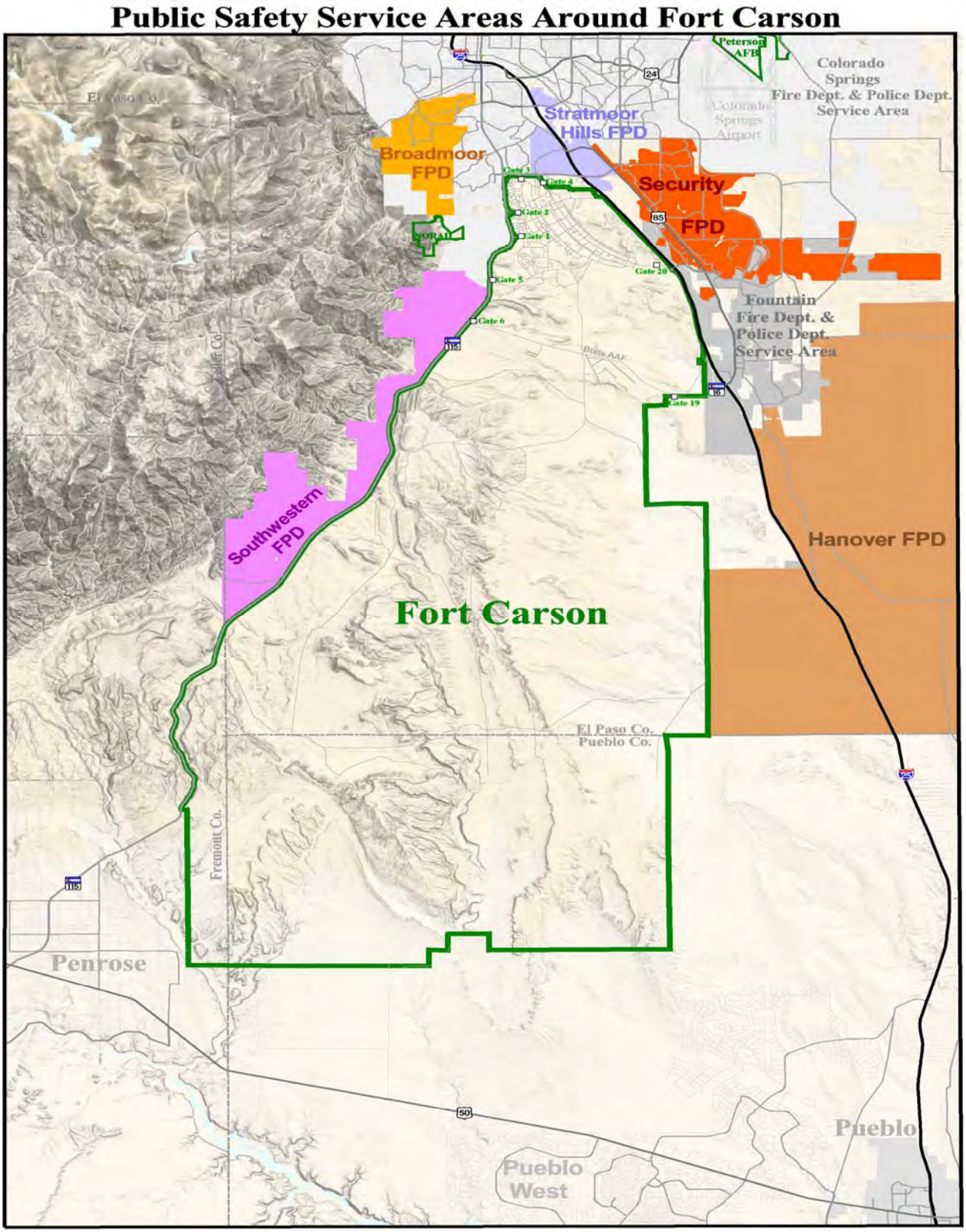
Demographics

According to the Growth Plan's Demographic Projections Technical Report, an estimated 12,600 military personnel were authorized for Fort Carson at the end of FY 2006, and an estimated 23,000 Fort Carson-related dependents were living within the region. Therefore, the population of the Fort Carson community, the majority of which lives off-post, was approximately 36,000 persons at the beginning of FY 2007.

New population growth associated with the forecasted troop increases will add approximately 33,800 new persons to the study area population; this population will consist of approximately 11,400 newly authorized troops, 21,300 military dependents, 430 civilians, and 690 civilian dependents. The Fort Carson-related population will make up over 8% of the total study area population by 2011 and will account for over one-fourth of the region's growth during this time frame. Accordingly, communities near the post anticipate significant impacts from Fort Carson's growth.

According to data presented in the Growth Plan's Housing Technical Report, the current Fort Carson off-post population resides in the Primary Housing Impact Area, within twenty miles of the post. The Housing Technical Report estimates that the majority of Fort Carson personnel (approximately 76%) will live off-post. The report also estimates, based on zip code data supplied by the post, that 64.5% of Fort Carson soldiers and families that reside off-post live in Colorado Springs, 17.5% live in the City of Fountain, and 15.2% live in unincorporated El Paso County, primarily in the Security/Widefield area.[1] It is assumed that, absent major changes in housing trends, the housing distribution of new Fort Carson soldiers and families will reflect current trends. Therefore, this paper focuses on public safety agencies in Colorado Springs, Fountain, and El Paso County that will be most impacted by Fort Carson growth (see Map 1: Public Safety Service Areas Around Fort Carson). Public safety and emergency services costs attributed to Fort Carson growth are also based on this geographic breakdown.

[1] Sample zip code data provided by Fort Carson and analyzed by RKG Associates are presented in Table 41, page 45 of the Growth Plan's Housing Technical Report.



Map 1: Public Safety Service Areas Around Fort Carson

B. EXISTING SERVICES

Public safety and emergency services are provided on-post by Fort Carson personnel. Off-post needs are generally handled by the communities in which an incident occurs. Local jurisdictions coordinate with the installation through mutual aid agreements and on an ad-hoc basis to handle off-post incidents involving Fort Carson soldiers or on-post incidents that affect the region, such as wild fires. This section identifies the law enforcement, fire, and emergency services provided by the post and by key jurisdictions surrounding the installation. Current service levels are identified, as well as the capital and operational requirements of each jurisdiction to meet future demand from Fort Carson growth.

Fort Carson Police, Fire, and Emergency Services

Fort Carson's Directorate of Emergency Services (DES) provides public safety services on post and is comprised of Law Enforcement and Fire and Emergency Services, as well as Installation Access Control. The DES also includes the Physical Security Branch (PSB), which is responsible for assessing the security of buildings and training areas, developing training requirements for soldiers who guard weapons and ammunition, inspecting building alarm systems and managing the gate guard civilian contract. The PSB also reviews all new construction plans to ensure they meet both Force Protection and physical security requirements.

The service area of the post includes a total of 373,300 acres: 137,404 on the Mountain Post and 235,896 in the Pinon Canyon Maneuver Site located 150 miles southeast of the post. The cantonment or town area of the post covers approximately 7,000 acres in the northern section of Fort Carson. The on-post population resides in approximately 2,600 family housing units and over 5,600 barracks. Three elementary schools and one middle school are also located on the post. There are currently 12,590 soldiers and family members living on the post. Fort Carson's population approximately doubles during the day, when additional soldiers and civilians living off-post work on the installation.

Law Enforcement Services

The DES Law Enforcement Division is headed by a Department of the Army civilian employee. The Directorate is comprised of civilians, military police officers (the 759 Military Police Battalion), and Department of the Army civilian police officers. Most personnel are civilian police officers who have substantially more longevity at Fort Carson than the military police officers, who are soldiers.

The Law Enforcement Division is staffed very similarly to a local civilian police department and provides many of the same services that local police departments provide. DES is responsible for services that include vehicle registration, patrol units, investigation units, records, emergency response teams, and AWOL apprehension.

Regular patrols are conducted within the main cantonment area and also periodically cover downrange areas, including the major training facilities and the Pinon Canyon Maneuver Site. Fort Carson police officers also respond to calls for service. Additionally, there are two Range Conservation/Game Warden officers that spend a majority of their time in the downrange areas and are dispatched as needed.

The Fort Carson Police serve as a reporting agency to unit commanders. Police officers investigate cases and report issues to commanders or legal authorities for adjudication or disposition. Military

police have no authority over civilians off-post; however, they can and do enforce rules and regulations with soldiers off-post. Troop units, not military police, have coordinated with off-post jurisdictions when requested, such as to help monitor bar scenes. However, Fort Carson Police officers are not authorized to respond to situations outside the confines of the post.

To serve the on-post population (including daytime working populations and those living on post), Fort Carson operates out of one police station with forty-six Department of the Army police officers , 221 Military Police officers, and seventy-nine contract civilian guards. The Fort Carson police station has two temporary holding cells for short-term detention. Long-term detention is coordinated with the El Paso County Jail.

In FY 2007, the DES responded to 29,000 calls for service. It is anticipated that calls for service will increase to 54,000, an 86% increase, by FY 2013 as a result of Fort Carson's growth. In order to meet this increase in demand, DES anticipates adding staff. The post is currently conducting a manpower study to determine the need for additional officers and access control guards. DES is also working to enhance coordination with neighboring communities to address law enforcement issues involving Fort Carson personnel.

Fire Services

The Fort Carson Fire Department (FCFD) is comprised of civilian firefighters and receives occasional support from a small number of uniformed (soldier) firefighters. The fire department's primary responsibility is to respond to calls on post. However, under mutual aid agreements, the FCFD is the primary response agency for all of State Highway 115 along the western border of the post, including areas south of the Turkey Creek Recreation Area.

The FCFD operates three fire stations: a main station in the middle of post, one station at Butts Army Airfield with a mission of crash rescue at the airfield, and a small station at the Turkey Creek recreation area.

FCFD responded to 2,800 calls for service in FY 2007. It is anticipated that calls for service will increase nearly 86%, to 5,200, by FY 2013. The post's manpower study will also determine the number of fire department personnel needed to meet this increase in demand.

Because the majority of Fort Carson personnel live off-post, Fort Carson law enforcement and fire officials need to work closely with surrounding communities. In addition to informal working relationships between jurisdictions, the post has numerous agreements with local agencies regarding public safety needs. Coordination between the post and local fire departments is long-standing and more formalized; the post has twenty-six mutual aid agreements with surrounding fire jurisdictions. This type of coordination has been extremely beneficial to the post and the community. For example, over fifty personnel and ten agencies responded to assist the post in fighting the "Training Area 25" fire in April, 2008. Efforts to coordinate with local law enforcement agencies continue through mutual aid agreements, as well as more informal communication and coordination efforts, both at the command and operational level.

Fort Carson and local law enforcement agencies anticipate enhanced communication and coordination with the recent appointment of a civilian as deputy director of emergency services. Prior to this appointment, Fort Carson communication with local agencies was handled by military

personnel with regular turnover, providing little continuity. This enhanced level of communication and coordination helps ensure adequate resources during emergencies and provides the post and local law enforcement agencies with better information when addressing military-specific issues.

The City of Colorado Springs

The service area covered by Colorado Springs law enforcement and fire and emergency services is 194.5 square miles. The city's population is estimated at 407,902 for 2008. According to the city's *Comprehensive Plan Annual Report 2006-2007*, between 2001 and 2007 the city's average annual population increase was over 5,000, or 1.4%. However, a 3.1% jump in 2007 indicates that population growth in the region is rising, and this increase is attributable at least in part to Fort Carson. In addition to baseline growth, the city anticipates significant impacts from Fort Carson's growth, with an increase of over 16,000 Fort Carson soldiers and families residing in the city by 2011.

Colorado Springs public safety and emergency services are funded by the city's general fund, as well as a .4% Public Safety Sales Tax (PSST). Specific funding levels are broken down by law enforcement (police department) and fire/emergency services (fire department). Below is a description of Colorado Springs' public safety services and costs.

Law Enforcement

In order to meet the law enforcement needs of the city, the Police Department operates out of the police operations center and four substations geographically dispersed across the city. The department is divided into bureaus (Operations Support, Patrol, and Administrative) to provide a range of services, including investigations; vice, narcotics, and intelligence; specialized enforcement, such as domestic violence and gang enforcement; patrol services; building security; traffic enforcement; crime prevention; and organizational and administrative support.

The police department's budget is as follows:

Table 1: Colorado Springs Police Department Budget

	2005 Actual	2006 Actual	2007 Budget	2008 Budget
General Fund	$70,229,520	$71,602,947	$74,338,959	$73,001,812
Public Safety Sales Tax Fund	$15,743,560	$12,808,753	$13,794,896	$12,739,895
General Fund FTEs				
Civilian	249	249	251	238
Uniformed	580	580	580	579
Total	829	829	831	817*

*This includes a shift of 9 positions from the Police Department to the city's newly-created Information Technology Department

Source: City of Colorado Springs 2008 Budget

The city's population and calls for service have been steadily rising in recent years. However, the department's annual budgets, particularly staffing levels, have not kept pace with this increase in demand for service. In fact, the 2008 CSPD budget is lower than the previous year's budget. The PSST has provided additional revenue and capital outlays for the police and fire departments, but budget constraints because of tax limitation measures and an economic slowdown that has decreased sales tax revenues make it extremely difficult for city services to keep pace with the growth in service area and population. Despite less funding per capita, CSPD has, in some areas,

been able to do more with less. Unfortunately, as the city continues to face budget constraints, decreased funding will affect the department's ability to maintain current service delivery levels.

CSPD has had good success in certain performance measures, such as clearing violent crimes and the ratio of injury-producing traffic accidents. However, the department notes key issues of concern in its 2008 budget, particularly as the population increases but resources (i.e., the number of patrol officers) do not keep pace. For example, the department's staffing ratios are below national averages (2.5 FTEs per 1,000 population versus 2.9 per 1,000 for similarly sized cities). Also, the number of calls for service continues to increase, from 193,162 in 2003, to 251,746 in 2006. In addition, response time for calls for service is increasing annually and is estimated at 11:28 (minutes:seconds) for "priority one" emergency calls, well above the average for similarly-sized cities (9:13) and above the department's target of eight minutes.[2]

The lack of patrol officers is of particular concern to local officials who indicate that, recently, the department has had no officers to respond to nearly half of all calls. In addition, response times for certain calls are extremely high. For example, response times for criminal mischief calls average sixty-five minutes; hit and run response times average thirty-six minutes; and theft response times average forty-seven minutes.[3]

In order to reach desired service levels in the future to meet growth-related needs, as well as address current gaps in service, the city has identified public safety needs in the 2009-2018 timeframe. The department anticipates that an additional 353 sworn officers, forty-five additional uniformed supervisors and 126 more civilian employees would be needed to decrease response times to eight minutes 90% of the time and obtain a ratio of two uniformed officers per 1,000 population.[4] A portion of CSPD's future needs can be attributed to Fort Carson's growth. An estimate of CSPD costs to meet needs of additional soldiers and families through 2011 are provided below.

Projected CSPD Costs in Response to Fort Carson Growth

The following projections are based on several assumptions. These assumptions include the geographic distribution of Fort Carson soldiers and families living off post and the population percentages of municipalities within El Paso County. A detailed fiscal analysis, including a breakdown of anticipated commercial growth is beyond the scope of this paper; therefore, cost estimates are calculated on a per capita basis (see Appendix A for a more detailed breakdown of Fort Carson cost impacts to public safety jurisdictions).

Per capita costs for the Colorado Springs Police Department are based on 2006 data, which include the latest municipal population estimates provided by the State of Colorado Department of Local Affairs (DOLA). As detailed in Appendix A, 2006 per capita costs for the CSPD were $216. The estimated city population increase from Fort Carson personnel and families is 16,574. Therefore, costs to provide police services – at current service levels – for additional Fort Carson soldiers and families living in Colorado Springs by 2011 are estimated at over $3.5 million.

2 City of Colorado Springs 2008 Budget.
3 Citizens for Effective Government, Presentation to the Leadership Summit, April 15, 2008.
4 City of Colorado Springs Ten-Year Public Safety Needs.

In order to increase service levels to national standards, CSPD has also calculated annual spending increases for additional personnel, facilities, and equipment for future years. According to CSPD's Ten-Year Public Safety Planning documents, the department anticipates the need for an additional 181 personnel (FTEs) by 2011, with an estimated budget of more than $20 million above 2008 levels. Therefore, in order to provide services at increased standards, the per capita cost would increase to $239, and the Fort Carson growth component of police department costs is estimated at over $3.9 million by 2011. Please note that this estimate of future needs represents only on-going 2011 costs above the department's 2008 budget and does not include one-time capital requests in intervening years (see Appendix B for a more detailed analysis).

Fire and Emergency Services

The Colorado Springs Fire Department provides fire and emergency services from twenty stations located throughout the city. CSFD staffs twenty engine companies, five truck companies, one hazmat team and one medical squad. The department's equipment also includes eleven brush trucks for fighting wildland fires, a heavy rescue truck, an air supply truck, a hazardous materials decontamination vehicle and a hose wagon to respond to emergencies. In general, CSFD responds to all emergencies that are not primarily law enforcement calls. These calls include wildland, structure, and vehicle fires, medical emergencies, rescues, hazardous materials responses and other calls for assistance. The department's goal is to respond to incidents within eight minutes 90% of the time.

The Fire Department's budget to provide these services is as follows:

Table 2: Colorado Springs Fire Department Budget

	2005 Actual	2006 Actual	2007 Budget	2008 Budget
General Fund	$40,100,414	$40,271,049	$42,356,486	$39,983,216
Public Safety Sales Tax Fund	$9,565,962	$10,736,054	$12,572,617	$12,809,702
General Fund FTEs				
Civilian	43.25	42.25	42.25	36.25*
Uniformed	372	373	379	379
Total	415.25	415.25	421.25	415.25

*This includes a shift of 6 positions from the Police Department to the city's newly-created Information Technology Department

Source: City of Colorado Springs Proposed 2008 Budget

The CSFD reports that, based in part on troop deployments, the number of emergency incidents per 10,000 population has risen more slowly since 2003. Also, because of a 2006 policy change that eliminated Fire Department responses to low priority police calls, the number of emergency incidents has actually declined slightly from 1,163 per 10,000 in 2006 to an estimated 1,119 in 2007 and 1,103 in 2008.[5] However, over the last ten years, the number of total calls for service has increased approximately 39%, from 32,417 in 1998 to 45,107 in 2007.[6] The department is working to maintain its current service level of responding to emergency calls within eight minutes 90% of the time. By repositioning and adding equipment, the department is responding to additional needs of residential development in areas that are not well-covered. However, particularly in newer

5 City of Colorado Springs 2008 Budget.

6 2007 Colorado Springs Fire Department Statistical Abstract, reported in the Colorado Springs Gazette, March 1, 2008.

developments to the east, the department's response times have increased, and in some cases those times do not meet the department's standards.

As the city continues to grow, the department anticipates the need for more fire stations, personnel, and equipment to ensure adequate coverage. In order to meet long-term demand, the department has identified a need for three new city-built fire stations, staffing at ten new fire stations, the addition of three truck companies and nine medical squads, with a total of 210 additional sworn personnel and twenty-four civilian positions between 2009 and 2018.[7] Obtaining these staffing and capital needs will continue to be a challenge, as PSST funds will be absorbed by staffing and operational costs and funding for additional capital facilities and equipment has not yet been identified.

Projected CSFD Costs in Response to Fort Carson Growth

In order to determine the specific impacts on public safety from Fort Carson growth, this paper utilizes per capita spending levels. As detailed in Appendix A, 2006 per capita costs for fire and emergency services in Colorado Springs were $131. To maintain current service levels, per capita spending in 2011 is assumed to remain at the 2006 level. With the addition of 16,574 Fort Carson troops and families, CSFD costs would increase by over $2 million to serve this new Fort Carson population.

However, in CSPD's Ten-Year Public Safety Planning documents, the department has identified additional facilities and personnel needs above 2006 levels in order to meet the demands of overall growth, including Fort Carson-related growth. Appendix B details these costs. Specifically, the department anticipates the construction of two fire stations by 2011. Additional costs cover equipment and staffing needed for new and existing fire stations, with the addition of sixty-seven additional staff by 2011. Per capita costs to meet increased service levels are estimated at $149. Therefore, costs to serve the increased number of Fort Carson soldiers and families living in the city at this higher service level are estimated to be nearly $2.5 million. Please note that this estimate is conservative. The per capita cost calculations represent only 2011 ongoing funding needs above the department's 2008 budget and do not include all capital costs in intervening years.

The above cost estimates for the Colorado Springs police and fire departments indicate that Fort Carson-related growth will have significant impacts on public safety services for the City of Colorado Springs. These costs include capital funding for fire stations, equipment, and vehicles, as well as on-going operational costs. Based on current budget trends and funding projections, the city will face challenges in meeting Fort Carson's growth needs. Additional resources will be needed to meet both Fort Carson and baseline growth demands.

The City of Fountain

The City of Fountain encompasses twenty-two square miles with a population of approximately 23,000. Out of a total general fund budget of $12,229,980, police services account for 37% and fire services account for 16% of the total budget. Ambulance service is paid for through an enterprise fund, with a small general fund subsidy, accounting for approximately 1% of the general fund budget.

[7] City of Colorado Springs Ten-Year Public Safety Needs.

Despite a regional and national economic slowdown, Fountain has continued to grow, even if at a slower pace than in previous years. As development and growth continue, the City of Fountain anticipates increases in both sales tax revenue (an estimated 6% increase from 2007-2008) and property tax revenue (an estimated 18% increase from 2007-2008).[8] However, because of tax measures which limit the city from increasing spending above specified levels,[9] the city faces spending restrictions below these forecasted revenues, limiting the ability of the city to meet the service needs demanded by new growth. Therefore, Fountain, as well as other local jurisdictions in the Fort Carson study area, must come up with creative alternatives to meet the demands of growth on public safety and other services.

Law Enforcement

The Fountain Police Department operates out of one station with forty sworn officers and three reserve officers. The patrol division, the largest function of the police department, covers four patrol districts. The department also handles other functions, including SWAT and criminal investigations, as well as communications and support.

In the past three years, the police department's budget has risen, but not as rapidly as demand for the department's services. For example, in 2006, the Fountain Police Department received 24,452 calls for service, a 20% increase over 2005 calls. Also, the department's 2008 budget increase is less than previous years' increases. Because of limited resources, the city has not been able to provide monies through the general fund to meet the department's staffing requests, although the department has been able to fund some positions and other needs through grants. Details of the department's general fund budget are provided in Table 3.

Table 3: Fountain Police Department Budget

	2005 Actual	2006 Actual	2007 Budget	2008 Budget
General Fund	$2,970,579	$3,397,740	$3,881,690	4,205,900
General Fund FTEs				
Civilian	13	13	13	13.5
Uniformed	38	38	40	40
Total	51	51	53	53.5

Sources: City of Fountain 2008 Budget Summaries and Fountain Police Department

The Fountain Police Department's staffing levels are a concern for the department. The number of officers (1.5 per 1,000) is currently below national standards (2 officers per 1,000), and the department does not have the funding necessary to hire additional personnel. The department estimates that fourteen additional officers are currently needed, and six more may be needed by 2009. Because a significant portion of Fort Carson soldiers and families who live off post are expected to live in Fountain (17.5% currently reside in the city), the department is very concerned about its ability to serve population increases from Fort Carson.

[8] City of Fountain 2008 Budget.

[9] Tax measures in Colorado, particularly the Taxpayer's Bill of Rights (TABOR), impose revenue and spending restrictions on all taxing entities. These restrictions make it difficult for fast-growing communities (which may be unable to collect tax revenues above allowable limits) from keeping up with the pace of growth. These restrictions also affect communities following economic downturns because, if tax collections fall below previous years' collections, spending and revenue limits are "ratcheted back"; therefore, when the economy improves, jurisdictions can not increase spending to previous levels.

Projected Fountain Police Department Costs in Response to Fort Carson Growth

2011 cost estimates for the Fountain Police Department to meet projected Fort Carson growth are based on 2006 per capita public safety costs for the city. Appendix A shows that, in 2006, per capita costs for police department services were $163. With a projected increase of nearly 4,500 Fort Carson soldiers and families and assuming no increase in personnel or other costs above 2006 levels, costs for the police department to maintain current service levels would be over $730,000. These costs represent a more than 21% increase above 2006 public safety spending, just to accommodate Fort Carson growth, and do not reflect additional costs to meet baseline growth needs. Therefore, the department likely will face future funding and staffing shortfalls if additional resources are not identified to meet these growth needs.

Fire and Emergency Services

In addition to the twenty-two-square mile city area, the Fountain Fire Department covers sixteen miles of Interstate 25, from mile marker 132 south to the Pueblo County line (mile marker 116).

To serve the residents of Fountain and cover I-25, the department has thirty paid staff and sixty volunteer firefighters operating out of three stations. The department is responsible for fire suppression, fire prevention and education, basic and advanced medical life support, ambulance transport, a hazardous materials unit, a heavy rescue unit, a technical rescue team and a wildland fire team.

The number of calls (alarms) has increased from 2,602 in 2002 to 3,248 in 2007. The department's average response time for calls for service is 4.59 minutes. In January 2002 the department added paramedic ambulance transport service; this service has reduced hospital transport times by twenty minutes. When the Fire Department's ambulance is in use, a private ambulance company (American Medical Response) provides transport services. Table 4 outlines the department's annual funding to meet the city's fire and emergency service needs.

Table 4: Fountain Fire Department Budget

	2005 Actual	2006 Actual	2007 Budget	2008 Budget
General Fund	$1,567,572	$1,623,180	$3,031,405	$1,904,660
General Fund FTEs				
Civilian	0	0	1	1
Uniformed	27	28	29	29
Total	27	28	30	30

Source: Fountain Fire Department

The large increase in the department's 2007 budget included the purchase of a ladder truck for $800,000. The purchase of the truck greatly enhances the department's ability to meet public safety needs; prior to the purchase and receipt of this truck, the department's existing apparatus could only reach up to twenty feet high. Because of the department's size and funding constraints, the purchase of any equipment significantly impacts the department's budget.

Projected Fountain Fire Department Costs in Response to Fort Carson Growth

Projected cost impacts from Fort Carson growth are based on the department's 2006 per capita costs. This method assumes service levels will not increase by 2011. As Appendix A shows, 2006 per capita costs for the Fountain Fire Department were $78. Based on a projected Fort Carson-related population increase of nearly 4,500, the increased costs for fire and emergency services just for the

Fort Carson growth component is estimated at approximately $350,000. This figure represents a more than 21% increase over 2006 spending levels just to accommodate Fort Carson growth and does not reflect the department's total costs to serve all residents by 2011.

However, the department has indicated that in order to meet the increased needs of Fort Carson and baseline growth by 2011, the department will need an additional fire station ($1.5 million) and fire engine ($450,000), as well as seven firefighters ($650,000 annually) to adequately serve the population. The total cost for the new capital facilities, equipment, and staffing is $2.6 million, a significant increase over current budget requirements. Based on population projections and future budget needs, the per capita cost for increased services is estimated at $95. This number reflects only on-going 2011 costs above the department's 2008 budget and does not include additional one-time capital costs. The projected Fort Carson component of these costs, based on a Fort Carson-related population increase of nearly 4,500 by 2011 is approximately $427,000 (please see Appendix B). Again, these are significant costs for which no additional funding is currently identified. The City of Fountain will need to address these cost implications in order to provide services that meet the needs of Fort Carson and baseline population growth.

El Paso County Sheriff

The El Paso County Sheriff's Department covers the county's 2,158 square miles and a total population of 597,632; over 155,000 live in unincorporated El Paso County.[10] The Sheriff's Department provides law enforcement services in unincorporated areas of the county. The department also provides services on a county-wide basis to all county residents, including running the county jail, serving as fire warden, executing writs, transporting prisoners, conducting search and rescue and processing concealed weapons permits.

The Sheriff's Department budget for recent years is outlined in Table 5. The department's 2008 budget is $44,012,082 – less than the department's 2007 budget of $44,622,962. The total public safety component, which includes the District Attorney, Coroner, and other public safety functions in addition to the Sheriff's Department, is approximately 36% of the total county budget. The department has 600 law enforcement personnel (419 sworn and 181 civilian). The number of calls for service received by the Sheriff's Department has been steadily increasing. The department handled 213,680 calls in 2005, an estimated 216,758 in 2006, and an estimated 222,177 in 2007. However, the county is experiencing extreme budget pressures, and the Sheriff's Department's 2008 budget reflects these budget constraints.

Table 5: El Paso County Sheriff's Department Budget

	2005 Actual	2006 Budget	2007 Budget	2008 Budget
General Fund	$45,597,972	$44,172,591	$44,622,962	$44,012,082
General Fund FTEs				
Total	600	603	603	600

Source: El Paso County 2007 Budget Book and 2008 Preliminary Balanced Budget

Long-term trends indicate that, as the county's population has grown, public safety resources have not kept pace. For example, the county's population has increased by 50,000, and the department has seen a 137% increase in calls for service since 1990; however, no additional patrol deputies have

[10] Population figures are based on 2007 Department of Local Affairs estimates.

been funded in that timeframe. Response times for priority one calls range from 9:03 to 20:35 (minutes:seconds), depending on area of the county, and response times of ten minutes or less occur as little as 11% of the time in underserved areas of the county. Further, in 2007 the number of patrol deputies per 100,000 serving unincorporated El Paso County was 38.8, significantly lower than other urbanized counties in the state (Arapahoe County reported 73.1 patrol deputies per 100,000; Douglas County reported 73.2; and Boulder County reported 184.3).[11]

Jail facilities are also currently stretched beyond their limits, and any additional growth will require significant funding increases to meet current service levels or improve levels of service. For example, in 1995, the staff-to-inmate ratio was 1:35; in 2006 the ratio was 1:65, and wards at the criminal justice center are currently over 95% of capacity, raising significant safety concerns for staff and inmates. If current trends continue, the El Paso County Sheriff estimates that by 2012 the jail's population will be 2,187 inmates, with a capacity of only 1,599 beds. Additionally, salaries for El Paso County Sheriff's deputies are significantly below neighboring jurisdictions, making it difficult to attract and retain qualified staff.[12]

Because of severe budget constraints, the El Paso County Sheriff continues to raise concerns about the ability of the department to provide services to existing and future residents at nationally-recognized service levels. The ability of the department to provide services is becoming more and more difficult, and the department (along with other county departments) is in the position of having to recommend programs to eliminate, such as the county's work release program, in order to achieve cost savings. These types of cuts have other impacts, such as increasing the population of the county's already-taxed jail facilities.

Projected El Paso County Sheriff Department Costs in Response to Fort Carson Growth

Determining specific costs to the department related to Fort Carson growth is challenging for several reasons. The department provides varying services to residents in unincorporated and incorporated areas, and breaking down costs by area is beyond the scope of this assessment. Further, while estimates of per capita costs in this assessment assume that service levels will remain constant, the budget pressures on county services may actually lead to decreased service levels as budgets continue to decrease while the county population increases. The department has identified current and projected future gaps in service based on budget history, continued funding shortfalls, and projected baseline and Fort Carson growth needs. In order to address these gaps, the Sheriff's Department has identified over $150 million in one-time capital needs and over $60 million in on-going operational needs by 2014. However, funding for these projects has not been identified.

The above issues notwithstanding, Appendix A does provide an estimate of public safety costs for the Sheriff's Department – assuming current service levels are maintained – based on Fort Carson growth projections. Specifically, based on 2006 per capita costs of $76, a projected increase of approximately 23,000 Fort Carson troops and families would result in costs of over $1.7 million in 2011. The department will be extremely challenged to meet these future costs based on current budget conditions in the county.

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[11] Ten County Comparison Report, 2007.

[12] The Jails are Full: Causes and Future Implications, Sheriff Terry Maketa and Bureau Chief Paula Presley, available at http://shr.elpasoco.com; El Paso County Sheriff 2007 budget request documentation.

Stratmoor Hills Fire Protection District

The Stratmoor Hills Fire Department is located between the City of Colorado Springs on the north and Fort Carson on the south. The department's service territory covers approximately four square miles of residential and light commercial properties, with an additional six miles of Interstate 25, from Circle Drive (mile marker 138) to Colorado Highway 16 (mile marker 132). The district has one station, seven paid employees, an average of twenty to twenty-five volunteers, and seven vehicles. The department's budget, detailed in Table 6, is funded mainly through property taxes, with the rest funded by vehicle taxes, grants, and fire protection contracts.

Table 6: Stratmoor Hills Fire Protection District Budget

	2005 Actual	2006 Actual	2007 Budget	2008 Budget
General Fund	$587,213	$617,057	$652,333	$671,426
Other funding (grants, etc.)	$26,487	$249,597	$39,047	$0
General Fund FTEs				
Civilian	1	1	1	1
Uniformed	6	6	6	6
Total	7	7	7	7

Source: Stratmoor Hills Fire Protection District

Currently, the district serves approximately 2,600 homes and 6,500 residents. The area will increase by approximately 1,000 new residential units in the district by 2011, primarily to accommodate Fort Carson growth. The district also anticipates major impacts to traffic, both in terms of volume and severity of traffic incidents as the volume on its roads increases because of Fort Carson growth. Currently, approximately 14% of the district's calls are traffic-related, double the number from ten years ago, and the number of traffic-related incidents is expected to rise. As calls for service increase, additional wear and tear on vehicles creates the need to purchase equipment more often than in previous years. The district estimates that equipment that used to last twenty years now needs to be replaced as often as every ten years, effectively doubling the equipment costs for the department.

The district is also affected by workforce issues related to Fort Carson. Until recently, many of the district's volunteer firefighters were Fort Carson soldiers. Because of repeated deployments, active duty military members have been unable to volunteer and are becoming less willing to continue service because of a desire to spend more time with their families when they are home. The district is working to address this shortage by adjusting recruiting and response plans. However, this shortage of volunteers affects the district's budget by increasing the need for more paid staff. Also, as noted above, the district relies heavily on property taxes for its budget, and partly because of Fort Carson deployments and partly because of the current housing market, the number of vacant houses in the district has increased, lowering the district's tax base.

Estimating per capita costs specifically for the Stratmoor Hills Fire Protection district is beyond the scope of this paper because the analysis used for the Growth Plan and this paper does not include 2011 population information attributable specifically to the district. However, it is anticipated that many of the new district residents will be associated with the post. Also, the district will be impacted by increased traffic from non-residents traveling to and from the post. The district's budget, as noted in Table 6, can fluctuate greatly, depending on the availability of grant funding and other non-general fund sources, making cost averaging estimates difficult. Therefore, determining specific Fort Carson impacts to the district is not possible under current data limitations.

However, based on information provided by the district and information provided by fire and emergency service providers in the region, some general impacts of Fort Carson growth can be identified. In particular, the district anticipates a significant increase in traffic, not just from residents, but from pass-through traffic in general and from vehicles traveling to and from Fort Carson. The district has identified a need for additional staffing (both career and volunteer), as well as additional equipment to meet future growth. Specific staffing levels have not yet been determined, particularly as the district struggles to recruit and retain volunteer firefighters. The district has identified a near-term need for a new rescue truck, at a cost of $300,000-$350,000. This cost would increase the district's budget by 45-52%, a cost that the district would not be able to absorb without identifying funding beyond current general fund levels.

The department is also seeking to off-set needs for increased paid staffing by developing a training program for recruits and students that would include tuition assistance and apprenticeship opportunities while providing the district with needed volunteer firefighters. Funding for this type of program has not yet been identified. Stratmoor Hills, like other public safety agencies in the region, is struggling to meet current needs under difficult circumstances. Growth at Fort Carson will contribute to the challenges the district faces.

Security Fire Department

The Security Fire Department covers approximately eighteen square miles of mainly residential area and serves 42,000 people in the communities of Security and Widefield in unincorporated El Paso County. The department operates out of three stations with fifteen paid staff and approximately forty to fifty volunteer firefighters. The department handles approximately 2,400 calls for service annually with an annual budget of $1.3 million.

The department, funded by property taxes within the district, has managed its previous budgetary needs by saving for major equipment purchases and capital projects, such as the purchase of a $575,000 ladder truck in 2006, to limit its debt. While the district currently has no debt obligations, it is now struggling to meet growth needs in general. Staffing requirements are a significant concern for the district, which recently asked voters to approve a mill levy increase to fund eight new paid firefighter positions. However, the district lost the election by thirty votes in the fall of 2007.

Security Fire does anticipate a significant increase in demand from Fort Carson growth. Current demographics indicate that over 13% of Fort Carson families who live off post live in the Security/Widefield area. Because of 2011 population data limitations, determining specific per capita costs from Fort Carson-related impacts to the district is beyond the scope of this paper. However, the department has identified future needs based on the arrival of Fort Carson soldiers and families in the next several years.

Because of a slowdown in the local housing market and the delay in arrival of Fort Carson soldiers who are currently deployed, growth in the district has slowed. However, the department anticipates a significant increase in population with Fort Carson's growth, as the community is a strong attraction for Fort Carson soldiers and retirees.

The department works closely with local developers in the area to determine the timing and location of future fire stations. In anticipation of future growth, the department has identified the need for a fourth fire station at a minimum cost of $3.2 million. Staffing and equipment will also be

needed for the station. In the fall of 2008, the department will again ask district voters for a mill levy increase to fund an additional ten firefighters to meet anticipated growth needs. The annual cost for salaries and benefits for ten paid firefighters is $680,000. Therefore, if the mill levy increase is not approved by voters, the district could face significant staffing shortfalls, limiting the department's ability to respond to the growth demands of Fort Carson.

Other Fire and Emergency Service Providers

There are numerous other fire departments in El Paso County, as well as Pueblo and Fremont counties. The Hanover Fire Department, serving southeastern El Paso County, is experiencing some growth in the Midway/Rancho Colorado area near Fort Carson, and the department anticipates the need for an additional fire station and increased water supply to serve the area. Some smaller jurisdictions near the post, such as the Broadmoor Fire Protection District and the Southwest Highway 115 Volunteer Fire Department, do not anticipate significant impacts from Fort Carson growth.

Other fire departments in surrounding communities may be impacted by Fort Carson growth, depending on where future Fort Carson soldiers and families choose to live. For example, the Colorado Centre Metropolitan District Fire Department was created in September 2007 to support the construction of housing in three new subdivisions in unincorporated El Paso County. While this department is new, developers in the area are marketing to Fort Carson families, and the district anticipates growth in Colorado Centre developments to accommodate Fort Carson families. The Colorado Centre Fire Department and other smaller fire districts have significant equipment and capital facilities needs, but limited resources, particularly because equipment and facilities are needed before property tax dollars from new residents are collected and received by the districts. Because these districts are small, a single truck can be prohibitively expensive, and alternative funding mechanisms should be identified.

Other areas in the Fort Carson region may also experience growth, depending on the post's decisions regarding gate openings. The post has indicated an interest in opening Gate 6 on the western side of the post, which may spur some development in Fremont County. Also, the post is considering longer term options for opening Gate 19, closer to Pueblo County. Activation of these gates may encourage more development in areas like Pueblo West in Pueblo County and the Penrose area in Fremont County (see Map 2 on page 7). Additional analysis of public safety impacts in these communities is recommended to determine growth impacts if current development patterns and Fort Carson housing trends change.

Court-Related Services

The Fort Carson study area, particularly the El Paso County region, is currently experiencing a marked increase in the need for court services from Fort Carson soldiers and families, and it is anticipated that these impacts will increase with the arrival of additional troops and families. The Fourth Judicial District covers El Paso and Teller counties, and the majority of funding for the District Attorney's Office is through El Paso County's general fund, in addition a portion contributed by Teller County and from grants. Population growth drives the need for more courts, and the number of courts in El Paso County has grown in recent years, with two additional courts slated for 2008 and three new courts in 2009. However, no additional funding to support these courts has been identified at this time. These court increases necessitate additional deputy district attorneys, as well as paralegals, investigators, and other support staff, including financial and information technology positions.

According to the DA's 2006 and 2007 annual reports, the office's workload continues to rise. The DA's office handles over 33,000 cases annually, and felony trials increased by 47% in 2007. Additionally, the office established a special victims unit in 2005 to handle cases such as sexual assault, child abuse, Internet luring and extreme domestic violence. This unit has seen a 43% increase in workload since its inception. El Paso County contributes over $10 million to the DA's annual budget. However, because of El Paso County's budget pressures noted previously, the District Attorney's office is currently understaffed despite increasing workloads. The DA's 2006 Annual Report notes that, "A singe deputy assigned to county court handles more cases per year than any other prosecutor in the State of Colorado."[13] The majority of these cases include domestic violence, assaults, and driving under the influence (DUIs).

The DA's office reports a significant increase in contacts with military members and families in recent years. While current tracking of military information is limited, preliminary data do indicate an increase in the number of military members involved in crimes. The DA's office reports that in 2005, 295 military personnel were booked on criminal charges in El Paso County; that number increased to 450 in 2006 and 471 through December 1, 2007. In 2007, the number of military bookings represented over 2% of total county jail admissions. This is a small percentage of total crimes in the county, and anecdotal reports of an increase in military-related crimes require further analysis.

The Colorado Public Defender's office that serves the Fort Carson region also indicates a significant increase in workload related to Fort Carson soldiers. The Public Defender's office serves Fort Carson soldiers, spouses, and children who are officially indigent, raising concerns not only regarding criminal trends related to Fort Carson growth, but also economic issues related to the income levels of some soldiers.

Anecdotally, court officials note an increase in military-related crimes involving issues such as assault, domestic violence, and substance abuse. Fort Carson soldiers have also been involved in several high profile crimes, including murder, within the past year. More detailed analysis, including development of a tracking system to identify the number and types of crimes committed by military members, is recommended to determine key trends in public safety and law enforcement needs and appropriate responses to address these emerging trends.

C. ISSUES

General Growth Issues

Public safety and emergency service providers in the Fort Carson study area strive to provide quality services to the communities they serve. However, the region's public safety agencies are struggling to maintain current service levels as the population increases from both baseline and Fort Carson growth. Levels of funding for public safety services in the region lag behind population growth and, in the case of El Paso County, are reaching critically under-funded levels. Tax, debt, and spending limitations, combined with increasing costs to provide services, challenge local governments' abilities to maintain current levels of service or improve levels to national standards. Local law

[13] 4th Judicial District Attorney's Office Annual Report 2006, p. 11.

enforcement and fire agencies have been working hard to maintain service levels with fewer resources through increased use of technology, creative staffing, and relocating equipment to reach larger service areas.

Most, if not all, agencies are deeply concerned about their ability to maintain current service levels and meet increased growth demands. As additional troops and their families arrive, they will need services immediately but contributions from sales and property taxes will lag behind their arrival. Services needed may also not be tied directly to the population of a specific service provider, particularly for fire departments responding to traffic incidents along I-25 and State Highway 115 near Fort Carson. Additionally, tax limitation measures in Colorado make it difficult to re-attain previous spending levels after an economic downturn, and spending limitations make it difficult for the budgets of fast-growing communities to keep pace with growth. Further, voter approval requirements for any tax, spending, or debt increases are cumbersome for local governments, as the Security Fire Protection mill levy vote discussed above demonstrates.

Local public safety agencies are particularly concerned about these budget restrictions resulting in fewer resources to engage in proactive police work. Agencies are concerned that they will only be able to handle crime issues reactively and will no longer have the ability to work toward preventive solutions. In order to address these funding concerns, local officials are currently advocating for additional resources to meet El Paso County's public safety needs. It is estimated that $70 million is needed annually to support public safety and public health agencies in the county, just to fill existing gaps and meet current needs. Options being considered include a possible 1-cent sales tax increase, a 15-mill property tax increase, or impact fees. Any proposal to increase sales or property taxes, however, will require voter approval, a rather daunting challenge in a community that has been historically reluctant to increase taxes and that is currently experiencing an economic slowdown.

Another factor affecting the Fort Carson study area is that the region is served by multiple agencies and districts. As growth extends eastward, new, small metropolitan and fire districts are created to provide services, but their small size limits their ability to obtain funding for equipment and staffing to meet local needs. Also, the number of public safety agencies in the region makes it challenging for Fort Carson personnel and local agencies to communicate about key issues. The existence of multiple agencies requires a high level of coordination to ensure efficient and effective service delivery. Public safety agencies in the region have a good history of cooperation and coordination through a multitude of mutual aid agreements and informal, ad-hoc, cooperation. Continued communication and coordination through both formal agreements and informal relationships is critical to meeting the public safety needs of the Fort Carson study area, particularly as growth demands outpace jurisdictions' abilities to meet public safety needs at current levels of service.

Issues Unique to the Military Population

There is often a perception that communities neighboring military installations experience higher levels of crime. For example, studies on Army populations in general indicate an increase in spousal aggression and domestic violence, as well as higher rates of child maltreatment, particularly during

times of deployment.[14] Also, younger populations (particularly those under twenty-five) tend to have greater contacts with law enforcement and commit more crimes.[15] Further, there is some concern that the Army has increased recruiting waivers, allowing more soldiers with criminal backgrounds to serve in the Army.[16] While overall crime rates in the El Paso County region as a whole do not support this perception, preliminary data from law enforcement agencies and social service providers, as well as anecdotal information and recent high profile crimes committed by some soldiers, suggest that key public safety issues related to Fort Carson are beginning to emerge. These issues may involve only a small percentage of the Fort Carson population. However, these public safety concerns should be addressed proactively to ensure the proper levels of services on- and off-post to meet the needs of Fort Carson's soldiers and families.

In the Fort Carson study area, initial data collected by local agencies do raise some concerns regarding challenges faced by Fort Carson soldiers and families, particularly related to the stresses of deployments. For example, as detailed in the Fort Carson Growth Plan's Social Services Technical Report, Court Appointed Special Advocates (CASA) of the Pikes Peak Region indicates a significant increase in the number of military children served since the agency began collecting data in 2004. CASA supports children that have been abused or neglected or are involved in families with domestic violence or highly contested divorces. The agency indicates that in 2006-2007, military children represented 17.5% of total clients served. Fort Carson families represented less than 6% of the study area population during this time frame. CASA does not break down military data by branch of service, so it is not clear exactly how many Fort Carson families are served by the agency, and more detailed data are needed to assess Fort Carson family needs.

Other agencies, including the DA and Public Defender's Office, have also experienced increased caseloads related to the military. These cases involve Fort Carson soldiers and families, as well as children of soldiers who are beginning to exhibit behavioral problems related to the stresses of military life and repeated deployments of parents. Further, as detailed in the Social Services Technical Report, 41% of child abuse reports to the El Paso County Department of Human Services come from the nine zip code areas near Fort Carson. While these statistics can not lead to the conclusion that Fort Carson soldiers and families are directly responsible for these issues, further data collection and analysis are recommended to help communities better understand and address Fort Carson and other growth impacts on public safety services.

In the absence of detailed data related to military populations in the Fort Carson study area, this report includes anecdotal information provided by local law enforcement and emergency service providers. Agencies have identified general trends and emerging issues, in addition to increased demands on law enforcement and court services related to Fort Carson soldiers and families. Much

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[14] "Deployment and the Probability of Spousal Aggression by US Army Soldiers". McCarroll, JE, Ursano, RJ, Liu, X, Thayer, LE. Newby, JH, Norwood, AE and Fullerton, CS. *Military Medicine*, Vol. 165, No.1, January 2000, pp. 41-44. "Effect of Deployment on the Occurrence of Child Maltreatment in Military and Nonmilitary Families". Rentz, ED, Marshall, SW, Loomis, D, Casteel, C, Martin, SL, and Gibbs, DA. *American Journal of Epidemiology*, Vol. 165, No. 10, pp. 1199-1206. "Child Maltreatment in Enlisted Soldiers' Families During Combat-Related Deployments". Gibbs, DA, Martin, SL, Kupper, LL, and Johnson, RE. *Journal of the American Medical Association*. Volume 298, No. 5, August 2007, pp. 298-535.

[15] *2006 Crime in the United States* and age-specific arrest rates, U.S. Department of Justice, Federal Bureau of Investigation.

[16] "Army Accepts Crime in Recruits." Tom Bowman, *Baltimore Sun*, February 14, 2006; "Army, Marines Give Waivers to More Felons," CNN.com, April 21, 2008.

more detailed, verifiable data collection, analysis, and reporting are needed, however, to determine key issues and trends related to Fort Carson growth impacts.

Based on initial information, local agencies report several areas of concern regarding Fort Carson growth. Again, while these issues may affect only a small percentage of Fort Carson soldiers and families, local officials have expressed the need for further analysis and resources to address these impacts as Fort Carson grows. Issues that are unique to military populations and require further attention include the following:

- The need for continued and enhanced coordination with Fort Carson personnel, particularly concerning law enforcement matters.
  - While Fort Carson has recently hired a civilian to oversee law enforcement services to help enhance communication and coordination with law enforcement agencies, more coordination, particularly related to data-sharing, is recommended.
- High levels of stress on soldiers and families caused by the increased number and duration of deployments, particularly:
  - Concerns about increased domestic violence or substance abuse;
  - Potential elevated levels of unruly behavior at downtown bars;
  - Increased critical incident calls, such as suicides and barricades, that endanger public safety personnel and require a great deal of resources (staffing and funding) to resolve;
  - First responders' ability to assess and respond properly to issues of post-traumatic stress disorder (PTSD) and/or traumatic brain injury (TBI) that can affect soldiers' behavior.
- Workforce issues, particularly for volunteer fire departments that are unable to attract and retain military members for volunteer service.
- Concerns about increased criminal activity from soldiers moving from other installations.
  - Gang activity at Fort Hood and new soldiers arriving from that installation have raised concerns among local law enforcement agencies and Fort Carson. While the post does not anticipate significant gang activity, it is important for local jurisdictions and the post to communicate and coordinate in order to handle any possible gang issues proactively.
  - Motorcycle groups that require engagement with, and escape from, law enforcement officials for membership, resulting in high-speed chases and dangerous traffic incidents.
- Impacts to the county court system and other services.
  - Soldiers involved in incidents off-post are required to obtain their own legal representation, increasing demands for public defender services for soldiers and family members who are indigent;
  - Many soldiers impacting the court system also have compounding issues such as PTSD or substance abuse problems, and require services beyond the scope of the courts.

D. RECOMMENDATIONS

As noted in the above discussion, public safety and emergency services agencies in the Fort Carson study area are currently struggling to meet the demands of growth in general and Fort Carson-related growth. Complicating service delivery capabilities are emerging trends specific to Fort Carson, particularly related to deployments. This section highlights recommendations and actions to

address the cost impacts of Fort Carson growth and the need for regional coordination, as well as Fort Carson-specific public safety needs.

Issue: Growth related to the increased number of troops and their families will exacerbate challenges for local jurisdictions to provide already-strained public safety and emergency services in the Fort Carson region.

Recommendation #1: Identify and obtain funding needed to maintain and enhance existing levels of service for public safety.

Action #1: Identify specific capital facilities, equipment, manpower and operational needs for each jurisdiction to meet growth-related needs.

Action #2: Seek additional funding for public safety services in El Paso County, such as through additional sales or property tax revenues, grants, or other funding sources, to address current gaps in service, as well as meet identified growth-related funding needs. Funding levels should support public safety efforts that focus on prevention.

Action #3: Construct additional facilities (fire/police stations) to meet the needs of increased population.

Action #4: Identify and obtain funding to hire additional personnel to handle increased service calls for law enforcement, traffic incidents, and other emergency services.

Action #5: Identify and obtain funding to purchase equipment/apparatus to handle increased service calls.

Recommendation #2: Develop innovative strategies to meet staffing, training, and other agency needs to maintain existing service levels.

Action #1: Develop recruitment and training programs to assist smaller jurisdictions in meeting workforce needs (i.e., volunteer firefighters).

Action #2: Implement best practices and use of technology to gain efficiencies in providing services (e.g., use of technology to provide more training in-house).

Action #3: Develop strategies to assist smaller jurisdictions in funding equipment needs (such as fire apparatus) that can not be covered by annual budgets.

Action #4: Continue partnerships with Fort Carson, including opportunities for joint law enforcement and fire training, as well as local jurisdictions' use of Fort Carson's fire training facilities.

Issue: Military-specific law enforcement and public safety issues are emerging as a concern and will increase as more troops are stationed at Fort Carson and return from deployments.

Recommendation #1: Enhance communication and coordination through better data collection, tracking, and reporting and information sharing.

Action #1: Develop an information tracking system to collect and report statistics and identify military-related impacts on law enforcement and public safety services.

Action #2: Implement a data collection and reporting system modeled on the El Paso County court's tracking of gambling-related crime. Such a system will help the community and the post identify and quantify key military-specific issues and emerging trends in order to develop appropriate methods to respond to the emerging trends.

Action #3: Develop a database system that allows linkages between Fort Carson and local law enforcement jurisdictions to enable the local jurisdictions and the post to track and respond appropriately to any Fort Carson soldiers in contact with local law enforcement.

Recommendation #2: Develop and enhance training programs for first responders regarding military-specific issues, such as soldiers with post-traumatic stress disorder (PTSD) and traumatic brain injury (TBI).

Action #1: Continue current training of law enforcement and fire and emergency first responders to address health and behavioral health issues of returning troops, particularly related to PTSD and TBI. Include in these trainings other community-based service providers who assist soldiers and families.

Recommendation #3: Continue to utilize task forces and other coordination efforts to address Fort Carson-specific issues, such as potential gang concerns, bar scene issues, etc.

Recommendation #4: Coordinate with on-post and community-based social services/behavioral health agencies to address military needs related to increased stress from deployments (substance abuse, domestic violence, etc.) before soldiers and families come in contact with law enforcement agencies.

Issue: The large number of emergency service providers in the region requires substantial efforts to ensure efficient delivery of services and coordination between service providers.

Recommendation #1: Continue and enhance communication and coordination between public safety and emergency service providers on- and off-post.

Action #1: Continue use of mutual aid agreements and other, ad-hoc, efforts to ensure adequate communication between the post and local public safety agencies.

Action #2: Continue joint meetings between the installation and other agencies, such as those convened by the Pikes Peak Area Council of Governments (PPACG), the Colorado Springs Chamber of Commerce, and Fort Carson.

Recommendation #2: Work with local, regional, state and federal agencies to address roadway conditions, congestion, and maintenance issues that affect response times and public safety.

Action #1: Maximize information-sharing between public safety, transportation, and other service providers through coordination efforts of the Pikes Peak Area Council of Governments (PPACG) and the Colorado Defense Mission Coalition (CDMC).

APPENDIX A: PER CAPITA COST ESTIMATES AT CURRENT SERVICE LEVELS

Per Capita Cost Estimates for Impacted Jurisdictions at Existing Service Levels

Jurisdiction	2006 population	2006 budget	Per capita costs	2011 Fort Carson-related population increase	Fort Carson growth impacts
CSPD	390,581	$84,411,700	$216	16,574	$3,579,984
CSFD	390,581	$51,007,103	$131	16,574	$2,171,194
Fountain PD	20,872	$3,397,740	$163	4,497	$733,011
Fountain FD	20,872	$1,623,180	$78	4,497	$350,766
El Paso Co. Sheriff	578,336	$44,172,591	$76	23,004	$1,748,304

Fort Carson population forecasts for each jurisdiction are based on current distribution of Fort Carson soldiers and families, as identified in the Growth Plan Housing Paper, which shows that 97.2% of Fort Carson families live in El Paso County, with 64.5% living in Colorado Springs, 17.5% in Fountain, and 15.2% in unincorporated El Paso County (13.6% in the Security/Widefield area.)

2011 costs and budget projections are based on 2006 actual budgets and do not take into account cost of living increases for salaries or other changes, such as inflation.

Off-post population is estimated at 76% of the total Fort Carson population; therefore the 33,810 Fort Carson-related population increase living off-post is estimated at 25,696 (76% of 33,810)

Jurisdiction	Fort Carson-related population increase by 2011
Colorado Springs (25,696 * 64.5%)	16,574
Fountain (25,696 * 17.5%)	4,497
Unincorporated El Paso County (25,696 * 15.2%)	3,906
Total El Paso County (25,696 * 97.2%)	23,004

APPENDIX B: 2011 PUBLIC SAFETY COST ESTIMATES AT INCREASED SERVICE LEVELS

2011 Public Safety Costs for Municipalities to Meet National Service Level Standards

	2011 population	2011 budget**	Per capita costs	2011 Fort Carson-related population increase	Fort Carson growth impacts
Colorado Springs (67.5% of county population)*	446,539				
CSPD		$106,504,903	$239	16,574	$3,961,186
CSFD		$66,757,016	$149	16,574	$2,469,526
Fountain (Crowley Consulting estimate)***	27,020				
Fountain FD		$2,554,660	$95	4,497	$427,215

*Colorado Springs' 2011 population is based on the city's 2006 percentage of total county population, e.g., Colorado Springs' 2006 population was 390,581, or 67.5% of El Paso County's 2006 population (578,336); The 2011 total County population of 661,539 is the State of Colorado Department of Local Affairs forecast.

**CSPD and CSFD 2011 budgets are based on the departments' 2008 budgets plus department estimates of 2011 budget needs above 2008 levels, primarily representing increased personnel needs. The 2011 budgets presented here do not include certain one-time capital costs in previous years to support personnel increases; these include purchase of a CSPD helicopter, equipment for new patrol officers, information technology, and the construction and equipment needs for two new fire stations. The City of Fountain 2011 budget estimates include on-going expenses above the 2008 budget level and do not include one-time capital costs.

***Because the City of Fountain is growing at a faster rate than other parts of El Paso County, Crowley Consulting population estimates were used as a better representation of Fountain's future population.

Planning and Zoning Technical Report

Fort Carson Regional Growth Plan

May 20, 2008

Pikes Peak Area Council of Governments

Communities Working Together

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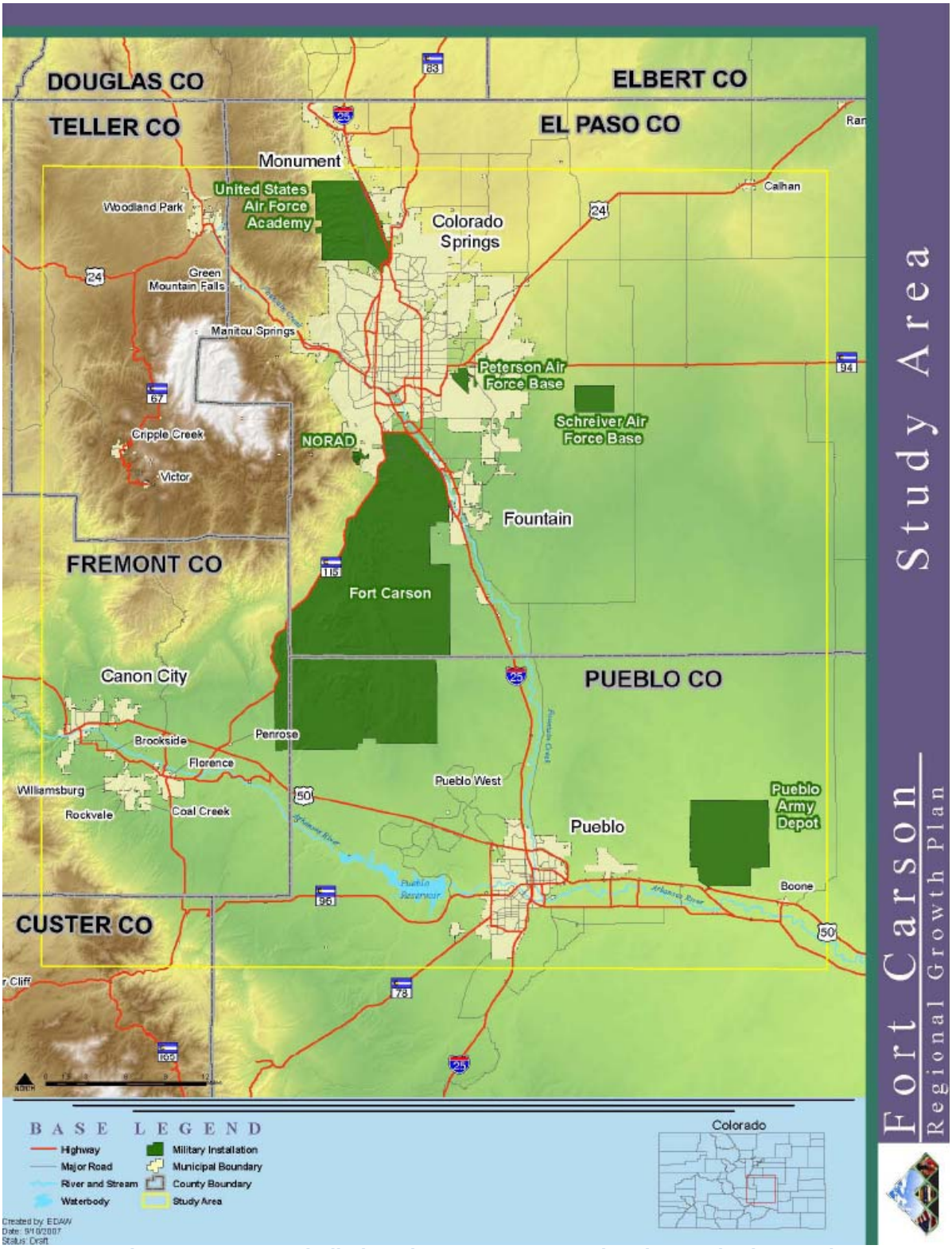


Map 1. Local Government Jurisdictions in Fort Carson Regional Growth Plan Study Area

A. PLANNED LAND USE CAPACITIES AND FORT CARSON'S GROWTH

With respect to local government land use planning for the projected growth of Fort Carson, the fundamental question is: will the capacity of land uses planned for residential and supporting commercial development be sufficient to accommodate the anticipated increase in demand? An answer in the negative would mean that local governments need to rework their land use planning and zoning regulations to respond adequately to the projected growth.

An estimated 12,600 military personnel were authorized for Fort Carson at the end of FY 2006, with an estimated 23,000 dependents living within the study area. Thus, the population of the Fort Carson community at the beginning of FY 2007 was approximately 36,000 persons.

Based on the growth resulting from Base Realignment and Closure decisions only, the total population growth associated with the troop increase at Fort Carson by 2011 is expected to be roughly 33,800, consisting of approximately 11,400 newly authorized troops, 21,300 military dependents, 430 civilians, and 690 civilian dependents.

Two large surges of troop arrivals are anticipated through 2011. The first increase in troops was estimated to add 4,700 troops by the end of Fiscal Year (FY) 2007, which is equivalent to the end of calendar September, 2007. The second increase, expected to occur before the end of FY 2009, will add an additional 5,200 new troops. FY 2008, 2010, and 2011 are expected to add 100, 700, and 700 new soldiers, respectively.

New population growth associated with the forecast troop increases (including military personnel, civilians, and all dependents) will add approximately 33,800 new persons to the study area population, and the total Fort Carson related population will make up over 8% of the total study area population by 2011.

Planned residential capacity in the three jurisdictions that will absorb the bulk of the new residents appears to be more than sufficient to absorb the demand from Fort Carson's growth. In May, 2007, a review of proposed and approved development plans for vacant land in the City of Colorado Springs, unincorporated El Paso County, and the City of Fountain, that looked only at that portion of the study area lying south of Platte Avenue/U.S. Highway 24 and surrounding Fort Carson, found a planned residential capacity of over 44,000 residential units distributed as follows:

El Paso County – Approved Plans: 26,173 dwelling units - 8,758 acres
City of Colorado Springs – Approved Development Plans: 1,881 dwelling units
City of Fountain – Proposed and Approved Developments: 16,654 dwelling units/lots
Total: 44,711 Dwelling Units/Lots

However, new multifamily units make up a small percentage of the total approved residential development in southern El Paso County and Fountain. At the same time, there is a shortage of attractive, quality affordable multifamily residential units in the Security/Widefield and Fountain area with close access to the installation. A more definite quantification and assessment, which takes into account both the existing housing stock and areas for new development in the Fountain Valley, is needed to identify opportunities for multifamily development and redevelopment, as well as for supporting commercial uses.

B. REVIEW OF LOCAL GOVERNMENT PLANNING DOCUMENTS

The following summarizes the results of a review of the key land use planning and policy documents for local governments in El Paso, Pueblo, and Fremont counties as they relate to the growth of Fort Carson. This review was undertaken in order to identify any gaps in planning documents and policies that should be filled in order to respond effectively to the land use impacts of Fort Carson's projected growth, and to identify opportunities for improved regional coordination and cooperation in land use planning.

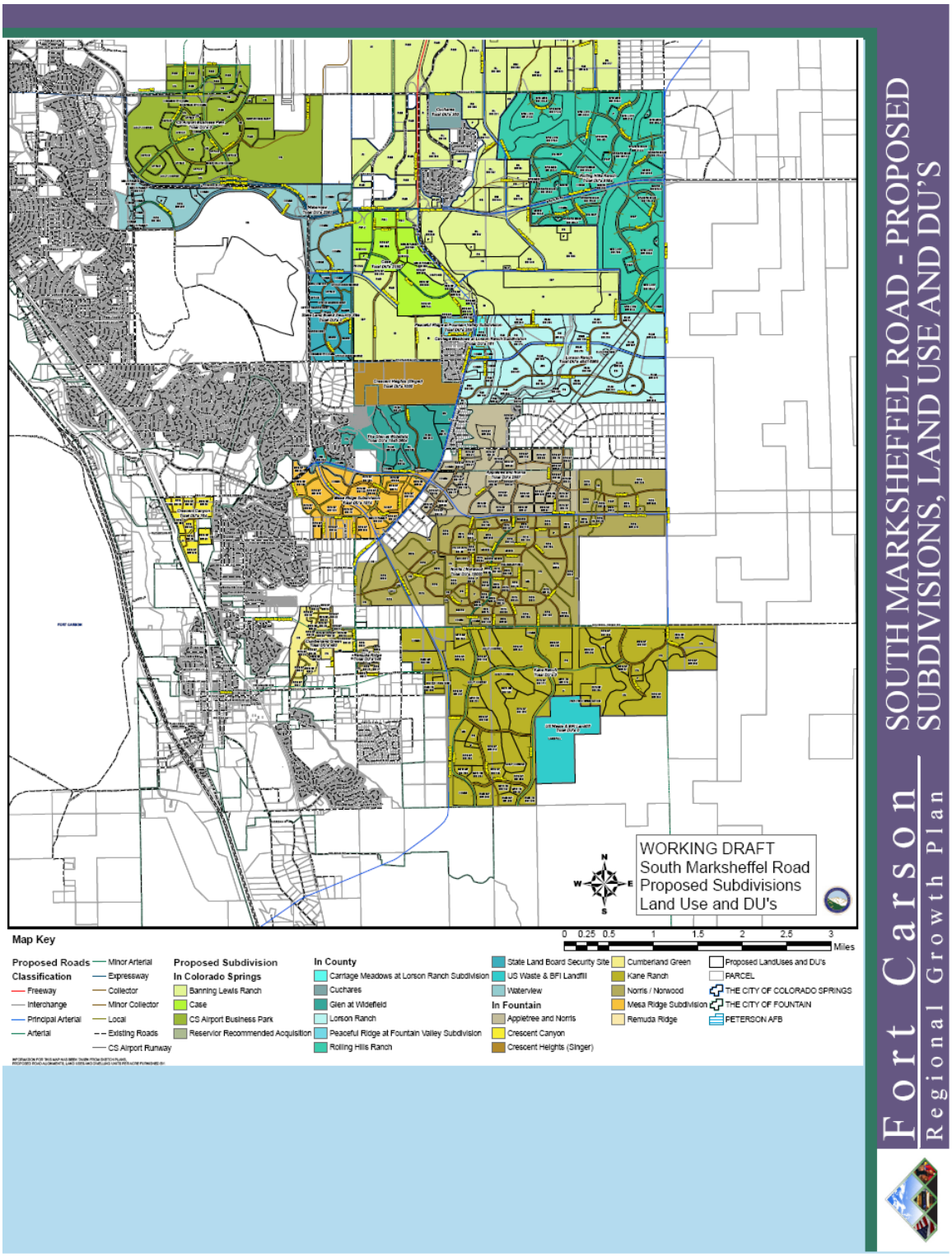
El Paso County

El Paso County utilizes its *Policy Plan* as a general guide for land use decisions for the unincorporated areas. In addition, the County maintains a more geographically specific *Master Plan* which is comprised of several sub-area comprehensive plans, "system plans", such as for drainage basins, parks, open space, and transportation corridors, and a series of general "sketch plans" for specific development areas . Two of the small areas plans are particularly relevant to Fort Carson: the *Southwestern (Highway 115) Comprehensive Plan* (1990) and the *South Central Comprehensive Plan* (1988), both of which are out of date and need to be updated to address the growth at the installation. Apart from a brief acknowledgement of the noise impacts from training at Fort Carson, both plans are largely mute regarding compatibility or interfaces with the post.

The *El Paso County Policy Plan* contains policies regarding the development of cooperative building, zoning and infrastructure standards in areas that interface with municipalities and military properties and the coordination and integration of the planning and development for transportation modes. This includes highways, public transit, bikeways, pedestrian facilities, equestrian trails, railroads, airports, ride-sharing, car-pooling and telecommunications networks with PPACG and the County's municipalities and military installations.

The planning documents more immediately relevant to Fort Carson's growth are the approved plans in the areas close to the installation, as depicted in Map 2, showing the extent and capacity of proposed development in the County to the east of Fort Carson.

With respect to County zoning in proximity to Fort Carson, the RR 5 (Rural Residential with I dwelling unit per 5 acres) and RR 2.5 (Rural Residential with I dwelling unit per 2.5 acres) zoning in the Midway Ranches subdivisions on the eastern border of the installation's training area has created conflicts which are being addressed through a working relationship between Fort Carson and El Paso County to mitigate and avoid incompatible land uses. (See also the *Compatibility and Installation Operations Technical Report*.) On a large vacant parcel directly to the north of Fort Carson on South Academy Boulevard across from Pikes Peak Community College, County zoning for Planned Unit Development presents an opportunity for a mixed-use commercial and residential development. (See Map 4)

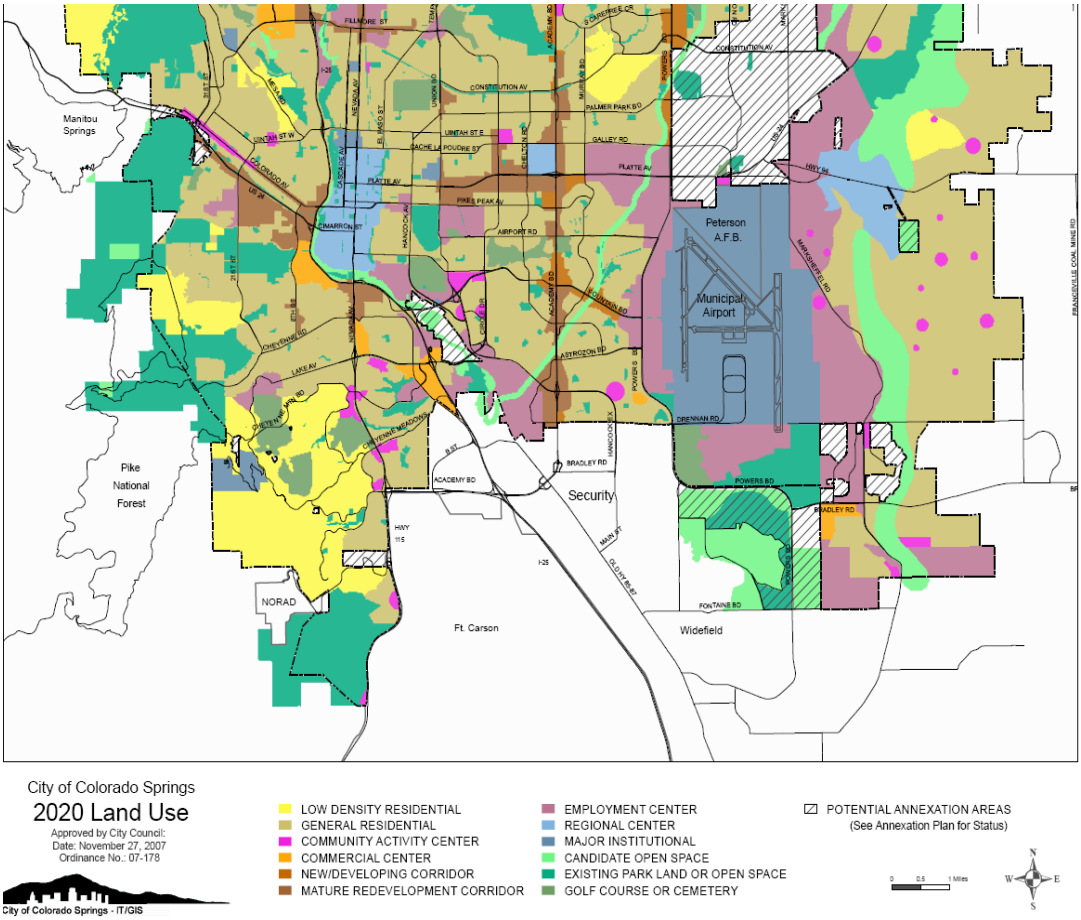


Map 2. South Marksheffel Road- Proposed Subdivisions, Land Use, and DU's

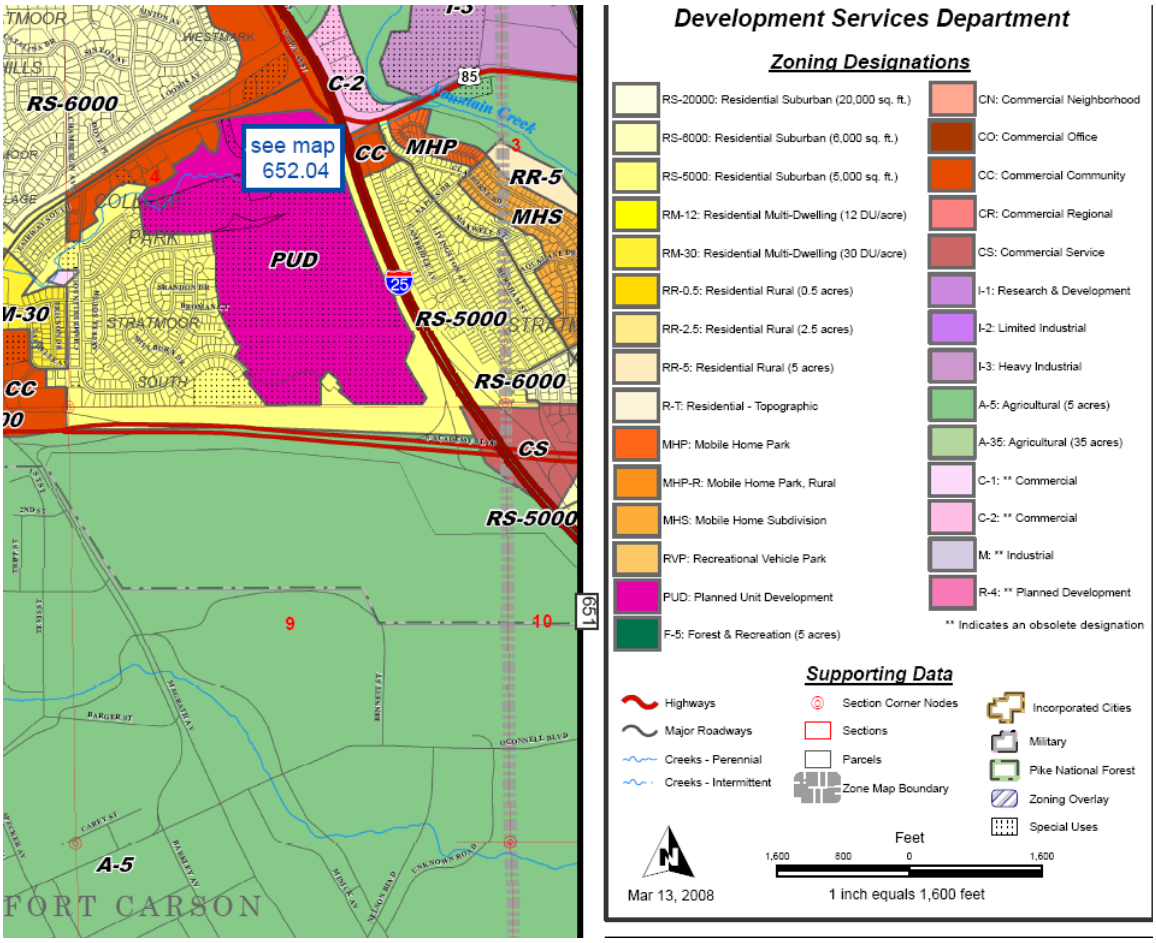
City of Colorado Springs

Compared to unincorporated El Paso County and the City of Fountain, the southern part of Colorado Springs (south of Platte Avenue and U.S. Highway 24) has limited development capacity for new residential development. Most residentially zoned parcels are relatively small infill sites, many of them approved for townhouses. Exceptions to this are the Spring Creek and Soaring Eagles residential developments and the Case property.

Along South Academy Boulevard, south of Platte Avenue, there are numerous commercially zoned vacant parcels and buildings presenting significant infill and redevelopment opportunities. The City's 2001 *Comprehensive Plan* designates the South Academy Corridor as a Mature Redevelopment Corridor and sets forth associated policies supporting its redevelopment as a mixed-use commercial and residential corridor conducive to pedestrian, bike, and transit travel and with convenient access to Fort Carson via Gates 3 and 4. (See Maps 3 and 4 below.) Those supporting policies are echoed by the strategies for Sustainable Growth in the City's *2008 Strategic Plan* adopted by City Council.



Map 3. Planned Land Uses for Southern Colorado Springs



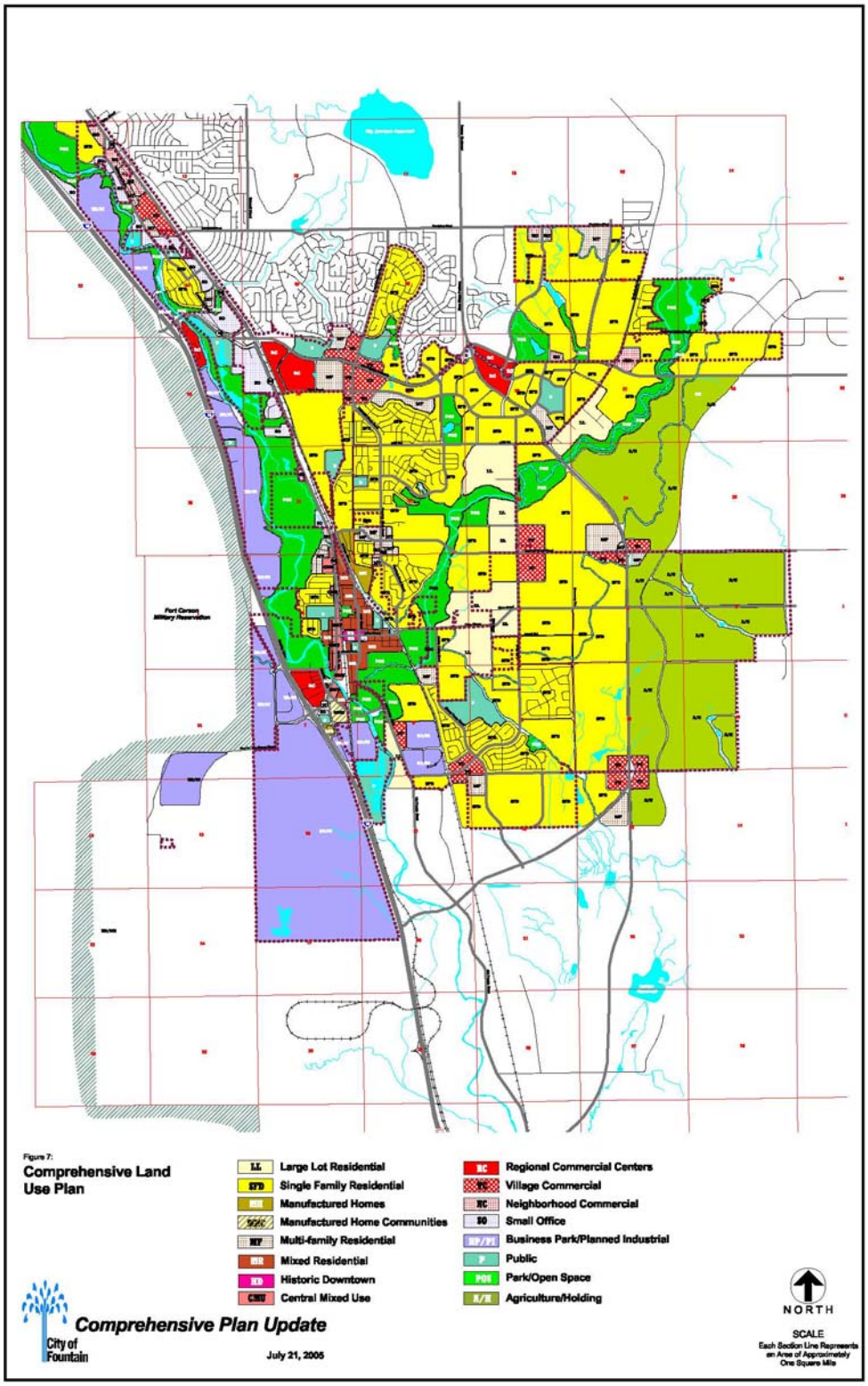
Map 4. El Paso County PUD Zoning North of Fort Carson

City of Fountain

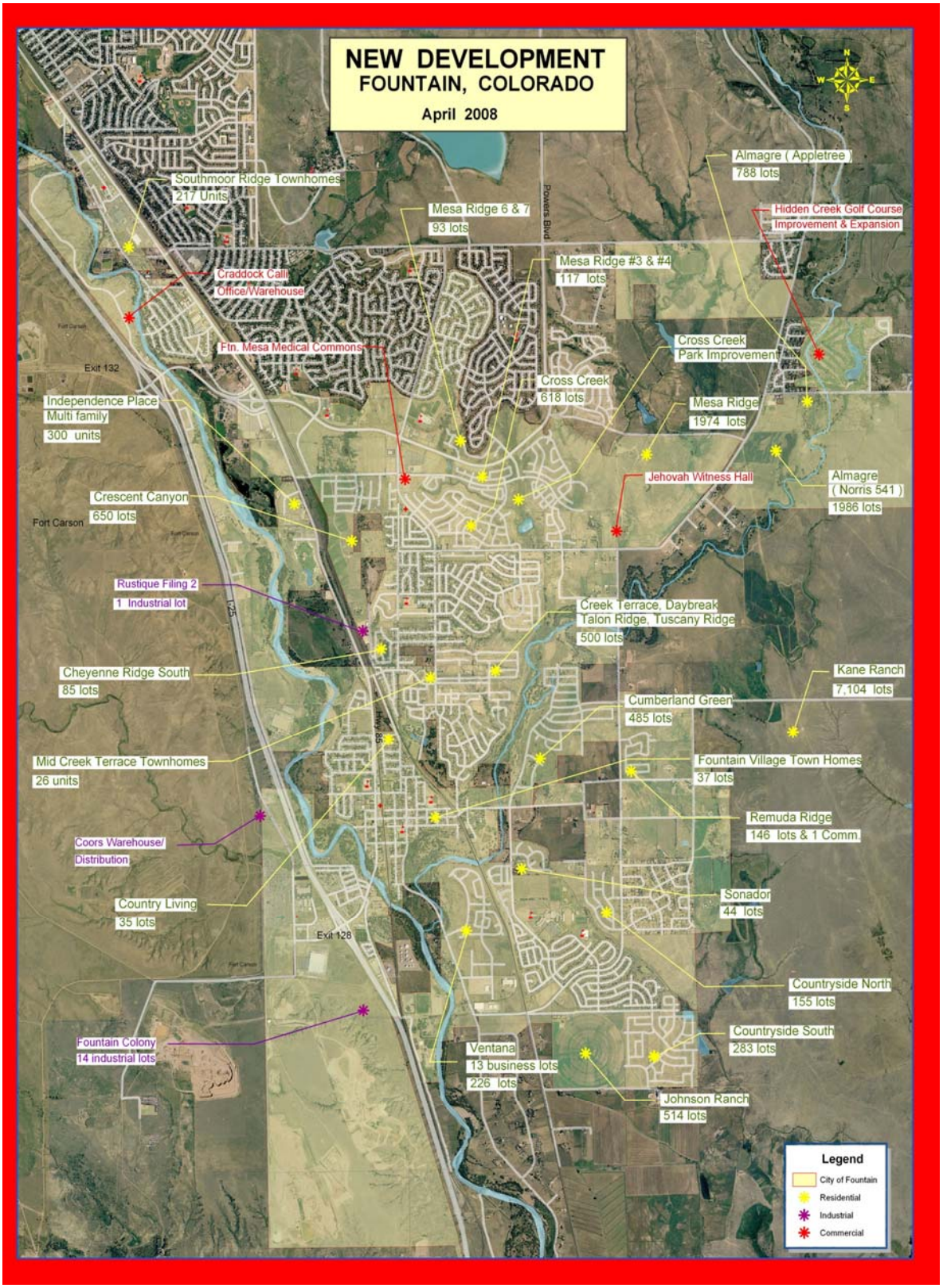
Land use planning in Fountain is characterized by three development types: 1) urban renewal, redevelopment, and infill sites in the central and older areas of the city, and specifically the Downtown and along the Highway 85 corridor; 2) Planned Unit Developments (PUD's), Large Lot Residential (LLR)/Agricultural areas, and relatively large parcel annexations toward the eastern edge of the city; 3) new commercial and office development along the eastern stretch of the Mesa Ridge parkway corridor. (See Map 5.) All three of these are represented in Fountain's *Comprehensive Development Plan*.

The City of Fountain has been aggressive in recent years in expanding its approved development capacity with large parcel annexations and the approval of large PUD developments. Recent examples include the annexation of 2,544 acres in the Kane Ranch and 507 acres in the Mesa Ridge Addition. (See Map 6) The City has been also active in pursuing urban renewal and infill opportunities through its recently approved *U.S. Highway 85 Urban Renewal Plan* and the annexation of numerous enclaves through it *Annexation Plan*.

With its proximity to the I-25/Fountain Creek corridor along the eastern perimeter of Fort Carson, and its direct access to the installation, via Mesa Ridge Parkway, State Highway 16 and Gate 20, Fountain is well positioned to accommodate the projected growth at the post. There are, however, opportunities to improve on that position through promoting new mixed use development in PUD zoning for the Mesa Ridge corridor and Central Mixed Use (CMU) zoning for the Highway 85 corridor. By pursuing a strategy to mix high quality, affordable multi-family and attached residential uses with commercial, service, and office development in those two corridors, the city could reap the benefits of reduced automobile use and increased transit use through well-designed, pedestrian-friendly environments.



Map 5. City of Fountain Future Land Uses



Map 6. New Development Fountain, Colorado April 2008

Pueblo County and City of Pueblo

The City and County of Pueblo share the same Comprehensive Plan entitled the *Pueblo Regional Development Plan*. (See Map 7.) In 2002 the Plan identified Pueblo West, a 31,000-acre unincorporated Metropolitan District, which lies between the northwest corner of the City of Pueblo and Fort Carson, as having a capacity for 17,000 new dwellings, or 19 percent of the total residential capacity in the county. The area is planned mainly for low density suburban and rural residential development on 1 to 5 acre lots and has direct access to I-25 north to Fort Carson. Since 2001 over 50 percent of all new housing in Pueblo County has been built in Pueblo West. The adjoining portions of the City of Pueblo, north of Highway 50, are planned for urban residential densities at four to seven units per acre.

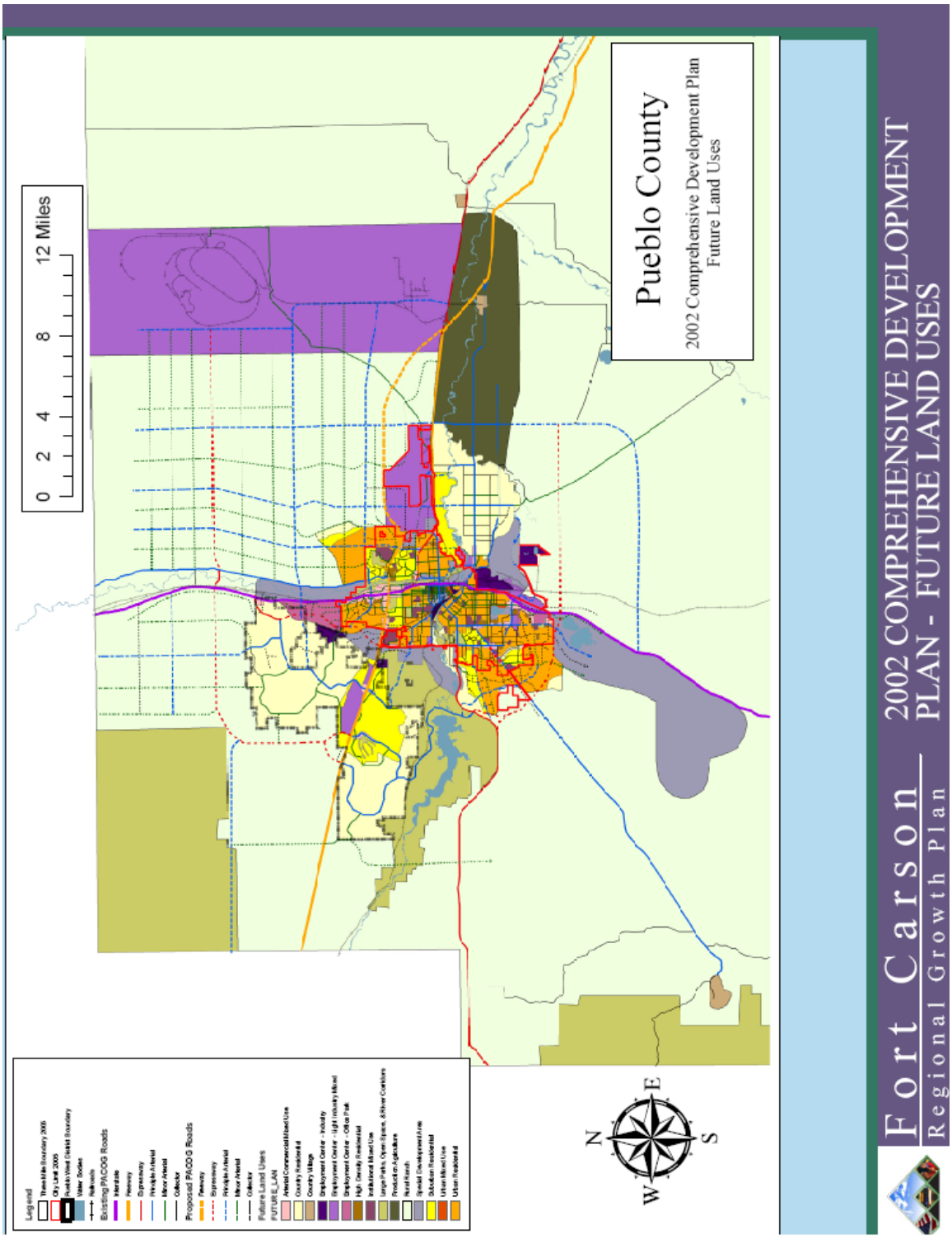
Overall, there appears to be a more than adequate residential supply and planned capacity to absorb the 250 to 300 new Fort Carson households projected to live off-post in Pueblo County.

Fremont County, Cañon City, and City of Florence

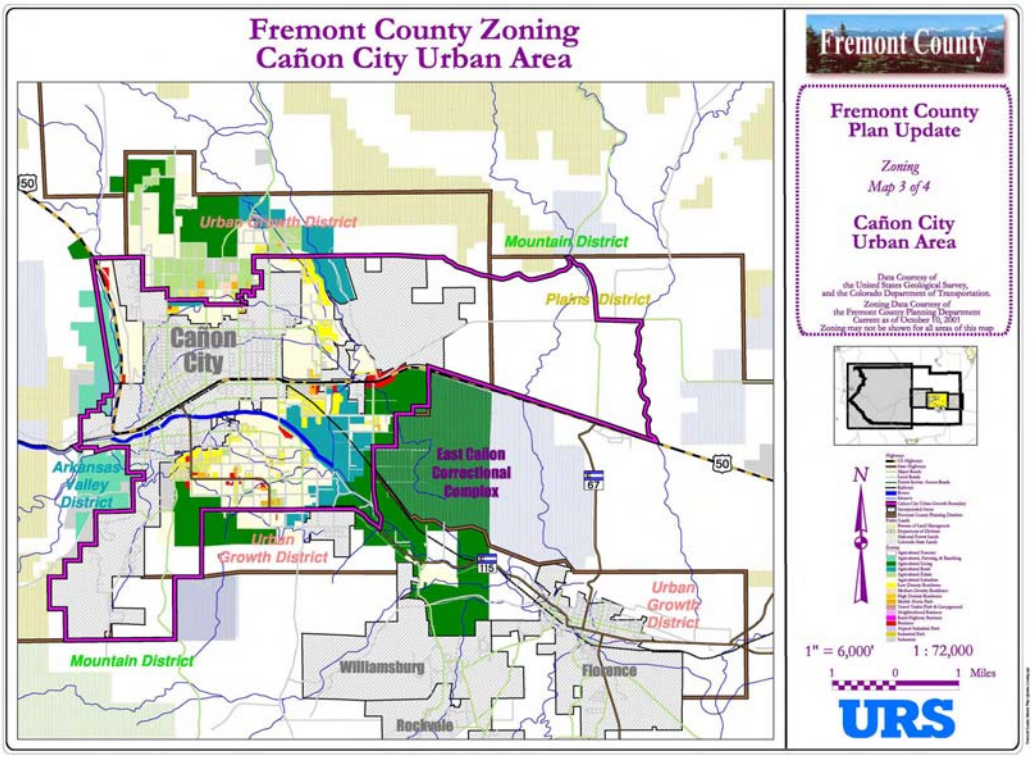
With the exception of Cañon City, the Florence area, and the Beaver Park/Penrose area, most of eastern Fremont County consists of 35-acre parcels (See Map 1). The *Fremont County Master Plan* identifies two Planning Districts with residential uses within 20 to 30 minutes commuting time to Fort Carson: an Urban Growth District for the county lands surrounding Cañon City and Florence and the Penrose/Beaver Park District, which is a large unincorporated area with the potential to develop into an urban area. (See Maps 8 and 9) The Cañon City and Florence unincorporated areas are characterized by a lower density residential and distinct agricultural land uses and are planned to continue developing in a similar pattern. The Penrose area, with lot sizes of between four and ten acres, has the potential to develop with higher densities depending on future service by sanitary sewer. Both districts offer a rural residential alternative to troops assigned to Fort Carson if commuting time and costs are not prohibitive.

The City of Cañon City's *Comprehensive Plan Update 2001* shows an extensive urban growth boundary encompassing areas beyond the current city limits where development should be supported, and outside of which growth should occur only if it is not urban in nature. The Urban Growth Boundary for Cañon City includes an area that can accommodate urban growth and development for a projected twenty-year time frame. Within the city limits, the plan shows future development of a 1,640-acre mixed use district on the eastern end of the city (See Map 10). This area, known as Four Mile Ranch is within 20 minutes commuting time via SH 115 from Gate 6 at Fort Carson and is in the early stages of construction. Activation of Gate 6 is planned by 2011.

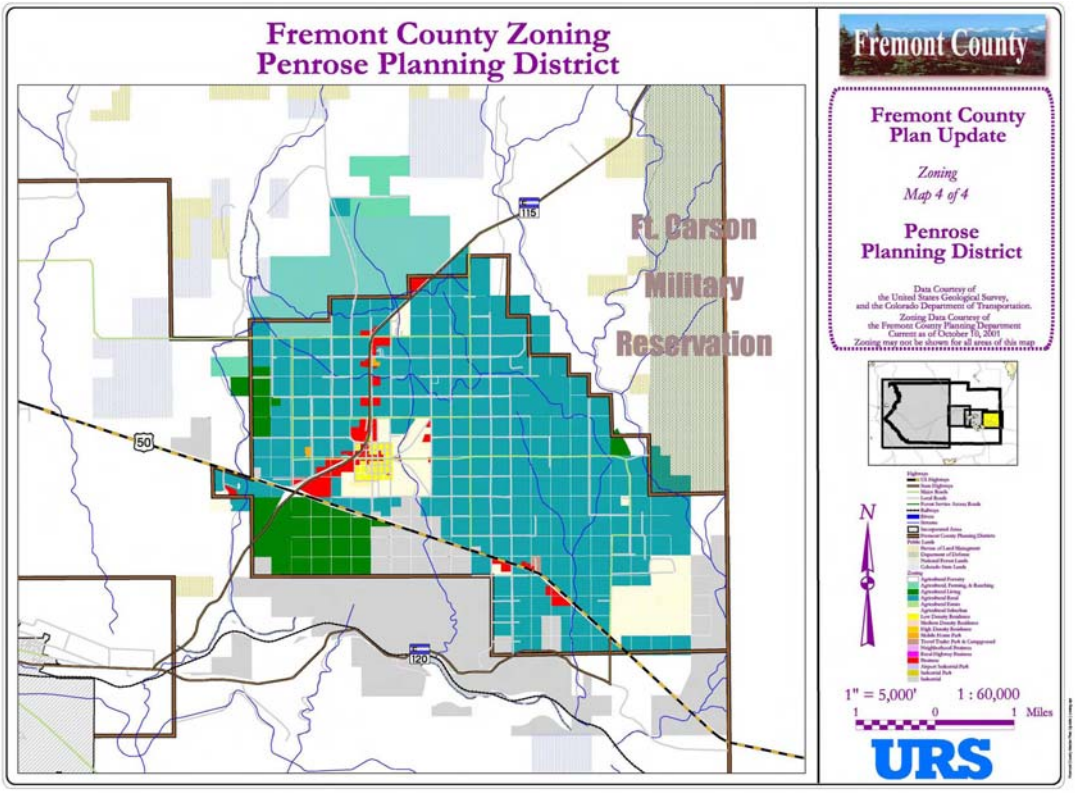
Finally, the City of Florence has a Master Plan that addresses land use, environmental protection, transportation, and preservation of its historic central business district.



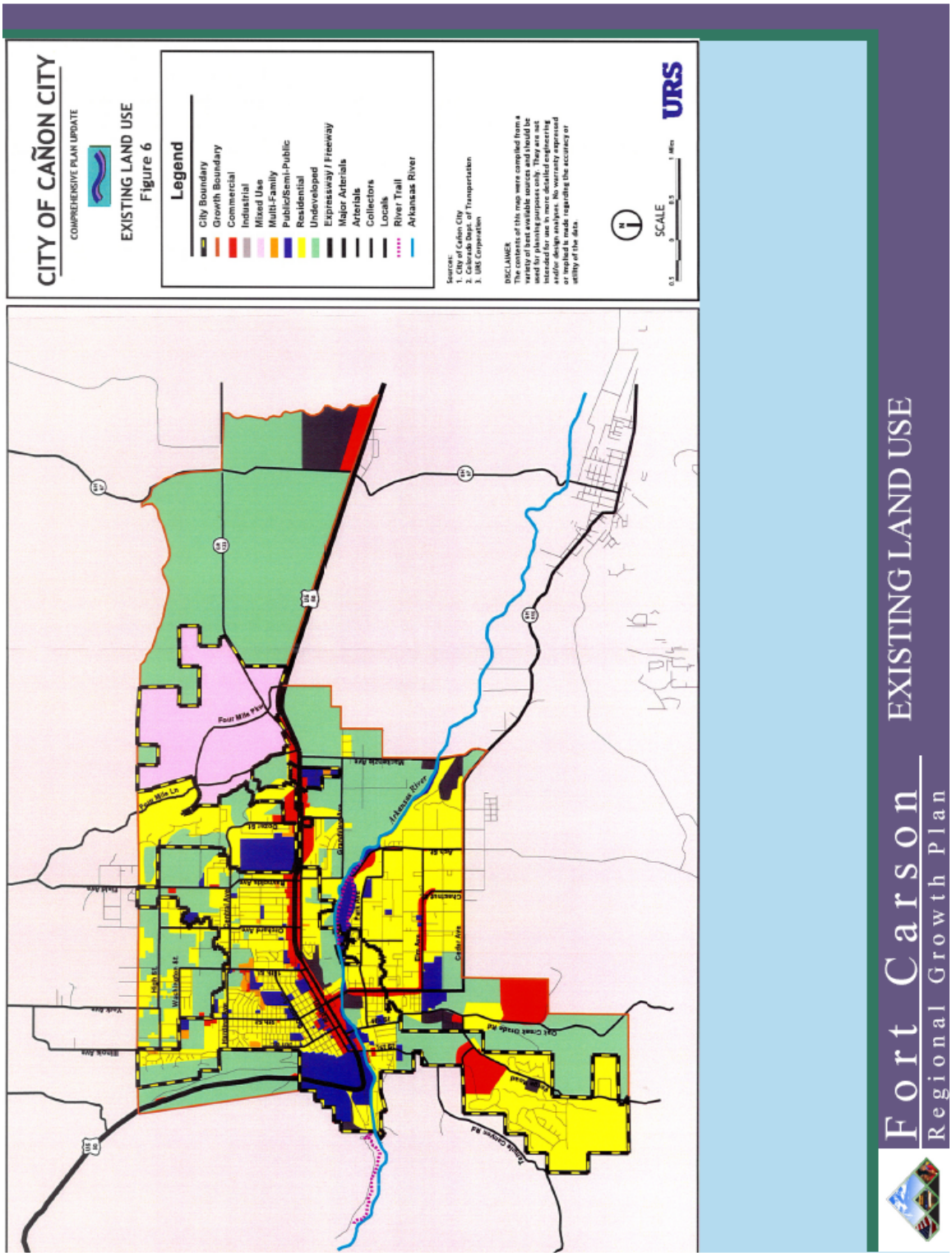
Map 7. Pueblo County Future Land Uses



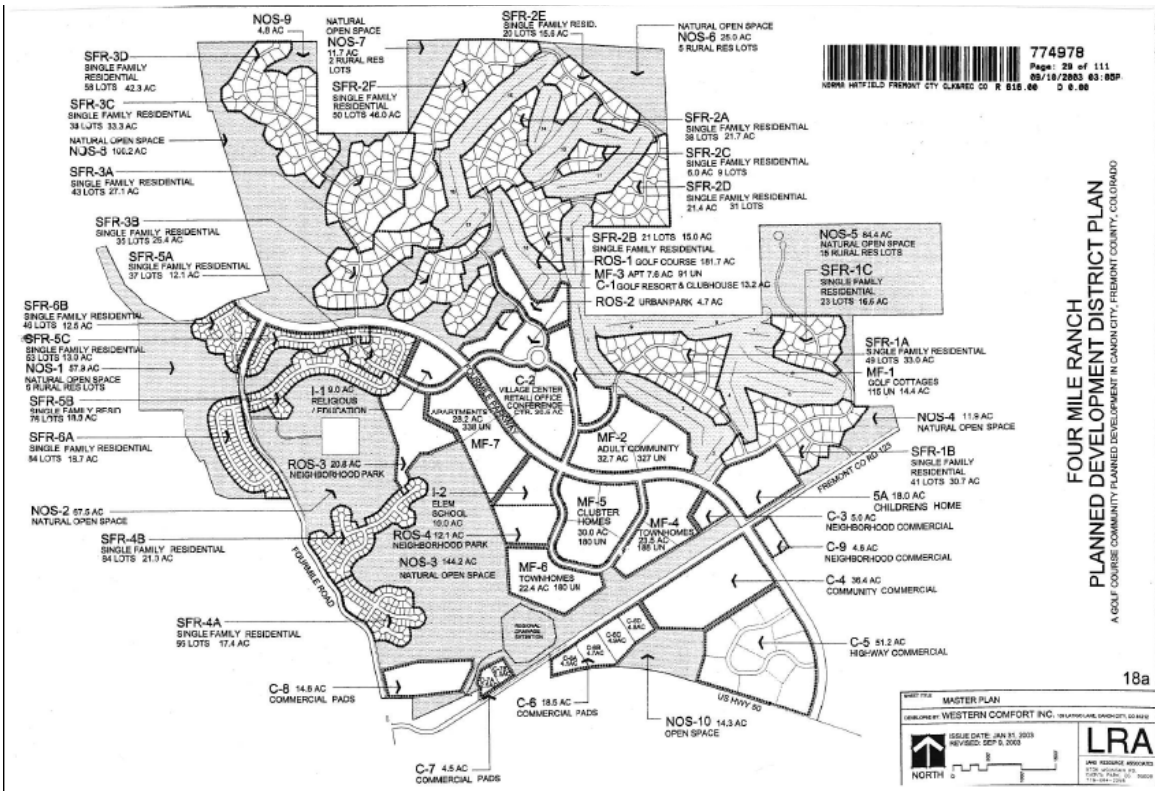
Map 8. Canon City Urban Area



Map 9. Penrose Planning District



Map 10. Cañon City Existing Land Use



Map 11. Four Mile Ranch Planned Development District Plan

C. RECOMMENDATIONS

- Include consideration of Fort Carson's existing and planned land uses, transportation improvements, and projected growth in future updates to local government comprehensive and sub-area plans.
- Continue the working relationship between Fort Carson and El Paso County to mitigate and avoid incompatible land uses along the installation's eastern boundary.
- Plan mixed use redevelopment of South Academy Boulevard and new development of Mesa Ridge Parkway to meet demand from Fort Carson for affordable housing and convenient, transit oriented centers for retail and services.
- Initiate cooperative corridor planning between the City of Colorado Springs and El Paso County for South Academy Boulevard.
- Establish a process for information sharing and planning data updates between Fort Carson, local governments, and PPACG.
- Provide funding to support a housing study for the Fountain Valley to identify opportunities for multi-family development and redevelopment and supporting commercial development, taking into account both the existing housing stock and areas for new development

APPENDIX

Local Government Planning Documents Reviewed

El Paso County

- Policy Plan (1998)
- Master Plan (1998)
- South Central Comprehensive Plan (1988)
- Southwest – Highway 115 comprehensive Plan (1990)
- Land Development Code (2008)
- Zoning Map Book

City of Colorado Springs

- Comprehensive Plan (2001)
- Annexation Plan (2002)
- Comprehensive Plan Annual Report 2006-2007
- Mixed Use Development Design Manual (2003)
- Vacant Commercial, Office, and Industrial Land Analysis (2007)
- Academy Boulevard Corridor Conditions Assessment (2007)
- Zoning Code

City of Fountain

- Comprehensive Development Plan (2005)
- Annexation Plan (2007)
- U.S. Highway 85 Urban Renewal Plan (2008)
- Strategic Downtown Plan (2000)
- Official Zoning Map (2008)
- Zoning Ordinance - Title 17

Pueblo County and City of Pueblo

- Pueblo Regional Development Plan (2002)
- Pueblo County Code Title 17 Land Use
- Pueblo Area Council of Governments 2035 Long Range Transportation Plan (2008)

Fremont County

- Master Plan

City of Cañon City

- Comprehensive Plan Update (2001)
- Four Mile Ranch Planned Development District Plan (2003)
- Zoning Map (2007)

City of Florence

- Master Plan (2006)

Compatibility and Installation Operations Technical Report

Fort Carson Regional Growth Plan

March 28, 2008

Pikes Peak Area Council of Governments

Communities Working Together

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A. BACKGROUND

Compatibility of land uses on-post and off-post has emerged in the last decade as a concern across all branches of the military. As adjacent areas become more urbanized to support off-post needs of military families, once-isolated installations face encroachment from incompatible land uses. Fort Carson anticipates the addition of 11,400 additional troops, 21,300 military dependents, 430 civilians and 690 civilian dependents by 2011, according to the Expect Growth Scenario detailed in the demographics component of the Fort Carson Regional Growth Plan. To accommodate these additional personnel, the Army will undertake significant construction projects and increase training activities to achieve its mission. Surrounding communities are also pursuing development plans to serve personnel and dependents living off-post.

The mission of Fort Carson is to train combat troops. Fort Carson's goal is to preserve the installation's ability to train troops effectively by ensuring that the post's live-fire training ranges, maneuver lands, and air space meet current and future Army standards. However, land development to accommodate the growing post and region raise concerns about compatible land uses near Fort Carson. Key issues include working with Fort Carson to enable the installation to train combat-ready troops, while minimizing air quality, water quality, and noise impacts, as well as addressing the effects of training and off-post development on wildlife species.

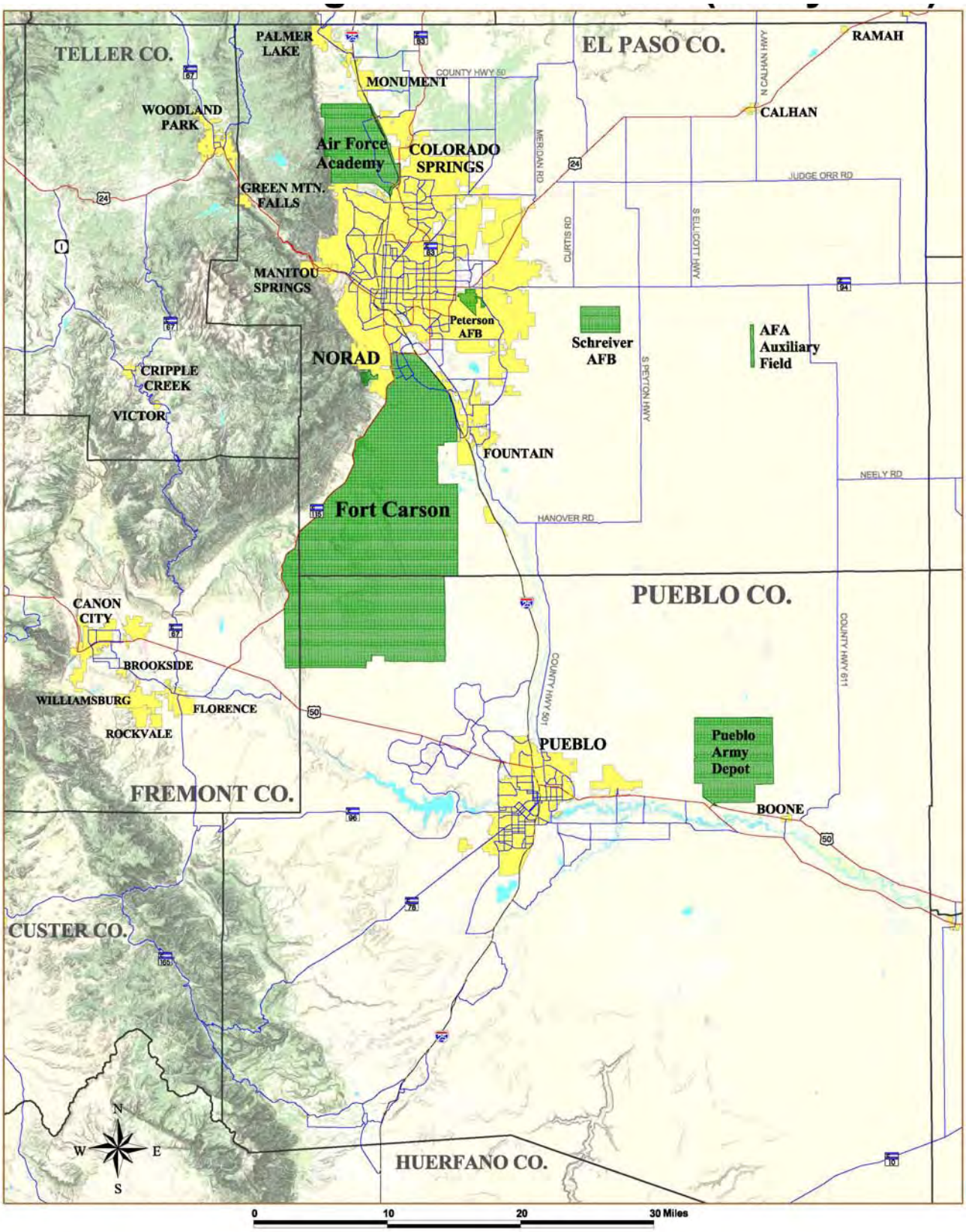
The Installation

Fort Carson comprises 137,000 acres part of which is adjacent to the cities of Colorado Springs and Fountain, and an additional 235,000 acres located at the Pinon Canyon Maneuver Site, 150 miles southeast of Fort Carson. The Mountain Post is a 24-mile long triangular wedge fanning from Colorado Springs into Pueblo County and bordering Fremont County. The post's main cantonment area or "town" comprises 7,000 acres in the northern one-third of the installation and is surrounded by urban landscape to the north and east (see Map 1). The southern two-thirds of the installation consist mainly of training lands.

The 24-mile western boundary is the State Highway 115 corridor, which borders primarily National Forest land, and includes a state park, small private holdings, and minimal residential development. The only significant encroachment issue in this area is reflected light and noise off the mountain backdrop. In 2005 a state and local partnership purchased what is now Cheyenne Mountain State Park just outside Gate 1 of Fort Carson, preserving approximately 1,600 acres of open space directly to the west of the post.

The southern boundary, twenty-four miles to the south of the cantonment area is the 15-mile long base of the triangle of the installation's footprint. The southern part of the installation has four firing ranges. The largest land holding to the south is the Gary Walker Ranch. The ranch is between the municipality of Pueblo, US Highway 50, the Pueblo West Metropolitan District and the Fort Carson boundary.

The eastern border of Fort Carson poses significant compatibility challenges because of the checkerboard of land ownership between Fort Carson and the Interstate 25 corridor. The land corridor directly east of I-25 includes the major waterway of the regional watershed, Fountain Creek. The creek flows north to south from Colorado Springs to Pueblo and into the Arkansas River.



Map 1: Fort Carson Regional Growth Plan Study Area

Fort Carson's Training Mission

The Fort Carson Transformation Final Environmental Impact Statement, completed in 2007, outlines the need for maintaining the training capabilities of the installation. Because of the transformation of fighting units, changes in weapons systems, training doctrine and live fire and maneuver land requirements, it is critical that Fort Carson preserve its training facilities.

Beginning in 1999, the Army began a planning process to transform and restructure the Army's active duty forces. In 2002, the Army began implementing this transformation, known as the Army Modular Force (AMF), in order to support the global war on terror. Specifically, the Army is restructuring and standardizing brigades to act as self-sufficient brigade combat teams (BCTs) and will increase the number of BCTs from twenty-eight to forty-three.[1]

This transformation process also includes technological advancements to current weapons systems, requiring the use of large training areas in order to meet the Army's needs. Gunnery, live fire, and qualification training rages are a critical component of current and future Army training, because the Army must train ground forces in conditions that replicate current and future theaters of operations. In addition to training ground forces, the Army must integrate artillery, aviation, and communication and reconnaissance operations. Training operations must also be able to support night maneuvers without interference from light pollution and be able to utilize the full spectrum of bandwidths currently available through modern communications systems.

The Army must train its soldiers to meet a range of operational needs, from humanitarian and counter-insurgency, to battlefield engagements, through various ecosystems and terrain. Therefore, large, varied training areas are critical to meeting the Army's training needs. However, as different land uses encroach upon Fort Carson's boundaries, the Army's training mission can come into conflict with off-post uses. Urban areas, particularly homes, are not compatible uses near Fort Carson's training ranges because air and water quality impacts, as well as noise and vibration impacts, can adversely affect residents. Light pollution from adjacent properties (residential, commercial, and industrial), as well as air space and radio frequency issues, can hinder the installation's training operations. Off-post development can also push wildlife on-post, affecting habitat and restricting the post's training facilities. It is important, therefore, that public, private, and non-profit sector organizations across jurisdictions work cooperatively to mitigate on- and off-post impacts.

B. GROWTH IMPACTS

With the addition of troops, civilian personnel, and their dependents, the Army will undertake significant construction projects in the cantonment area, including construction of on-post housing, divisional headquarters facilities, support facilities such as child care centers, barracks, motor pools and improvements to Evans Army Community Hospital. The post will also make improvements to its training ranges and conduct significantly more training operations to meet Army standards. The construction activity and increased training of soldiers will result in impacts on- and off-post, if not properly addressed.

[1] *Fort Carson Transformation Final Environmental Impact Statement, 2007*

Extensive review of potential growth impacts have been detailed in the 2007 Fort Carson Transformation Final Environmental Impact Statement (FEIS). In general, Fort Carson already has significant plans and procedures in place to address these impacts. In addition, the post has a well-established sustainability program (discussed later in this report) that further addresses these issues to ensure quality of life and environmental stewardship on-post and in the surrounding community. A brief overview of key issues is discussed below[2].

Air Quality

Air quality associated with Fort Carson growth could be affected by increased emissions from vehicle travel on- and off-post. However, analysis shows that these emissions would be below National Ambient Air Quality Standards (NAAQS), and carbon monoxide emissions would not result in any new violations of the Colorado Springs maintenance area. Prescribed burn emissions would continue to require constant monitoring under the post's Prescribed Burn Plan document which includes required permitting under state regulations. Fugitive dust from increased off-road vehicle travel for training activities would continue to be addressed through the post's Fugitive Dust Control Plan, approved by the Colorado Department of Health and Environment in 2005. Any fugitive dust from on-post construction activities to accommodate Fort Carson growth would also fall under the Fugitive Dust Control Plan and would be temporary. Emission from construction projects and from stationary source emissions would not exceed standards and would not require further mitigation. In short, air quality issues associated with increased personnel, training, construction and operations have undergone extensive analysis under the FEIS and would be in conformity with state and federal requirements.

Water

Growth-related impacts to surface water, stormwater, hydrogeology, groundwater and floodplains are also addressed through the post's planning, operations, and environmental stewardship. Increases in personnel would not result in significant water impacts. Ground disturbances and potential impacts from spills of hazardous materials would be increased during construction activities. These impacts will be addressed by employing erosion control best management practices, complying with permitting and stormwater discharge requirements, and developing a stormwater management plan. Impacts from increased training could include accidental spills of pollutants, which would be mitigated by updating the post's existing Spill Prevention Control and Countermeasures Plan; increased erosion from training activities would be addressed by continued implementation of environmental and land management programs, as well as development and implementation of Integrated Training Area Management programs. Within existing water rights limitations, increased use of groundwater would be needed to support more training activities; however, Fort Carson has determined that it has sufficient groundwater rights from current and planned wells to meet this need so that no mitigation is required.

Noise

Noise impacts reviewed would come from aircraft and traffic, construction and operations, and small and large caliber weapons firing. Analyses have determined that aircraft and traffic noise would have no additional impacts. Noise levels adjacent to construction sites (but not extending beyond Fort Carson's boundaries) would increase, but these impacts would be temporary;

[2]Information regarding air quality, water, noise and wildlife habitat was obtained from the *Fort Carson Transformation Final Environmental Impact Statement*, 2007.

additionally, the post may limit night-time construction or the use of back-up alarms on construction vehicles to mitigate these temporary impacts. Small caliber weapon noise would pose no changes from current operations and require no further mitigation. However, large caliber weapon noise would continue to impact the nearby communities of Fountain, the Rancho Colorado subdivisions, Midway Ranch and Turkey Canyon Ranch. This impact is a result of incompatible land uses surrounding Fort Carson's training areas. The post will work to mitigate these impacts by continuing to follow current practices under AR 200-1 and the Installation Environmental Noise Management Plan, as well as continuing to implement the Army Compatible Use Buffer (ACUB) program and other partnerships discussed later in this paper.

Wildlife Habitat

Development pressures surrounding the base to accommodate Fort Carson and regional growth, as well as development on-post and increased training, will impact wildlife in the region. Fort Carson has a strong record of environmental stewardship through its land and environmental management plans and sustainability programs, which would continue. The post has also been working diligently to ensure a buffer surrounding the post (discussed in greater detail below) that will ensure compatible uses and adequate habitat for wildlife. The post's sustainability goals include environmental monitoring and maintenance of training lands and biodiversity, as well as ensuring no significant environmental and safety impacts of expended munitions.

Land Uses

Encroachment of incompatible uses adjacent to Fort Carson poses significant challenges to the post and the region. Current land uses surrounding the base are described below by quadrant. (Please refer to Map 2: Fort Carson's Compatible Land Use Buffer Area on page 13.)

Northern Border

The land uses directly adjacent to the northern portion of Fort Carson are primarily roadways that include Highway 83/Academy Boulevard, Interstate Highway 25 (I-25) and State Highway 115. Pikes Peak Community College sits directly to the north of the installation. The B Street subdivision and vacant land are north of Highway 83. The Broadmoor Bluffs residential development is located across Highway 115 to the west, and the Security/Widefield communities and the City of Fountain are to the east across I-25. The northern border may continue to urbanize at higher densities over time. The only significant, but to-date unplanned, impact could be threats to security from multi-story buildings adjacent to the roadways along the installation boundary.

Western Border

The 24-mile western boundary is the State Highway 115 corridor, which borders primarily National Forest land; this area includes small private holdings and contains minimal residential development. In 2005, the state, with assistance from the local Trails, Open Space and Parks (TOPS) fund purchased approximately 1,600 acres and created Cheyenne Mountain Stat Park just outside Gate 1 of Fort Carson. This boundary is a significant natural wildlife corridor, from the mountain backdrop to the plains and is included as a component of the Peak to Prairie Conservation Project described later in this report.

Southern Border

The southern boundary of the post is fifteen miles long. The largest land holding directly south of Fort Carson is the Gary Walker Ranch. The 60,000-acre ranch buffers Fort Carson from U.S. Highway 50, the municipality of Pueblo, and the Pueblo West Metropolitan District. Encroachment from growth in the Pueblo West area is a concern for the post. However, the southern area has seen the greatest progress toward preserving the natural heritage of the region and buffering Fort Carson from incompatible uses. The buffer consists of a complex set of agreements for long-term preservation as part of the Army Compatible Use Buffer (ACUB) program discussed below.

Eastern Border

Land use along the 24-mile eastern boundary of the post poses the greatest challenge to sustaining the training mission of Fort Carson. The land uses include, from north to south:

- The I-25 corridor and Fountain Creek
- A 3,200-acre quarry privately owned by Schmidt Construction
- A Colorado Springs Utilities power plant
- Rancho Colorado subdivisions
- Hegestrom Ranch and Midway Ranch
- Colorado School of Mines property
- The Robert Walker Ranch

Ownership and development plans for these properties pose challenges for the post. As the Schmidt Construction quarry is mined out, ownership and potential uses will need to be monitored by El Paso County and the City of Fountain for compatibility. Little change is expected in the Colorado Springs Utilities power plant, and discussions are underway for privately-owned wind turbines to be positioned on that property. The Nixon power plant does contribute to light pollution, hindering night training, and this issue will require further cooperation between Fort Carson and Colorado Springs Utilities. The area just outside Fort Carson's Gate 19 is within the City of Fountain and zoned for industrial use. The Hegestrom and Walker ranches are agricultural land, and discussions continue regarding implementation of conservation easements and leases to maintain compatible land uses on these properties. The biggest challenge is with the Rancho Colorado subdivisions and Midway Ranch, which are subdivided for residential development and whose residents face the greatest impact from noise and vibrations from the training lands. Currently, there are approximately ninety new wood and prefabricated homes and forty-five trailers/mobile homes in this area. A small elementary school associated with the Hanover School District opened in 2007.

The land corridor directly east of I-25 includes the major waterway of the regional watershed, Fountain Creek. The creek flows north to south from Colorado Springs to Pueblo and the Arkansas River. The Fountain Creek waterway is being considered for preservation as a recreational amenity and is already inside the 2,220 square-mile Peak to Prairie Conservation Project discussed in greater detail in a later section of this paper. This project places a high value on habitat conservation, sharing Fort Carson's motivation for preservation as the post works to promote compatible land use to protect and enhance Fort Carson's training mission.

C. CURRENT PROGRAMS

Fort Carson, along with state, local, private and non-profit entities, has made significant progress in addressing compatibility issues through partnership opportunities. The installation has developed a sustainability program outlined below, as well as pursued complex and varied partnerships to buffer the post from incompatible uses and mitigate impacts from its training activities. Two key programs being implemented to-date are the Army Compatible Use Buffer (ACUB) program and the Peak to Prairie Conservation Project. Fort Carson's sustainability efforts and these partnerships are designed to protect the long-term training capabilities of the installation and the environmental qualities of the post and region.

Fort Carson's Sustainability Goals

Fort Carson has a long-standing commitment to environmental stewardship and sustainability. The post has developed short- and long-term sustainability goals and objectives to further this commitment.[3] Specific objectives include the following:

- Provide environmental monitoring and maintenance of training lands and biodiversity, with a long-term target of 100% restoration of installation lands to sustainable, native ecosystems.
- Ensure no significant environmental and safety impacts of expended munitions, to include unexpended ordnance. This objective includes annual inspections and reviews, with long-term targets of 100% use of green munitions, lands cleared of all unexploded and expended munitions. The post has undertaken initiatives to meet these goals, such as soil and groundwater contamination monitoring and development of land use controls.
- Mitigate archaeological sites. The long-term goal is to survey and inventory all training lands. By FY 2012, the post's goal is to complete 100% of its Phase I Archaeological Inventory of all areas identified for potential training use. To-date, over 55,000 acres have been inventoried for cultural resources; over 600 archaeological sites have been recorded, evaluated and mitigated; and over 1,000 buildings have been coded/evaluated for historical significance.
- Ensure training ranges are buffered from external encroachment. Details of this buffer program are discussed in the Army Compatible Use Buffer (ACUB) program in the following section.

Army Compatible Use Buffer (ACUB) Program

In 2002, Fort Carson began to utilize funding from the newly established Army Compatible Use Buffer (ACUB) program. ACUB was formed to fund the creation of buffers around installations to minimize encroachment from incompatible uses. The program has shown such great success that the Air Force launched a similar program in 2007, and there are now at least twenty-seven other Army installations seeking funding for buffering. The goal of the program is to encumber up to 75,000 acres bordering the installation to safeguard the post from encroachment and allow for the implementation of conservation management strategies. To further this goal, Fort Carson is working to address the following:

- Access continued revenue streams for completion of buffer preservation through conservation easements along the post's southern and southeastern boundaries.

[3] Detailed descriptions of Fort Carson's sustainability goals can be obtained from Fort Carson's Sustainability and Environmental Management Website (http://sems.carson.army.mil/).

- Anticipate continued deployment of incremental funding strategies and sustain efforts to identify future requirements within the program objective memorandum (POM) (i.e., out-year budget requests).
- Safeguard primarily Fort Carson's eastern and southern boundaries (twenty-six miles) from additional urban encroachment with a two-mile wide buffer.

Fort Carson and community leaders have developed a successful partnership to address the checkerboard of ownership surrounding Fort Carson's southern and eastern borders[4]. The partnership has protected Fort Carson's boundaries from encroachment from residential development while preserving important habitat for plants and animals that depend on the prairie landscape.

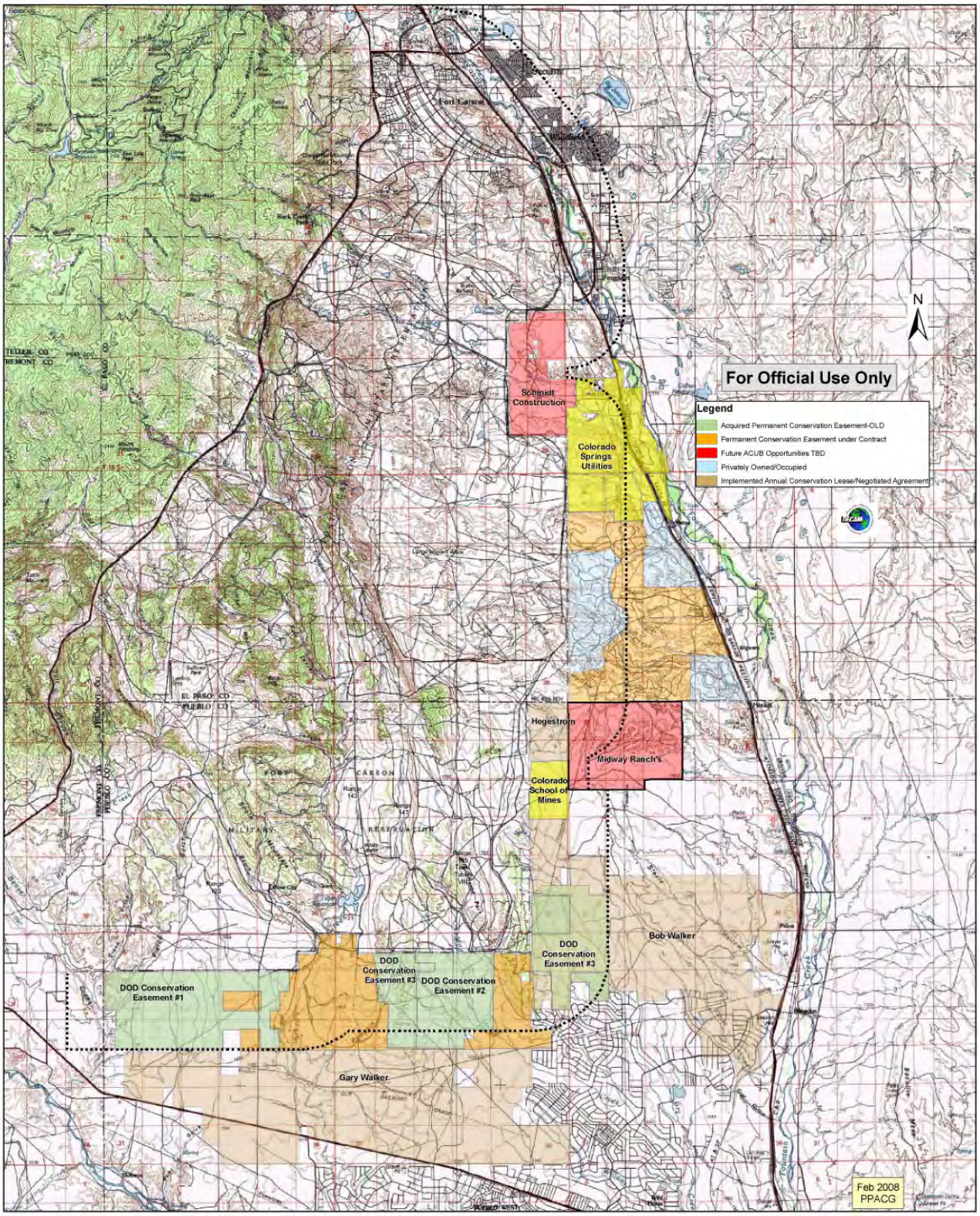
The ACUB partnership includes Fort Carson, El Paso County, Colorado Open Lands, The Nature Conservancy (TNC), private land holders, the City of Colorado Springs, the Colorado School of Mines, state-funded Great Outdoors Colorado (GOCO), the Colorado Departments of Transportation (CDOT) and Natural Resources (DNR), the Colorado Division of Wildlife (CDOW), the U.S. Fish and Wildlife Services (USFWS) and the non-profit Peak to Prairie Conservation Project, as well as the Colorado Springs Economic Development Corporation (EDC), and the Greater Colorado Springs Chamber of Commerce.

While the entire perimeter of the installation is more that seventy miles, the boundary area targeted for buffering (the southern and southeastern borders) has the greatest possibility of incompatible encroachment. Highlights of the ACUB program are as follows:

- Joint efforts of Fort Carson, El Paso County, and the Chamber's Defense Mission Task Force, led by Mike Kazmierski, President and CEO of the EDC, resulted in the acquisition of fifty-seven undeveloped lots from L.W.D., LLC in the Rancho Colorado subdivisions for $2.76 million during 2006 and 2007. This purchase shows significant progress in limiting encroachment from incompatible residential development.
- To-date, a total of fifty-seven undeveloped lots in Pioneer Village, Rancho Colorado subdivisions, has been obtained covering approximately 517 acres; El Paso County retains title to these properties, which will remain open space. A key component of these acquisitions is the permanent vacation of water development rights within Pioneer Village, helping to ensure no additional urban development will take place on these properties.
- 4,200 acres of land from the Robert Walker Ranch have been preserved in permanent conservation easements along the post's southeastern boundary.
- 11,500 acres of land from the Gary Walker Ranch have been preserved in permanent conservation easements along the post's southern boundary.
- 36,000 acres in leases/purchase options for additional properties have been negotiated; the goal is to convert these leases to permanent conservation easements.
- To-date, nearly $21 million in federal funding has been spent, with an additional nearly $1 million in in-kind services from various partners, including $32,000 from the EDC, and funds from El Paso County, TNC, USFWS, CDOW, CDOT and GOCO, to preserve approximately 60% of the buffer zone needed by Fort Carson.

[4] Information regarding Fort Carson's ACUB program was obtained from Mr. Tom Warren, former Director of the now-defunct Directorate of Environmental Compliance and Management, or DECAM , and currently Fort Carson's Deputy Garrison Commander-Transformation/Pinon Canyon Maneuver Site.

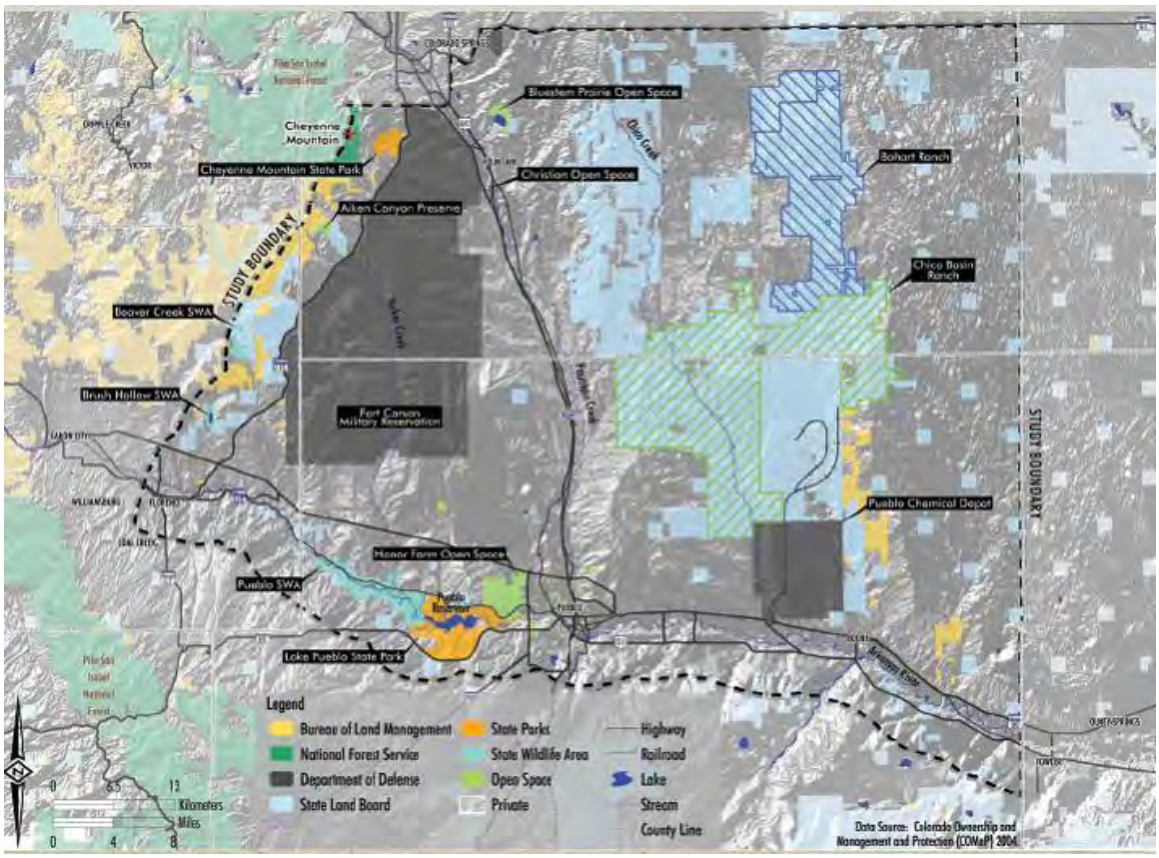
The goal of Fort Carson's ACUB program is to encumber over 75,000 acres of land through acquisitions, leases, and conservation easements to create a 2-mile buffer zone around the southern and southeastern boundaries of the installation. (See Map 3: Fort Carson ACUB Area.) Challenges to completing this program include continued development pressures, particularly in the Pueblo West area, and significant funding requirements. It is anticipated that an additional $25-$40 million is needed to complete the buffer. Of particular concern is the fact that, based in part on the success of Fort Carson's program to-date, there are now at least twenty-seven other Army installations seeking ACUB funding, greatly increasing competition for federal dollars for this important program. Therefore, partnerships and coordinated regional efforts must continue and be enhanced to leverage funding.



Map 2: Fort Carson's Compatible Land Use Buffer Area

Peak to Prairie Conservation Project

The Peak to Prairie Conservation Project is a partnership that includes many federal, state and local entities. The project began with discussions between The Nature Conservancy (TNC), Colorado Open Lands, and El Paso and Pueblo Counties. With the assistance of a Great Outdoors Colorado (GOCO) grant and matching funds from the above entities, the project has identified a 2,200 square-mile conservation planning area, which includes all of Fort Carson. (See Map 3: Peak to Prairie Conservation Project.) The area extends from Colorado Springs on the north to the Arkansas River on the south and from the Front Range on the west to the Chico Basin on the east. The project has identified plants and wildlife, agricultural heritage, military resources, recreation opportunities and visual resources in the planning area. The project has grown to include many partners, including the cities of Colorado Springs, Fountain and Pueblo; El Paso and Pueblo counties; Colorado State Parks and the Colorado State Land Board; Palmer Land Trust; the Pikes Peak Area Council of Governments; and the U.S. Departments of Defense and Agriculture, as well as private land owners. The project has been an integral component of Fort Carson's ACUB program, because the project's efforts to conserve shortgrass prairie lands near the post help Fort Carson maintain its training mission.



Map 3: Peak to Prairie Conservation Project

The planning area includes vast and varied terrain and significant natural, recreational, and military resources. However, continued development pressure in the area from incompatible uses jeopardizes these resources, including the ability of Fort Carson to maintain its training mission. There is also a complex array of land ownership in the planning area, highlighting the challenges the conservation project faces and fostering the need for significant cooperation

between public, private, and non-profit entities. (See Table 1: Land Ownership in the Peak to Prairie Conservation Plan area.)

Table 1: Land Ownership in the Peak to Prairie Conservation Plan area

Land Use	Acres
Pike-San Isabel National Forest	4,005
Bureau of Land Management	22,276
Department of Defense	162,907
State Land Board	297,907
State Parks	12,021
State Wildlife Areas	9,438
City and County Open Space	8,073
Private Land	904,293
Planning area (total)	**1,420,828**

Source: Peak to Prairie Conservation Project

Highlights of the partnerships that are significant to furthering Fort Carson's compatible use goals include the following[5]:

- Obtaining funding from the Department of Defense to purchase conservation easements for land adjacent to Fort Carson. This funding is helping to leverage additional grant monies to provide funding for additional land acquisition.
- Protection of 5,000 acres of the Walker Ranches, bordering the southern and southeastern boundaries of Fort Carson, through The Nature Conservancy conservation easements.
- Preservation 50,000 acres of land through preservation of agricultural leases.
- Preservation of Midway Ranch through a Colorado Open Lands conservation easement.
- Conservation of over 287,000 acres of lands neighboring Fort Carson[6].

The goal of the project is to protect key lands and prevent incompatible uses through purchasing conservation easements and key land acquisitions. The total value of the project is $40 to $60 million. Key partnerships have been successful to-date in obtaining funding and preserving lands. However, continued coordination between public, private, and non-profit entities will be critical in order to obtain additional funding and reach the overall conservation goals of the project.

D. RECOMMENDATIONS

While Fort Carson has made significant progress in protecting its training mission through various partnerships and buffering efforts, additional efforts and resources are still needed to complete the buffer program. Also, efforts should continue to communicate and share information between the post and the community as the number of troops and training activities increase to ensure that the post is able to maintain and enhance its training mission. Specific recommendations regarding land use, noise impacts, light pollution and air space and communications needs are discussed below.

[5] Information on this project was obtained from the Peak to Prairie Conservation Plan, available at http://www.coloradoopenlands.org/site/ourWork/landProtection/peakToPrairie/index.php

[6] *Fort Carson 2007 Sustainability Report*, p. 4.

Land Use and Buffering

Issue: Land uses adjacent to Fort Carson's training facilities are incompatible.

Recommendation #1: Continue to implement Fort Carson's buffer zone program.

- Continue to identify funding for the purchase of land and conservation easements in the identified buffer zone from federal, state, and local sources.
- Maintain and expand partnerships that assist in converting adjacent lands to compatible uses, including participation in the Peak to Prairie Conservation Project.
- Pursue opportunities to leverage funding through a coordinated buffering approach, including other military installations in the region.

Recommendation #2: Pursue land use plans that support compatible uses.

- Coordinate with surrounding local governments and private entities to ensure planning and development efforts do not result in further incompatible uses surrounding Fort Carson.
- Monitor properties that have current compatible uses (i.e., Colorado Springs Utilities and Schmidt Construction's quarry) regarding future uses and ownership, and work with local governments and private property owners to ensure compatible uses are retained.

Recommendation #3: Continue and enhance the deployment of Fort Carson's Installation/Community Sustainability Initiative as the mechanism to increase community involvement and citizenship, environmental stewardship, and regional sustainable development.

- Continue Garrison Commander's Sustainability Breakfast program to inform the community, including major land owners surrounding the post, regarding the post's training mission needs and sustainable training lands goals.

Noise Impacts

Issue: Noise impacts to areas outside Fort Carson's boundaries will increase as training increases on southern ranges.

Recommendation #1: Continue using Fort Carson's Installation Environmental Noise Management Plan.

- Maximize information sharing to the public regarding mission requirements via various media outlets.

Recommendation #2: Coordinate with local and regional governments to overlay noise contours into regional land use planning efforts.

- Continue information-sharing mechanisms, such as the Pikes Peak Area Council of Government's (PPACG's) Fort Carson Regional Growth Plan Compatibility Partnership Group, to maintain and enhance communication between the post and local governments and incorporate noise contours overlays in local government planning documents.

Light Pollution

Issue: Light pollution from surrounding communities and private industry inhibits the installation's night training capabilities.

Recommendation #1: Work with key entities to enhance their understanding of Fort Carson's night training requirements and need for realistic training in a night environment

- Maximize information sharing to the public regarding mission requirements via various media outlets

Recommendation #2: Determine ways to reduce current night pollution while maintaining safety considerations.

- Identify key property owners affecting Fort Carson's mission and develop mechanisms to educate those owners regarding the post's training mission and develop joint strategies to mitigate light pollution.

Future Air Space and Frequency Needs

Issue: As training increases, including the use of unmanned aerial vehicles (UAVs,) air space will be taxed.

Recommendation #1: Maintain Fort Carson's restricted air space.

Recommendation #2: Work with surrounding communities and FAA to ensure adequate air space and flight corridors to support Fort Carson's training mission.

- Continue communication efforts to ensure FAA and surrounding communities understand Fort Carson's air space needs, particularly as the use of UAVs increases.

Issue: Regional growth and increased troops and training at Fort Carson will impact bandwidth and affect Fort Carson's training capabilities.

Recommendation: Continue to monitor the installation's communications needs for both operations and training.

- Maintain and enhance partnerships, through PPACG's partnership groups to clarify Fort Carson's communications needs as operations and training increase on the post.

Stakeholder Interview Report:

Housing, Economic Impact Education, Health and Social Services

Fort Carson Regional Growth Plan

June 5, 2007

Pikes Peak Area Council of Governments

Communities Working Together

INTRODUCTION

In 2005, community leaders formed the Colorado Defense Mission Coalition (CDMC) in response to the announcement of troop increases at Fort Carson. The addition of approximately 11,400 soldiers and civilian personnel plus over 21,000 family members in the next four years will have a significant impact on the Pikes Peak region. To assist the CDMC, the Pikes Peak Area Council of Governments (PPACG) obtained a grant from the Department of Defense's Office of Economic Adjustment (OEA) to develop the Fort Carson Regional Growth Plan (referred to as the Regional Growth Plan or the Plan). The purpose of the Plan is to assess the impacts of the expansion of Fort Carson on the region and to provide a coordinated action plan to address them.

The objectives of the Plan are to:

- Make growth work for the region
- Develop an overarching approach to coordinate efforts
- Capitalize on regional diversity and choice
- Integrate local and regional problem-solving

PURPOSE OF THIS STAKEHOLDER INTERVIEW REPORT

The Regional Growth Plan will evaluate the effects of growth for ten resource areas. This Stakeholder Interview Report focuses on the initial feedback received on four of the ten resource areas: housing, economic development, education, and health and social services, as described below:

Housing – Consultation with Fort Carson and area housing representatives to determine future off-base housing supply and demand and military housing needs.

Economic Impact – Feedback on economic opportunities and concerns to achieve increased investment benefiting Fort Carson and the three-county region.

Education – Overview of the preparation and capacity of local school districts to absorb an increase in students and initial strategies to meet the anticipated need.

Health and Social Services - Discussion of the availability of community, medical, behavioral health, and social services, specifically for the military and dependents, and creation of strategies for improved delivery of those services.

By interviewing the stakeholders, we are better able to identify on-the-ground issues, build a cohesive network of supporting relationships, and pool ideas and solutions. This Stakeholder Interview Report:

- Provides information about the stakeholder meetings conducted from February through March 2007.
- Summarizes all general comments provided by stakeholders relating to the four resource areas of housing, economic development, education, and health and social services.
- Reviews potential tools and solutions suggested by stakeholders.

The project team will continue to listen to stakeholders throughout the Regional Growth Plan effort through ongoing interviews and other outreach events. Future addenda to this report may be issued, both to supplement the four resource areas summarized below, as well as to present issues identified for the remaining resource areas.

STAKEHOLDER PROCESS

Over 90 stakeholders were contacted to solicit one-on-one, focus group, phone, or email feedback.

Stakeholders are those companies, agencies, organizations, institutions, and individuals who represent the greater Pikes Peak region and who will be greatly influenced by troop increases at Fort Carson.

The stakeholder involvement process for the Regional Growth Plan began with the publication of the February newsletter that was distributed by project staff. The newsletter requested that anyone interested in one-on-one interviews should contact PPACG. A list of stakeholders was also requested from members of the CDMC and PPACG at several meetings. As a result, over 90 stakeholders were contacted to solicit one-on-one, focus group, phone, or email feedback.

In-person stakeholder interviews were held on February 20 - 22 and the week of March 12, 2007 by PPACG staff and the consultant team of EDAW, RKG Associates, and Navigant Consulting. Additional phone and email interviews were held during February and March 2007. Interviewees from the Colorado Springs and Pueblo area included:

- PPACG staff
- Fort Carson
- Local school districts
- Colleges and universities, such as University of Colorado at Colorado Springs and Pikes Peak Community College
- Hospitals and medical providers, such as Evans Army Community Hospital and Memorial Hospital
- Local chambers of commerce
- County and municipal staff from the City of Fountain, City of Colorado Springs, City of Pueblo, El Paso County, and Pueblo County
- Developers and homebuilders, such as Oakwood Homes, KB Homes, Pulte Homes, Beazer Homes, and New Generation Homes
- Real estate agents and banks, such as Pikes Peak Association of Realtors, First Property Management, and CBT Mortgage
- Colorado Housing and Finance Authority
- Housing Authority of the City of Colorado Springs
- Non-profit groups, such as TESSA, CASA, and Pikes Peak United Way

Perceptions, concerns, and ideas from stakeholders are summarized in the following section. Although many of these comments have not been confirmed by hard data, they represent genuine concerns of community leaders. Their comments will be substantiated by further research and data collection. PPACG and EDAW will refer to the comments as they prepare comprehensive resource assessments and develop strategies.

HOUSING AND ECONOMIC IMPACT

RKG Associates, Inc. has conducted approximately 30 interviews related to housing and economic development in the Pikes Peak region.

- Who has been interviewed to-date?
  - Kim Headley, Director, Department of Planning and Development, Pueblo County
  - Mike Trujillo, Manager, Housing and Community Services, Pueblo County
  - Ted Ortiviz, Director, Housing and Human Services, Pueblo County
  - Ada Rivera Clark, Director, Housing and Citizen Services, City of Pueblo
  - Jayne Mazur, Executive Director, Catholic Charities of the Diocese of Pueblo
  - Jim Munch, Assistant City Manager for Community Development, City of Pueblo
  - Jerry Pacheco, Director, Land Use Administration, City of Pueblo
  - Don Vest, Senior Socioeconomic Planner, City of Pueblo
  - Lisa Cochrun, Director, Economic Development, City of Fountain
  - Sheila Booth, Planner, City of Fountain
  - Dave Smedsrud, Acting City Manager/Planning Director, City of Fountain
  - Gene Mills, President, CBT Mortgage
  - Curtis Martinell, Assistant Building Official, Pikes Peak Regional Building Department
  - Brendan Miller, Marketing Manager, Pulte Homes
  - Terry Storm, CEO Pikes Peak Association of Realtors
  - Robin Waller, Director of Services, Pikes Peak Association of Realtors
  - Venise Fuqua, Sales Director, Oakwood Homes
  - Brenda Trimble, Builder Representative, New Generation Homes/Widefield Realty
  - Carl Schueler, Long Range Planning Manager, Development Services Department, El Paso County
  - Bill Healy, Director of Planning and Community Development, City of Colorado Springs

- Denny Cripps, Retired Assistant County Administrator, El Paso County
- Dean Quaranta, Program Analyst, Directorate of Public Works, Fort Carson
- Doug Lobdell, Project Director, GMH Military Housing
- Fred Crowley, Ph.D., Crowley's Consulting, Inc.
- Roy Alexander, CEO, Colorado Housing and Finance Authority
- Cris White, COO, Colorado Housing and Finance Authority
- Tony Koren, Founding Partner, Northstone Group
- Tom Warren, Director, DECAM Fort Carson
- Brian Binn, President, Military Affairs, Greater Colorado Springs Chamber of Commerce
- Peggy Herbertson, Director, Pikes Peak Workforce Center
- Mike Kazmierski, President, Colorado Springs Economic Development Corporation

Issue #1: Requests for Demographic Data

All parties consistently requested information related to the number of relocating troops and the timing of their arrival. In several cases, stakeholders felt uninformed about the timing and magnitude of the pending impact, and did not know whom to contact for information.

Lack of access to, and inconsistency over, troop projections were the most frequent stakeholder comment.

Most stakeholders understood the complexity of projecting troop relocations. However, the lack of consistent short term or long term projections seemed troubling. This has led many businesses to make conservative reassessments of their short term business plans. For example, due to the slow down in the local housing market, many homebuilders are planning on selling their current housing stock, and no longer building spec homes.

There is a general level of confusion related to troop deployment and redeployment, versus relocation. As the US Army is currently engaged in combat operations in Afghanistan and Iraq, troops and families are moving on a monthly basis because of overseas deployment. This may be confused with the arrival and departure of troops related to Base Realignment and Closure (BRAC), Integrated Global Presence and Basing Strategy (IGPBS), and Army Modular Force (AMF) directives.

Issues #2: General Health of the Building Community

Interviews with the building community suggest that builders are cautiously optimistic about the expansion of Fort Carson. No shortfalls in subcontractor labor or building materials have been cited. The recent building boom for the Colorado Springs area has generally slowed. While spec homes are fewer and inventories are shrinking, the ability to build future homes is strong.

Issue #3: Direction of Growth

Land availability does not appear to be an issue, and the majority of near-term development appears to be planned for Fountain and unincorporated El Paso County.

Fountain: Fountain has a range of building activity including recently completed homes, lots ready for construction, parcels platted, plans under review, and annexations in progress. Several significant annexations have occurred in Fountain, including Kane Ranch, which may eventually yield over 7,000 lots. Preliminary information regarding the pricing of single family and townhomes in Fountain suggests that the target market will be Fort Carson personnel.

Unincorporated El Paso County: Similar to Fountain, a range of building activity is currently underway in unincorporated El Paso County. Several large projects such as Lorson Ranch may include several thousand lots and could be built during the Fort Carson expansion. Other projects, such as Rolling Hills Ranch, Colorado Centre, and Glen at Widefield may also include over two thousand lots each, but are expected to be completed over the next two decades.

Colorado Springs: As new master planned developments are not likely to occur until later (e.g., Banning Lewis Ranch), most housing demand will be met by current homes, infill development, and smaller subdivisions.

Pueblo County/Pueblo West and the City of Pueblo: Several developments are occurring in Pueblo County, and one major annexation may be considered over the next few months.

Issue #4: On-Post Housing Supply

Fort Carson has authorized the construction of 1,000 new on-post housing units, with approximately 400 units to be built over the next few years. They will include primarily 3- and 4-bedroom homes. These 400 homes will add to the existing supply of 2,664 on-post units, and are expected to be occupied as there is a current waiting list for on-post housing regardless of the planned troop expansion. Unless additional on-post housing is identified, the majority of military personnel and families will likely live off-post as additional personnel are relocated to Fort Carson.

Issue #5: High Multi-Family Vacancy Rates

Area multi-family rentals are experiencing higher than average vacancy rates. However, these rates will likely decline as new troops are located to Fort Carson. Rents appear to be reasonable for military personnel, and a large number of incentives are currently being offered to military personnel. During our interviews we heard of no new multi-family building projects; however, this area is still being researched.

Open communication regarding troop projections, either from Fort Carson or PPACG, will be a key factor in regional preparedness.

Issue #6: Housing Affordability

Stakeholders interviewed indicated that apartment rents and home prices are affordable to military families because of the Basic Allowance for Housing (BAH), salary, and spousal income. Because of the BAH and military salary, few military personnel living off-post are considered to earn below the median wage. Thus, subsidized projects that are oriented to below-median-wage earners will likely continue, but will not be driven by base expansion. However, these projects may play a role in providing affordable housing for civilians/ contractors working on post.

Potential Tools and Solutions

Easy, open communication was identified as a critical need that would allow for timely and accurate demographic data and troop projections. Stakeholders agreed that communication relating to troop movement has been unclear. Most stakeholders requested a central point of contact - either directly or through PPACG - that could provide consistent, timely communication to regional stakeholders. Audiences seeking demographic data include developers,

homebuilders, local Chambers of Commerce, School Districts, universities, and local jurisdictions. Good information will allow the housing community to respond to the forecast housing demand. Consistent communication on a monthly basis may be required.

Housing demand and economic impact assessments prepared by PPACG and the consultant team will include data for sales turnover, sales prices, rents, building permits, on-post housing, housing affordability, and vacancy rates.

EDUCATION

EDAW and RKG Associates, Inc. have interviewed 15 local School Districts and university officials.

- Who has been interviewed to-date?
  - Henry Reitwiesner; Planning Director, D49 Falcon District
  - Mark Hatchell; Superintendent, D3 Widefield District
  - Don Schiverdecker; Executive Director of Support Services; D3 Widefield District
  - Dave Roudebush; Facilities, D8 Fountain-Fort Carson School District
  - Cheryl Walker; CFO, D8 Fountain-Fort Carson School District, on CDMC
  - Glenn Gustafson; CFO, D11 Colorado Springs School District, on CDMC
  - Greg Finn; Director of Communication, D60 Pueblo City District
  - Walt Cooper; Superintendent, D12 Cheyenne Mountain District
  - Tom Gregory; Capital Facility Planner, D20 Academy District
  - Daniel Lere; Superintendent, D70 Pueblo County Rural District
  - James Malm; Military Affairs Liaison , CSU Pueblo
  - Martin Wood; Chief Operating Officer, UCCS
  - Dana Rocha; Military Affairs and Campus-Wide Extended Studies, UCCS

- Wes Clark; Vice President for Operations, SAIC, Military Liaison, Colorado Springs Chamber of Commerce

Issue #1: Distribution of New Students

17 school districts serve the Pikes Peak region and capacity varies widely among them, with central city and "first-ring" developed areas showing capacity and "third-ring", newly developing areas quickly outpacing supply. The phenomenon is most pronounced at the developing fringe where once-rural districts experience the greatest increases. Stakeholders acknowledged that while military-dependent students are found in all 17 districts, most are concentrated in the nine districts closest to Fort Carson.

Passage of an open enrollment law in 1994 created the opportunity for any student to apply for entry in any school outside their resident school, subject to available space and teaching staff. This creates an environment of competition for students among schools and is a factor when parents make choices about where to re-locate or where to "choice in" to a school.

In addition to proximity and academic performance, the ability of districts to attract new students may be influenced by how well a district markets themselves as "military-friendly" by providing programs such as all-day kindergarten, early education, pre- and after-school activities, and special need programs such as speech, occupational therapy, and other family support systems.

School districts determine how many military-dependent students attend their district through an annual "count day". Districts with at least 400 students or at least 3 percent of all children in the district are eligible for the Federal Impact Aid Program, which provides funding for a portion of the educational costs of military-connected students.

However, some stakeholders shared concern that many districts do not collect detailed information about the branch of service or post to which their guardian(s) is assigned. Stakeholders noted that districts could collect more detailed information during the "count day" to aid the region in understanding how many students in each district specifically result from families stationed at Fort Carson.

Stakeholders suggested that detailed "count day" information could also be important as initial attempts to project the distribution of additional military students were based on the assumption of where military-dependent students attended – regardless of branch of service or post. The initial projections also assumed that new military-dependent students would locate where existing military-dependent students currently live. As older areas are built-out, all interviewees recognized that most growth would occur on the developing fringe closest to the post, in districts such as D2 Harrison, D3 Widefield, and D8 Fountain-Fort Carson.

Should this occur, it would likely result in a misalignment between supply and demand: school districts with the greatest capacity (e.g., D11 Colorado Springs) may not receive as many students, and already overstretched districts may receive the highest proportion. Regardless of their proximity to Fort Carson, all districts were very interested to learn exactly how many students they might be expected to absorb.

Issue #2: District Capacity

Out of 17 school districts in the Pikes Peak region that potentially serve Fort Carson families (including two Pueblo districts), nine districts will likely experience increased enrollment based on a total of approximately 6,000 new students. Most districts have capacity for additional students.

Fountain-Fort Carson School District (SD) 8: Fountain-Fort Carson is the only district that has schools on-post. In preparation for troop movements, the district recently completed a new elementary school on-post and extensive expansions to the on-post middle school. Fountain-Fort Carson indicated that they can supply sufficient capacity for the troop expansion and construction of 400 new housing units on-post anticipated through FY 2011. Beyond the troop expansion, however, there may not be sufficient long term capacity due to regional in-migration, natural population increase and additional on-post family housing. Given the high regional growth occurring in Fountain-Fort Carson, an increase in on-post housing could affect the districts more acutely.

Widefield SD 3: Located in southeastern Colorado Springs adjacent to Fort Carson, Widefield SD 3 is experiencing high levels of general population growth

due to land availability and housing affordability. SD 3 appears to have sufficient current capacity to serve Fort Carson's current expansion.

Harrison SD 2: Like Widefield SD 3, Harrison SD 2 abuts Fort Carson and is experiencing high rates of growth. SD 2 appears to have sufficient current capacity to serve Fort Carson expansion.

Colorado Springs SD11: The oldest and largest of the region's school districts, D11 has been affected by an aging population and fewer new housing starts. As a result, it has the largest capacity for additional students. A new elementary school will be opening in the southeastern portion of the District to increase capacity near Fort Carson.

Districts have been planning for capacity – the real question is timing. "When will the troops arrive?" was a common sentiment echoed by District officials.

Manitou SD 14: Considered a "quality of life" town, Manitou Springs is built-out and has had little natural enrollment increases, but has become increasingly desirable as a school-of-choice district.

Falcon SD 49: With student enrollment increases over 10 percent annually, Falcon SD 49 is the fastest growing district and consequently has the most serious capacity issues. Fortunately, it is one of the districts most removed from Fort Carson.

Cheyenne Mountain SD 12: Like Manitou SD 14, Cheyenne Mountain SD 12 is relatively built-out but was second only to Falcon SD 49 in the percent of enrollment growth in 2006 due to school-of-choice migrants.

Pueblo Rural SD 70: While removed from Fort Carson to the south, SD 70 has limited capacity to accommodate additional students.

Academy SD 20: Growing above average, Academy SD 20 appears to have capacity for additional students. 20 percent of its students come from military families; however, only 2% of its total enrollment comes from Fort Carson families, probably due to distance.

Issue #3: Wait-and-See Philosophy

With an average annual growth rate in the Pikes Peak region of nearly 2 percent over the last ten years, districts are accustomed to and supportive of growth. As Mark Hatchell, superintendent of Widefield D3, said, "We're ready. We're waiting." Their preparation has been

evident since districts learned about BRAC-recommended increases at Fort Carson in 2005. For example, Colorado Springs D11 hired a consultant to evaluate its enrollment and marketing procedures for military families, and Fountain/Fort Carson SD 8 immediately began planning for a new elementary school.

The questions we heard being asked by the stakeholders were: districts and universities have been planning for adequate capacity, yet the real question is timing; when will military students arrive? What are the ages of these students? And how many will each specific facility absorb? What post-secondary training do troops or their spouses' desire? The timing issue affects adequate preparation in staffing, adequacy of services for what might be labeled a special needs population (particularly due to deployment), and creating a smooth transition depending on date in the school year of arrival. Timing is most acute in capital construction efforts, as a lengthy time frame for planning and voter approved bond measures and construction can take up to 7-10 years before occupancy.

Given the delay in troop movements, several interviewees expressed a conservative approach to any further preparations. Fountain/ Fort Carson SD 8 overstaffed in FY 06-07 in anticipation of troop movements that did not occur. Their inclination to wait until actual student enrollment numbers are gathered in early August FY 07 means hiring from a more limited pool of teachers to fill new positions.

Issue #4: Funding Quality Programs

Local school districts recognize themselves as the primary source of stability and continuity for military families, and feel obligated to offer high quality programs. All interviewees shared the philosophy of treating military students as permanent students rather than as short-term retention investments. However, all interviewees expressed concerns about equity in funding and tax limitation that limits the high quality programs they wish to provide.

Because of laws enacted by Colorado in past years, limits have been placed on the annual increase of revenue and spending of school districts, as well as state and other local governments. In other words, property taxes can only increase from the prior year by the

percent increase in the Denver-Boulder consumer price index plus the percent increase (or decrease) in the district's student population. So even though property values may be experiencing substantial growth, the mill levy rate will be reduced from the prior year so property taxes collected do not exceed the growth restrictions. Stakeholders suggested that low taxes and/or the 20 percent assessed value tax caps are barriers that could result in lower services. They shared concern that overall growth anticipated in the region will eventually outpace the ability to fund schools.

Issue #5: Labor Resources

Similar to national trends, all school districts have expressed a need for sufficient science, math, and special education (occupational therapy, speech pathology, etc.) teachers. Language teachers are also in demand in some districts.

Issues #6: Traffic Congestion

Traffic congestion is a concern for several schools, and may act as a constraint on the ability of schools to accommodate open-enrollment students from outside the area due to increased travel times. Other transportation-related issues include the capacity of surrounding streets, access and egress from congested streets such as State Highway 16, safety, and on-site traffic circulation. Some suggested that infrastructure and transportation issues, not just education, required attention.

Potential Tools and Solutions

While there is a pronounced commitment to supporting military-dependent students and an attitude of acceptance towards changes resulting from regional growth in the districts, there is a general feeling of uncertainty and a need for timely, clear communication to plan for necessary funding, resources, and adequate space. Some of the solutions offered from interviewees include a focus on timely and consistent distribution of information to school districts to aid in preparation for the influx. A hub for communication, such as monthly newsletters or a website similar or in addition to the current PPACG website would provide centralized, easy to access information for the districts.

Keeping partnerships active, such as the successful effort to pass second count day legislation, was a priority. House Bill 1232 adds a second student-count day in Fort Carson-area schools so that local school districts can apply for additional per-pupil funding. Other stakeholders suggested that multiple contingencies and relocation scenarios and timelines should be planned for each District. EDAW and RKG Associates will correlate student enrollment projections to housing supply and demand analysis to understand projected military distribution.

Solutions to the problems associated with timing would include opening avenues of communication between school districts and the new families assigned to Fort Carson. For example, the Colorado Springs Chamber of Commerce arranged a trip for school district representatives to go to Fort Hood and meet with families. There is an understanding that there are many more families coming from disparate and currently unidentified parts of the country. Access to those families would be helpful.

Regional and federal funding (such as DoD grants), local fees, and other creative financial solutions, such as partnerships, should be reviewed to determine whether they may assist school districts in alleviating some of their financial constraints.

Districts with additional capacity are interested in increasing their enrollment through open enrollment. In order to focus on high quality schools that will attract a larger range of students, innovative ideas such as laptops for all students and post secondary credits should be considered.

Best practices (e.g. military-family welcoming websites) and proposed programs (e.g. satellite registration offices) evaluated by D11 may be applicable to other districts. Ideas include a regional map of School Districts color coded by school distribution, an interactive map on website for families to find information about all schools, amenities in the Pikes Peak region, a single point-of-reference website for new arrivals, informational/ recruitment materials to market schools to new military families that may not live within District boundaries, and a "School Transition Workbook."

HEALTH AND SOCIAL SERVICES

Throughout February and March, Navigant Consulting, Inc. conducted approximately a dozen interviews with key stakeholders in the Pikes Peak area to obtain information on the current health care resources and the potential impact that increased troop levels and dependents will have upon service capacities.

- Who has been interviewed to-date?
  - Rich Strycker; Executive Director, Greccio Housing Opportunity Center
  - Will Temby; President, Colorado Springs Chamber of Commerce
  - Wes Clark;, Vice President for Operations, SAIC; Military Liaison, Colorado Springs Chamber of Commerce
  - Leo Chaney; Vice President, Military Affairs, Colorado Springs Chamber of Commerce
  - Ted Ortiviz; Housing and Human Services, Pueblo County
  - Steven J. McCoy; Deputy Garrison Commander, Fort Carson
  - COL John M. Cho; Commander, Evans Army Community Hospital, Fort Carson
  - COL James D. Terrio; Deputy Commander for Clinical Services, Evans Army Community Hospital
  - Linda J. Boedeker; Executive Director, Southern Colorado AIDS Project
  - Barbara Drake; Director, El Paso County Department of Human Services
  - Mike Decker; Director, Pikes Peak Area Agency on Aging
  - Howard Brooks; Vice President of Community Impact, Pikes Peak United Way
  - Rick O'Connell; President and CEO, Penrose Hospital
  - John Suits; Associate Administrator of Business and Government Affairs, Memorial Health System
  - C.W. Smith; CEO and President, Parkview Medical Center
  - Trudy Strewler; Executive Director, CASA for Children of the Pikes Peak Region
  - Patricia Randle; Acting Director of Army Community Services, Fort Carson

Competition for employees and patients may affect cooperation among providers.

A common concern was recruiting enough qualified nurses to meet community and military needs.

Issue #1: Labor Resources

There is a growing awareness around the Pikes Peak region that the availability of community, medical, and social services may need to increase, specifically for the military and dependents. Qualified providers are the limiting factor in expanding services.

The national nursing shortage affects both military facilities and community hospitals. As Col. Terrio, at Evans Army Community Hospital, described, "We currently have excess numbers of physicians on staff; however, it is difficult to recruit enough qualified nurses to meet our needs." The result is competition among providers for competent nurses, particularly in the more skilled areas, and the potential for that competition to affect cooperation on other issues.

It currently appears that the Growth Plan study area (El Paso, Pueblo, and Fremont counties) has more than enough physician capacity to meet current and expected future demand. While there are positive reports that many community physicians are making themselves available to military members, other stakeholders suggested that a limited number of primary care physicians accept TRICARE or Medicare patients. Navigant will assess to what extent this influences access to care.

Colonel Terrio highlighted a recent recruitment drive that landed 33 new providers to the area. Navigant's initial review of total physician supply in the region shows that there are an adequate aggregate number of doctors; however, the distribution of doctors by location and specialty hampers the ability to provide needed access to care to all citizens in the region. Local administrators affirmed that primary care physicians, especially in general medicine and family practice, are difficult to find. A local community leader stated that long waiting times for primary care appointments are often the norm rather than the exception.

As the gatekeeper for many insurance plans, the primary care physician is often the referral source to specialty services. A bottleneck in primary care services can impact how expeditiously a patient can access both primary and specialty services.

Issue #2: Service Capacity

Fort Carson is served directly by Evans Army Community Hospital on-post and indirectly by several community hospitals and specialty clinics throughout the region. While it appears that the region may have an excess in bed capacity, some stakeholders suggested that specific hospitals may be inadequate given projected growth.

Evans Army Community Hospital, in particular, currently has 78 inpatient beds. In 2005, the average inpatient census hovered near 30 percent, with an elevated census count during winter months. This census level shows there are growth opportunities for inpatient services.

Evans also reported other positive findings, including significant growth in the volume of outpatient services, with a 49 percent increase in encounters from 2005 to 2006. In 2006, Evans provided 2,362 outpatient services per day, or more than 592,500 throughout the year. In addition, its operating room volume increased 20 percent, deliveries grew by 10 percent, and pharmacy prescriptions escalated by over 20 percent to more than 2,300 filled prescriptions per day.

As Evans has experienced strong growth, its leadership has procured funding to enhance its capabilities to meet future needs. Currently, Evans has ongoing projects to increase the number of labor, delivery, and recovery rooms by December 2007, build an addition to the MRI facility to house a permanent magnet, renovate the Larson Dental Clinic by December 2007, replace a vet clinic, upgrade the Emergency Department, and improve its inpatient bed configuration to allow for better patient flows.

Issue #3: Communication

Colonel Cho, the Commander at Evans Army Community Hospital, organized a recent healthcare symposium of regional leaders to discuss key issues and trends in the Pikes Peak area. Colonel Cho, as well as Colonel Terrio, wished to ensure that the Army base was seen as a concerned member of the wider community of health care providers, and that they would continue their outreach efforts.

Issue #4: Behavioral Health

The adequacy of behavioral health services for troops and their dependents as well as retirees has become a major concern locally and nationally. Barbara Drake, the Director of Human Services in El Paso County, suggested a correlation between an increase in troop levels and an increase in domestic, spousal, and animal abuse.

Currently, Fort Carson has a soldier readiness center that has provided 34,000 screenings of soldiers in preparation for their departure or return from deployment. This center works actively with military families to provide a safe environment for military families to talk with professionals about familial issues, managing stress levels, identifying risk factors for disease, and other related matters of concern.

Recent published reports show that the leading barrier to behavioral care is that military personnel are worried about being seen as weak for having sought out behavioral health services. Navigant will continue to explore how behavioral health services can be improved.

Issue #5: Child Care

Nationally, child care has almost become a requirement for military personnel and their spouses as spouses have increasingly gained employment outside the home. At Fort Carson, child care facilities are in high demand both on- and off-post; however, on-post facilities are seen as more convenient while providing the same level of care or greater. Additional child care facilities are planned on-post, although these will not meet demand. There is promise in a new public-private partnership for off-post care; the success of this pilot program will be monitored and duplicated if successful.

Issue #6: Payment

The payment levels for medical services provided by non-military organizations to enrollees in the various TRICARE plans are a concern to community providers. The extent to which this influences access to care will be examined by Navigant.

Potential Tools and Solutions

Stakeholders suggested a number of questions for PPACG and the consultant team to analyze through the Regional Growth Plan. These included questions regarding:

- The supply of TRICARE and Medicare primary care providers, and whether there are sufficient providers to meet the need associated with the planned troop expansion;
- The regional health care capacity, including the supply of in-patient beds;
- Health care utilization rates (i.e., the number of admissions by service line per 1,000 people); and
- Access issues, such as the uninsured rate and waiting lists for behavioral services.

Navigant Consulting, Inc. will utilize the following tools in preparing for the troop expansion and future population growth. These tools will enable community leaders and planners to make informed decisions in regard to health care resources in the region.

- Utilization rates as a basis for calculating future patient volumes;
- Gap analysis in the supply of physicians that will show the number of doctors needed by specialty;
- Physician density and distribution levels throughout the study area; and,
- Best practices in providing behavioral healthcare for local providers, as well as identifying key trends and issues in improving behavioral services to military personnel and their families.
- In addition, behavioral health issues are a growing concern for military planners and non-military personnel. Navigant will provide guidelines for educating local providers about military culture and will work with military leadership to educate soldiers about behavioral health.
- Annual (or more frequent) symposiums of regional military and community medical leaders can continue to strengthen outreach and cooperative efforts between military and community providers.

SUMMARY

This report summarized the concerns and ideas of stakeholders interviewed in February and March 2007 for the housing and economic impact, education and health and social services/resources areas. Key issues for each resource area were as follows:

Housing and Economic Impact:

- Requests for Demographic Data
- General Health of the Building Community
- Direction of Growth
- On-Post Housing Supply
- High Multi-Family Vacancy Rates
- Housing Affordability

Education:

- Distribution of New Students
- District Capacity
- Wait-and-See Philosophy
- Funding Quality Programs
- Labor Resources
- Traffic Congestion

Health and Social Services

- Labor Resources
- Service Capacity
- Communication
- Behavioral Health
- Child Care
- Payment

The Growth Plan will be guided by this initial feedback, and the project team will continue to evaluate comments.

Fort Carson
Regional Growth Plan

An Invitation to the Community

February 2007, Issue 1

In 2005, community leaders formed the Colorado Defense Mission Coalition (CDMC) in response to the announcement of troop increases at Fort Carson. The addition of nearly 10,000 soldiers and civilian personnel, plus an estimated 15,000 family members in the next four years, will have a significant impact on the Pikes Peak region, particularly in areas such as housing, transportation, schools, public utilities, social services and the economy.

The CDMC has brought agency heads, business leaders, nonprofit stakeholders and elected officials together with the community to talk about what needs to be done to effectively prepare for the growth that will result from these large and rapid increases. An important first step was taken on August 24, 2006, when the Pikes Peak Area Council of Governments (PPACG) was awarded a grant from the Department of Defense's Office of Economic Adjustment to develop The Fort Carson Regional Growth Coordination Plan. The purpose of the Plan is to assess the impacts of the expansion of Fort Carson on the region and to provide a coordinated action plan to address them.

In order to ensure effective communication across the entire region, a Policy Oversight Committee comprised of elected officials from El Paso, Pueblo and Fremont counties has also been formed. The consulting firm of EDAW will assist PPACG in the development of the Plan.

Steady progress is already being made on the Regional Growth Coordination Plan. During this effort, we will be sending out four newsletters to keep you up to date on the planning process. This is a very large undertaking. Your involvement and communication is vital to its successful completion. In fact, all stakeholders are partners in the project. Any information, comments, and suggestions that you can provide to make the Plan more effective are welcome. Please contact the PPACG Military Impact Planners, Rob O'Connor and Annie Oatman-Gardner at 719-471-7080 or email them at roconnor@ppacg.org or aoatman@ppacg.org.

Accomplishing our Goals

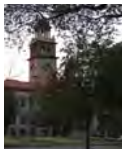
Installation growth will impact both Fort Carson operations and the communities in the surrounding region. This plan will work with the region to accomplish the following objectives:

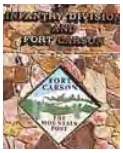
- Make growth enhance and work for the region
- Develop an overarching approach to coordinate efforts
- Capitalize on regional diversity and choice
- Integrate local and regional problem-solving
- Create clear and prioritized actions

Changes Coming to Fort Carson

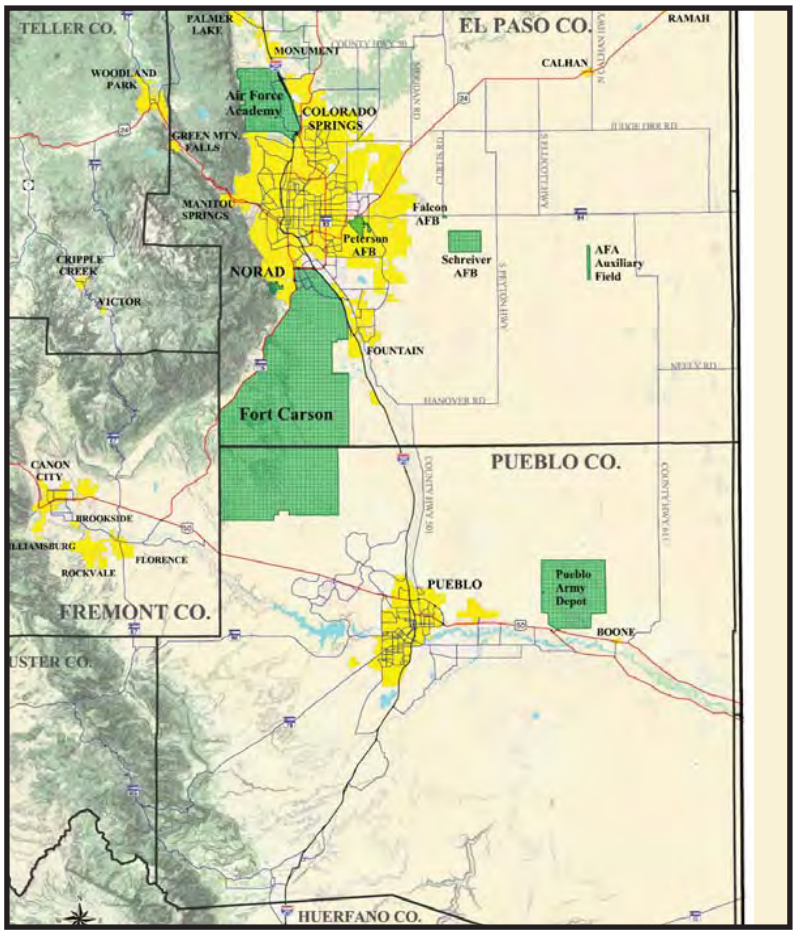
Fort Carson, established in 1942, is located south of Colorado Springs, extends into Pueblo County, and borders Fremont County. El Paso County is also home to four other military installations: U.S. Air Force Academy, Peterson Air Force Base, Schriever Air Force Base and Cheyenne Mountain Air Force Station. These military installations play a strategic and critical role in the national defense of our Country. They also play a major role in the sustained economic vitality of the region and the State of Colorado.

Due to shifts and growth in the U.S. Army, Fort Carson is expected to grow from a current level of 18,172 troops to over 28,000 troops by 2010 (Source: Fort Carson Transformation EIS Fact Sheet, May 2006). 10,000 positions are being reassigned to Fort Carson due to the Base Realignment and Closure decision and the Department of Defense Transformation Initiatives. The Army is restructuring military services to better respond to defense concerns in the 21st century.





Who Does This Study Affect?



Focusing on Impact Areas

Listed below are the key topic areas that are being analyzed. Identify your area of interest and go to the Process Timeline to see when these areas are being highlighted in the planning process.

Housing - This topic will utilize information available from Fort Carson's Housing Market Analysis Study to determine future military housing needs.

Education - This study will evaluate the capacity of local school districts to absorb increases of students and recommend strategies to meet the anticipated need.

Transportation (urban, highway, transit) - Restructuring of traffic circulation on Fort Carson (including opening one or more new gates) will require assessment of the effect on external traffic patterns and modes of travel.

Planning and Zoning - This study will inventory, review and assess existing municipal and county land use plans and policy documents; identify ways to improve regional cooperation; and coordinate planned growth and development of the region.

Public Safety and Emergency Services (fire, police, ambulance) - Assessments will be done to examine the ability of numerous public safety and emergency service providers to meet the needs of the growing population.

Health and Social Services - There is a growing awareness around the Pikes Peak region that we need to increase availability of community, medical, and social services, specifically for the military and dependents. This task will gather the information necessary to create strategies for delivery of those services.

Quality of Life - This project will continue Fort Carson's initiative to improve installation management and ensure positive relationships with neighboring communities through the use of quality of life and sustainability indicators.

Compatibility and Installation Operations - Assistance will be given to Fort Carson in its efforts to identify compatible uses of land, air, water and other resources near the installation to ensure its ability to conduct training exercises.

Economic Impact - The planned troop increases at Fort Carson and the inherent increased investment and reliance requires working with existing partners to develop strategies to address economic opportunities and concerns.

Public Utilities and Infrastructure - This task will examine the current reserve capacity and future demands on utilities and infrastructure through 2025.

What this plan does not address:

- How the Army will fulfill its training missions
- How the Army will develop the installation to meet transformation needs
- Potential changes at Piñon Canon Maneuver site

Activities Underway

- State Highway 16 / Gate 20 funding sources are being monitored, with the design and EIS underway. Ground breaking is scheduled for spring 2007.
- Supplemental Aid for Military Dependent Students (HB07-1232) was introduced in the State House on February 5, 2007 and passed the House Education Committee unanimously on February 12th where it is headed to the full House for a vote.*

  ** The goal of this bill is to ensure that teachers, desktops and resources are available to new military students when they are relocated. It allows school districts access to state education dollars for the year the students arrive by creating a second count day for military dependents that arrive between Oct 1st and Feb 1st. The law sunsets in 2011.*
- Presentations to the Policy Oversight Committee and CDMC begun.
- Task Area assessments and stakeholder group interviews underway.

Who's Who

Colorado Defense Mission Coalition (CDMC) includes representatives from the Economic Development Corporation, the Chamber of Commerce, the Colorado congressional delegation, the military, area nonprofit service providers , municipalities, and other stakeholder groups that expect to be impacted by the growth and are willing to work together on this plan. Meetings are open to the public.

Policy Oversight Committee (POC) membership is comprised of elected officials representing the Council of Governments from El Paso, Pueblo, and Fremont counties. These meetings are publicly posted and open to the public. The role of the POC is to oversee and promote the plan.

Stakeholders are those companies, organizations, institutions, and individuals who represent you and your community and who will be greatly influenced and affected by the proposed actions of the plan. Stakeholder meetings are one of the most important steps in the planning process. By interviewing the stakeholders we are better able to identify on-the-ground issues and address concerns and ideas. Contact our Military Impact Planners at PPACG, 719-471-7080 or aoatman@ppacg.org to schedule a stakeholder meeting.

★ Public awareness and outreach are an integral commitment of this project. Public meetings will be held for the review of plan materials, providing input, and voicing opinions. The first meeting was held in Colorado Springs, November 15th. The next town hall meeting is scheduled for April 17th in Pueblo. As the date nears, details will be posted at www.ppacg.org.

How to Get Involved

- Attend and participate in public meetings
- Observe the monthly Policy Oversight Committee or CDMC meetings
- Read about the project on our website, www.ppacg.org
- Email your comments to: aoatman@ppacg.org or roconnor@ppacg.org
- Mail your comments to:
  Fort Carson Growth Plan
  Pikes Peak Area Council of Governments
  15 South 7th Street
  Colorado Springs, CO 80905
- Fax your comments to: 719-471-1226

Process Timeline

Meeting Date		Event/Meeting Descriptions
November 15, 2006 - Town Hall Meeting	★	Colorado Springs
December 2006 - January 2007		Fort Carson Regional Growth Plan Kick Off
February 20-22, 2007 Stakeholder Interviews	★	PPACG, 15 South 7th Street Colorado Springs, CO 80905
March 21, 2007 CDMC Presentation		Transportation, Quality of Life
April 17, 2007 Public Meeting	★	Pueblo Convention Center
April 18, 2007 CDMC Presentation		Compatibility and Installation Operations, Housing
May 16, 2007 CDMC Presentation		Public Utilities and Infrastructure, Planning and Zoning, Public Safety and Emergency Services
June 20, 2007 CDMC Presentation	★	Economic Impact, Education
July 20, 2007 CDMC Presentation		Health and Social Services
August 2007		Transportation, Quality of Life
September 2007	★	Compatibility and Installation Operations, Housing
October 2007		Public Utilities and Infrastructure, Planning and Zoning, Public Safety and Emergency Services
November 2007	★	Economic Impact, Education
December 2007		Health and Social Services
January - February 2008		Finalization of Plan

Assessment and Research

Solutions and Actions

Fort Carson Regional Growth Plan
Pikes Peak Area Council of Governments
15 S. 7th Street
Colorado Springs, CO 80905

Please Join Us at One of the Following Public Events

Tuesday-Thursday

February 20-22, 2007

Pikes Peak Area Council of Governments

Colorado Springs
Stakeholder Interviews

Call PPACG to schedule an interview with the project team: 719-471-7080 x130

Sponsorship by:
EDAW
Pikes Peak Area Council of Governments

Invite Us!

If you are a group or organization that would like to be involved or more informed about the process, please feel free to contact us and we would be happy to provide you with an informational presentation.

PowerPoint presentations and handout materials are available. Please request length of presentation time and specify interest area.

Annie Oatman-Gardner
Pikes Peak Area Council of Governments
15 South 7th Street,
Colorado Springs, CO 80905
719-471-7080 x130

Sponsorship by:
Pikes Peak Area Council of Governments

Tuesday

April 17, 2007

Pueblo Convention Center

Pueblo
Townhall Meeting

Come to discuss issues relating to the Fort Carson Regional Growth Plan.

Sponsorship by:
Pikes Peak Area Council of Governments
Colorado Springs Independent
Pueblo Chieftain
Pueblo Chamber of Commerce

Fort Carson
Regional Growth Plan

June 2007, Issue 2

What's in this Issue?

- Introduction for Those New to the Growth Plan
- Project Highlights
- Troop Projections: How Many, When, Who, and Where?
- Stakeholder Interviews and Town Hall Meetings a Success!
- Next Steps
- How to Get Involved

Introduction for Those New to the Growth Plan

Community leaders formed the Colorado Defense Mission Coalition (CDMC) in 2005 in response to the announcement of troop increases at Fort Carson. The addition of approximately 10,000 soldiers and civilian personnel, plus an estimated 15,000 family members, in the next four years will have a significant impact on the Pikes Peak region.

Impact Areas

- Regional Housing Assessment
- Public Utilities and Infrastructure
- Education
- Transportation
- Planning and Zoning
- Public Safety and Emergency Services
- Health Care and Social Services
- Quality of Life/ Sustainability Indicators
- Compatibility and Installation Operations
- Economic and Fiscal Analysis

The CDMC and the Pikes Peak Area Council of Governments (PPACG) have brought together agency heads, business leaders, nonprofit stakeholders and elected officials to help prepare the community for that growth. The Regional Growth Coordination Plan will assess the impacts of the expansion of Fort Carson on the region and provide a coordinated action plan to address them. The effects of growth in ten impact areas for the three counties, El Paso, Pueblo and Fremont, will be evaluated. In order to ensure effective communication across the entire region, a project Policy Oversight Committee comprised of elected officials from the councils of governments for those counties has also been formed.

Your involvement is vital to achieving successful outcomes. Any suggestions that you can provide to make the Plan more effective are welcome. Please contact the PPACG Military Impact Planners, Rob O'Connor and Annie Oatman-Gardner at 719-471-7080 or by email, roconnor@ppacg.org or aoatman@ppacg.org.

Project Highlights

September 2006 - PPACG receives grant from Department of Defense to prepare a Regional Growth Coordination Plan.

November 2006 and April 2007 - Town Meetings with Fort Carson in Colorado Springs and Pueblo attended by an estimated 800 and 500 persons respectively.

February 2007- Stakeholder Interviews conducted and documented.

June 5th, 2007- Governor Bill Ritter signed into law two bills supporting local military families. HB 07-1232 helps school districts prepare for the growth of the military through a second student count day and SB 07-146 funds a three-year pilot project that will provide mental health services in the Colorado Springs area for family members of recently discharged veterans of Operation Enduring Freedom and Operation Iraqi Freedom.

March through July 2007 - Technical Assessment Presentations for each Impact Area to CDMC- 3rd Wednesday of each month.

Pueblo Town Hall meeting addressed military movements, housing, and other issues with over 500 attendees

Troop Projections

How Many Troops, Families, and Civilian Employees are Coming?

Currently the US Army is experiencing extensive personnel movement based on three strategic directives: Base Realignment and Closure (BRAC), Integrated Global Presence and Basing Strategy (IGPBS), and Army Modular Force (AMF). In combination, these directives will bring new troops, civilians and dependents to Fort Carson over the next 5 years.

Recognizing the dynamic nature of these three major changes, the Plan has developed a range for the projected increase in military personnel to evaluate impacts. Using a range between 11,400 and 8,550 new military personnel provides more flexibility and responsiveness in the planning effort for the Pikes Peak region. The two ends of this range are referred to as the "Expected Growth Scenario" (11,400) and the "Alternative Growth Scenario (8,550)." This type of approach, referred to as a sensitivity analysis, affords the opportunity to respond to possible development impacts if changes occur in the assignment of military personnel during the next five years.

The scenarios are based on estimates provided by officials at Fort Carson, and will function, for planning purposes, as the projected total number of troops that will be coming to the installation through Fiscal Year (FY) 2011 (please note that FY refers to the federal fiscal year which ends on September 30).

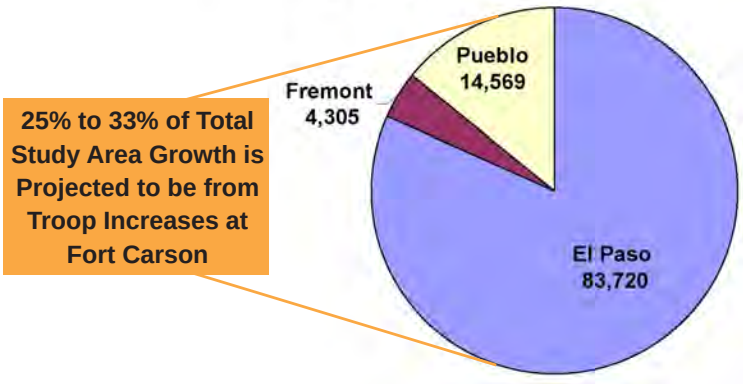
Expected Growth Scenario (EGS)
This assumes 11,400 additional troops will be authorized at Fort Carson in the next five years.

Projection for the Expected Growth Scenario (EGS)
11,400 Military Personnel
+21,287 Military Dependents
+430 Civilian Personnel
+692 Civilian Dependents
==========
33,809 Total New Persons in the Study Area

Alternative Growth Scenario (AGS)
This scenario results in 8,550 troops authorized at Fort Carson in the next five years.

Projection for the Alternative Growth Scenario (AGS)
8,550 Military Personnel
+15,966 Military Dependents
+430 Civilian Personnel
+692 Civilian Dependents
==========
25,638 Total New Persons in the Study Area

The Growth Plan Study Area is Projected to Increase in Population by 102,594 people from 2006 to 2011.



Dependent estimates are based on a population "multiplier" or "factor" of 2.9, meaning that for every 1 military personnel relocated, 1.9 dependents (including spouse, child, other dependent) will also follow. A slightly different multiplier is used for Civilians (2.6).

Please remember – the specific number of troops and their time of arrival is difficult to predict. The Plan will try to be flexible and offer a range of projections. Also note that projections address authorized strength rather than deployments.

When Are They Coming?

As shown in the table below, a large number, about 40 percent of the total amount of military personnel, are scheduled to arrive by the end of Fiscal Year 2007. The next large wave is anticipated to occur in FY 2009, with 3,900 (AGS) to 5,200 (EGS) troops. The remaining troops, approximately 1,000, are expected to arrive in FY 2010 and 2011.

Military Personnel Authorized to Fort Carson

Time Frame	Expected	Alternative
New Troops by FY 2007	4,700	3,525
New Troops by FY 2008	100	75
New Troops by FY 2009	5,200	3,900
New Troops by FY 2010	700	525
New Troops by FY 2011	700	525
Total Estimated Authorized Military Personnel	11,400	8,550

Source: RKG Associates, Inc., PPACG, Fort Carson

Who are the New Neighbors?

Military Personnel Profile			
Rank	**% of Total and Range of Increase**	**Demographics**	
E7 - (Warrant Officers/ Officers)	23%	32% of dependants arriving live in these families	73% of families will live off post. Of these, 9 out of 10 will live within 20 miles of the post.
	2,660 - 1,995		
E4 - E6 (Mid-level Enlisted Personnel)	59%	63% of dependents arriving live in these families	
	6,769 - 5,077		
E1 - E3 (New Recruits and Privates)	17%	Majority are single and live in barracks. Only 6% of dependents live with this rank.	
	1,971 - 1,478		

Where Will They Live?

Where troops and their dependents will live depends on a number of factors, such as their family status, proximity to Fort Carson, and the cost of housing. Historical data collected from local agencies and interviews with stakeholders indicated that the two most important factors in the housing location of Fort Carson personnel were commute time and affordability. As commute time increases, desirability of a location decreases. An examination of a sample of zip code data for Fort Carson personnel found that over 65 percent of married personnel (with or without children) live in Colorado Springs and 33percent live in Fountain, Security, Widefield, and unincorporated El Paso County. That means that more than 9 out of 10 families currently live within 20 miles of Fort Carson.

The Growth Plan expects current trends to continue, with Colorado Springs, the Fountain area, and El Paso County likely to become the new home for the majority of troops. However, Pueblo and Fremont counties and the City of Pueblo, Pueblo West and Canon City do attract Fort Carson families.

What troops can afford to rent or purchase, and the supply of that type of housing also significantly influences where troops may live. Data from over 200 military mortgages indicated the following:

Average Income
Primary borrower = $48,000
Borrower and spouse = $59,000

Average Other Monthly Debt
E1-E3 = $305
E4-E6 = $825
E7-Officer = $967

Average Home Sales Price
E1-E6 = $203,000
E7-Officer = $337,000

Affordability within the areas closest to Fort Carson appears to be in line with forecast demand, with homes starting at $210,000 and town homes starting at $180,000.

RKG Associates Inc. has examined the housing market within the Growth Plan Study Area. The analysis compares the projected housing demand to the current and future housing market and provides insights into the current health of the real estate development community. For more information about RKG's findings, contact the PPACG Military Impact Planners, Rob O'Connor and Annie Oatman-Gardner at 719-471-7080 or by email, roconnor@ppacg.org or aoatman@ppacg.org.

Growth Plan project team tours Fort Carson

Stakeholder Interviews and Town Hall Meetings a Success!

Over 90 stakeholders were contacted by PPACG staff and the consultant team of EDAW, RKG Associates, and Navigant Consulting in February and March to solicit one-on-one, group, phone, and email feedback. Interviewees included:

- Local school districts, colleges and universities
- Hospitals and medical providers
- Local chambers of commerce
- Agency, county and municipal staff throughout the region
- Developers and homebuilders
- Realtors, bankers, and brokers
- Non-profit groups
- Fort Carson civilian and military personnel

Key issues were identified by those most directly impacted by the growth. Those issues will serve as a platform for developing recommended actions.

To review the Stakeholder Interview Summary visit the PPACG website, www.ppacg.org, click on Military Impact, click on the Growth Plan page and click on the link to view the Stakeholder Summary.

The two Fort Carson Town Hall meetings were successful collaborations with community partners in both Colorado Springs and Pueblo. The meetings were a combination of informational presentations, question and answer sessions and breakout groups for in-depth discussion on the various impact areas.

A third meeting is scheduled for July 19, 2007 in Cañon City in Fremont County. Information recorded at the meetings will be integrated into the results of the stakeholder interviews.

Schedule/Next Steps

Meeting Date	Event/Meeting Descriptions
June 20, 2007 CDMC Presentation	Housing and Economic Impact
July 18, 2007 CDMC Presentation	Education, Health and Social Services
July 19, 2007	**Public Meeting in Canon City 6:00-8:00 pm**
August 2007 - January 2008 CDMC Presentations	Impact area subcommittees will be convened to identify solutions, discuss implementation strategies and recommend tools, and develop specific action items.
November 2007	Colorado Springs Town Hall Meeting (TBD)
February 2008	**Finalize Action Plan**

Assessment and Research Solutions and Actions

How to Stay Informed and Get Involved:

- **Attend** and participate in the July 19th Town Hall Meeting in Canon City.
- **Observe** the CDMC meetings on June 20, July 18, and August 22.
- **Review** the project or Stakeholder Interview Summary on our website, www.ppacg.org
- **Email** your comments to: aoatman@ppacg.org or roconnor@ppacg.org
- **Mail** your comments to:
  Fort Carson Growth Plan
  Pikes Peak Area Council of Governments
  15 South 7th Street
  Colorado Springs, CO 80905
- **Fax** your comments to: 719-471-1226

Invite Us!

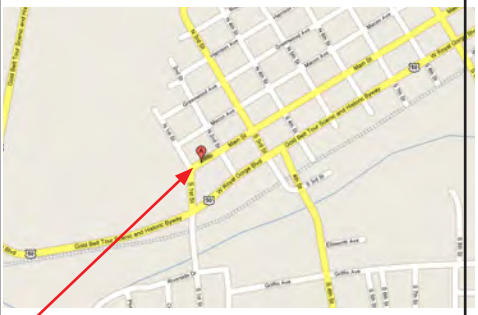
If you are a group or organization that would like to be involved or more informed about the process, please feel free to contact us and we would be happy to provide you with an informational presentation. PowerPoint presentations and handout materials are available. Please request length of presentation time and specify interest area.

Annie Oatman-Gardner
PPACG
15 South 7th Street,
Colorado Springs, CO 80905
719-471-7080 x130

Pikes Peak Area Council of Governments
Communities Working Together

Please Join Us at the Following Public Events:

Thursday
July 19th, 2007
7:00 - 9:00pm



Canon City City Hall
128 Main St
Canon City, CO 81212
(719) 269-9011

Fort Carson
Regional Growth Plan

February 2008, Issue 3

What's In This Issue?

- Milestones Completed in the Fort Carson Regional Growth Plan
- New Troops: How Many? By When?
- Housing and Economic Impacts
- Growing Concerns: Health Care and Social Services
- Education: Preparing for the Future
- Child Care: Community Capacity Issues

Milestones Completed

- September, 2007 – Formed and convened Partnership Groups composed of community stakeholders to develop recommendations and action items for each of the impact areas, including housing education, health and behavioral health, social services, childcare, transportation, utilities, public safety, planning and zoning, and installation compatibility
- Completed Working Papers, with assessments recommendations, and action items for eight of the impact areas listed above. Working Papers and accompanying Action Tables are available at www.ppacg.org.
- December, 2007 – Took part in the Office of Economic Adjustment's 2007 Growth Summit along with twenty other communities nationwide that are experiencing significant growth as a result of the 2005 Base Realignment and Closure Commission (BRAC) decisions.
- January, 2008 - Convened the fourth Fort Carson Town Hall meeting in Colorado Springs, with over 600 persons in attendance.

How Many New Troops Will be Coming?

The Base Realignment and Closure Commission (BRAC) recommended that between 2005 and 2011 Fort Carson become home to an additional 11,400 soldiers, accompanied by about 21,000 dependents equaling more than 32,000 new arrivals to the community by 2012. El Paso, Fremont and Pueblo counties are anticipated to be impacted by troop growth. The new soldiers and families arriving at Fort Carson will represent 27% of the total expected growth of the region in the next five years. The total expected growth is estimated at 124,000 new residents for the three county region.

Currently the US Army is experiencing extensive personnel movement based on three strategic directives: Base Realignment and Closure (BRAC), Integrated Global Presence and Basing Strategy (IGPBS), and Army Modular Force (AMF). In

combination, these directives will bring new troops, civilians and dependents to Southern Colorado.

Recognizing the dynamic nature of these three major changes, the Fort Carson Regional Growth Plan, being conducted by Pikes Peak Area Council of Governments, estimates that 11,400 new military personnel and about 21,000 of their dependents will arrive in Southern Colorado by 2011. It is important to stress, however, that the specific number of troops and their time of arrival is difficult to predict. The Fort Carson Regional Growth Plan will become a living document to keep the community abreast of numbers, changes and timelines as they unfold and will be made available on the PPACG website. (www.ppacg.org)

The actual number of Fort Carson-based soldiers present at the installation depends on ongoing deployments and other activities. Since the start of the Iraq conflict, more than 4,000 soldiers based at Fort Carson have been deployed overseas at any one time. The Growth Plan focuses on the end state of 2012, when 11,400 new solders and 21,000 of their dependents should be living in the Pikes Peak region. Please note, the above numbers do not factor in the recent December 2007 Pentagon announcement that an additional 4,900 troops will be based at Fort Carson.

4,900 MORE TROOPS!

In addition to the BRAC decision of 2005, the Army announced in December 2007, that Fort Carson will receive an additional brigade with about 4,900 more soldiers by 2013 as a part of the Grow the Army initiative.

It is important to note that the estimates outlined in the Fort Carson Growth Plan do not include the 4,900 troops that the Pentagon announced in December 2007. The impacts of these additional troops and their dependents on our community will be included in updated assessments through the Pikes Peak Area Council of Governments' planning efforts in the coming year.

When Are They Arriving?

They've already started to arrive. So far, about 30% of the new BRAC soldiers and their dependents have begun relocating to Colorado. The next large wave of troops is anticipated to occur in 2009, with 5,200 troops. The remaining troops are expected to arrive before the end of 2011.

How Can We Prepare?

How does one respond to the changes that could occur in the three counties as approximately 11,400 soldiers and civilian personnel, plus their estimated 21,000 family members, move to Southern Colorado? Community leaders formed the Colorado Defense Mission Coalition (CDMC) in 2005 in response to the announcement of troop increases at Fort Carson. The CDMC and the Pikes Peak Area Council of Governments (PPACG) have brought together agency heads, business leaders, nonprofit stakeholders and elected officials to help prepare the community for that growth. The Fort Carson Regional Growth Plan examines how the anticipated Fort Carson troop increase will impact El Paso, Pueblo and Fremont counties in ten distinct subject areas.

For each impact area, a Working Paper has been prepared that articulates the major issues identified by stakeholders, examines the magnitude of change and corresponding need, and forms a platform for the Plan's recommendations and actions. Major findings and draft recommendations of these papers are summarized on the following pages, and completed Working Papers can be downloaded at www.ppacg.org (click on Military Impact). Comments are welcome as the partnership groups and CDMC further develop action recommendations to address anticipated changes.

Housing and Economic Impact

The Housing Working Paper compares the projected housing demand to the current and future housing market and provides insights into the ability of the real estate development community to respond. The Economic Impact Working Paper provides a review of the economic impacts related to the troop increase at Fort Carson from 2006 to 2011.

Major Housing Findings:

- At least 70% of incoming troops will live off-base. This translates into a demand by 2012 for approximately 12,500 for-sale units to meet the needs of the expected growth in the community, including Fort Carson's new families. Forecast demand for rental units is approximately 8,700 units, which is slightly above the number of vacant units, planned units, and on-post units.

- Most of the incoming soldiers and their families living off-base will likely reside in southern Colorado Springs, southern unincorporated El Paso County, Fountain, Security and Widefield. Pueblo and Fremont counties as well as other areas of El Paso County are expected to capture a smaller portion of demand.
- Regional rental and home prices appear to be in line with what incoming soldiers and officers can afford.

Major Economic Findings:

- Approximately $1.3 billion in federal funds will be spent at Fort Carson through 2013 on new construction, stimulating an additional output of $2.6 billion, $887.5 million in additional wages, and 23,142 one-year jobs.
- New homes built in response to increased demand will equate to approximately $1.5 billion in construction dollars. These new houses will stimulate an indirect impact of an additional $2.9 billion in output, $977.6 million in earnings, and support over 25,000 one-year jobs.
- In 2006, Fort Carson spent an estimated $204 million in local purchases and contracts, Tricare and health related payments, utilities, tuition assistance, and rent/lease payments. If these payments increased based on

Fort Carson Annual Operational Spending

	Expenditures	Output	Earnings	Direct Employment	Indirect Employment
Type of Impact	Direct	Indirect	Indirect	Direct	Indirect
Current 2006*	$204,288,433	$362,638,623	$113,315,730	15,719	2,881
Additional*	$109,607,336	$194,567,323	$60,797,546	11,830	1,546
Total by 2011	**$313,895,769**	**$557,205,947**	**$174,113,276**	**27,549**	**4,427**

1. **Direct Employment** includes military personnel and civilian personnel, but does not include contractors.

2. **Indirect Employment** is employment induced from spending from Fort Carson annual spending in the community. It does not include induced employment from consumer spending from personnel.

Source: Fort Carson Garrison Command, Fort Carson Statistical Data Card, RKG Associates, Inc.

the number of new personnel, an additional $109.6 million would be spent annually once all new troops have arrived. This will create an indirect impact of $194.6 million annually, and support 1,546 new jobs per year with earnings of $60.8 million.

Draft Recommendations

- *Adequate and Timely Information.* Many of the builders and developers within the region are incurring substantial amounts of risk, and feel that the level of communication between the military and the building community could be improved. If more data related to troop increases were made available, the level of risk could be better managed and the region would benefit from a higher level of financial security.
- *Housing Indicators.* Several factors related to the health of the housing community, such as foreclosures, mortgage rates, subprime lending patterns, affordability trends, and other housing related indicators should be monitored. Data sources for many of these factors currently exist, but are not currently centrally located.
- *A Military Communication Information Forum.* A regional forum, serving as a conduit for information between Fort Carson and developers, should be established, and be responsible for providing regular updates of troop relocation, deployment, and any other information related to changes in military personnel.
- *Monitor the Economic Impact.* Several key indicators should be documented on an ongoing basis in order to provide information and education to community decision makers regarding the ongoing economic impact Fort Carson has on the region, as well as the

Growing Concerns: Health Care and Social Services

The Health Care and Behavioral Health Working Paper describes the current and planned health care provider resources in the Fort Carson study area and identifies both current and possible future gaps in services.

Key Findings

- There is a shortfall in the number of primary care physicians, as well as in the ratio of primary care to specialist physicians. The nursing shortage in the Fort Carson study area is also a significant issue.
- Major hospitals in the study area have announced or recently completed projects to add capacity; the projected population is not expected to overload the hospital infrastructure through 2011.
- Mental health and behavioral health services are strained currently with a deficiency in the supply of psychiatrists and difficulty in hiring and retaining counselors and other support staff. Mental health service delivery is fragmented and uncoordinated among providers. In addition, the community-based providers do not always have a good knowledge of the military culture.

- Insurance programs do not provide adequate payment levels or coverage models for behavioral health problems that address the complex needs of patients and their families.

Draft Recommendations

Provide more resources to the recently formed Military Community Collaborative to:

- Create a database that would aid in monitoring regional health performance and establishing regional healthcare milestones.
- Act as a conduit in bringing together leaders from Evans Army Community Hospital and the study area's hospitals and physicians to anticipate the needs of the military community and identify which services the military will rely on the community to provide.
- Form a mental health alliance of community and military providers. This alliance will build upon the Warrior Transition Unit program and the task force coordinating services to recently discharged veterans. It will also provide the information needed by both the military and the community providers to invest in the appropriate level of resources to meet future demand and avoid service gaps and capacity constraints.
- Create a regional strategy for recruiting physicians to the Fort Carson study area so local providers can reduce the physician shortfall that is expected to worsen.
- Explore how outpatient drop-in clinics could alleviate the lack of primary care and family practice physicians in rural areas within the study area.

Education: Preparing for the Future

The Education Working Paper evaluates each School District to determine what space might be available for children of incoming soldiers through 2011. It also addresses issues relating to staffing constraints and access to degree programs.

Major Findings:

- Approximately 9,200 school-aged children are estimated to move into the Fort Carson study area over the next five years. Roughly 6,000 of the 9,200 school-aged children can be attributed to population growth at Fort Carson, and 3,200 from baseline growth.
- Over half of new students are forecasted to reside within just two school districts: Fountain-Fort Carson District 8 (33%) and Widefield School District 3 (25%). The remaining students will live in Colorado Springs District 11 (16%), Harrison District 2 (13%), Cheyenne Mountain District 12 (4%), other school districts (4%) or private schools and home schools (6%).
- By and large, the school districts in the Fort Carson study area are capable of absorbing the forecasted influx of new students, and have been preparing adequately over the past few years to accommodate both Fort Carson and baseline population growth. Where deficits may occur, most schools have adopted plans to accommodate the increase.
- An estimated 370 new teachers will be needed by year 2011-12 as a result of new Fort Carson students, especially in the areas of science, math, special education, school counselors, and Spanish.
- For over ten years, the demand for adult education opportunities on Fort Carson has outpaced the availability of space to hold classes. As troops increase, the Mountain Post Training and Education Center will not be able to support the increased demands for both military training and adult education at the existing level of service. It is anticipated that adult education programs will be substantially reduced in order to accommodate military training programs.

Draft Recommendations

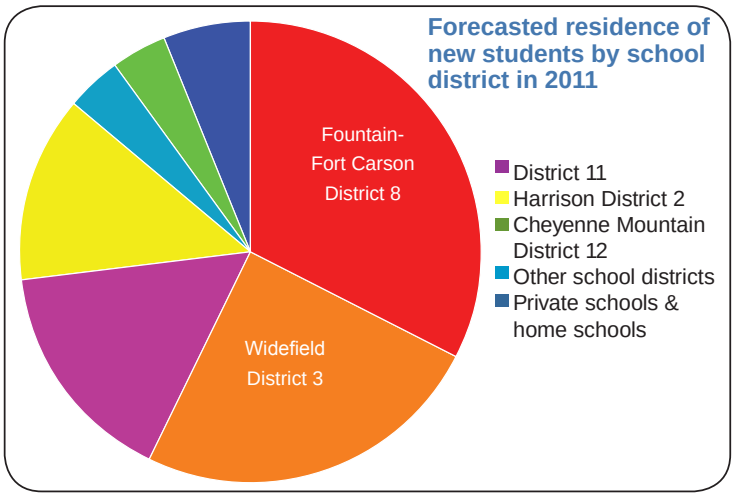
- *School of Choice.* School districts with surplus capacity should maximize opportunities to attract military students through school-of-choice promotions, charter schools, special programs, and special need services.
- *Accurate Forecasts.* School districts should continue to regularly conduct their own student forecasts as demographic and housing development trends evolve and change annually.
- *Teacher Recruitment.* School districts and Fort Carson should work together to fill the 370 new full-time teaching positions by encouraging military spouses and former service members to seek employment in schools.
- *Military Impact School District Coalition.* Local school districts should create a working group consisting of key stakeholders throughout the study area, referred to as the Military Impact School District Coalition.

Anticipated Increase in Students 2005-2011*

School District	K-5	6-8	9-12	Total
Fountain-Fort Carson District 8	1,541	679	716	2,935
Colorado Springs District 11	740	326	343	1,409
Harrison District 2	604	267	283	1,153
Widefield District 3	1,277	571	609	2,457
Cheyenne Mountain School District 12	174	77	81	332
Outside School Districts	189	83	87	359
Private School/Home School	294	130	137	561
TOTAL	**4,818**	**2,132**	**2,257**	**9,207**

Source: RKG Associates, Inc, *Fiscal Year

- *Awareness of Military Family Needs.* Teachers and counselors should receive relevant professional development on the life of the military family (i.e., military culture training) and how that relates to the school experience.
- *Joint Higher Education Facilities.* Fort Carson and its higher education partners should pursue funding for a new Multi-use General Instruction Building and Education Center at Fort Carson.



Child Care: Community Capacity Issues

The Child Care Working Paper estimates the demand for early education and child care (ages 0 through 9), and the available capacity of on-post and off-post providers, and provides recommendations relating to capacity, affordability, and quality of child care, as well as resources for training service providers.

Major Findings

- Non-profit support organizations contribute a major role in identifying community needs, coordinating community resources, and providing referral services for parents, and supporting providers through training and advocacy.
- If 30% to 50% of new families utilize child care, between 2,558 and 4,264 additional children age 0-9 will need child care or after school care by 2011.
- With six on-post Child Development Centers (CDC), the Fort Carson Child and Youth Services had an operational capacity of 782 in 2006. Current plans for expansion of the Fort Carson child development center program would accommodate 713 new children, for a total of 1,495 operational CDC spaces by 2012. Even this increase in capacity falls significantly short of the number of children requiring child care entering the region by between 1,700 to 3,500 children.
- Off-post providers will be able to accommodate short-term increases for select age classes. However, long-term capacity may become a critical issue that should be addressed not only by providers, but by Fort Carson, economic development interests, School Districts, and the broader community.

Draft Recommendations

- Continue an open dialogue between the military and off-post providers.
- Increase the capacity on-post and quality, affordable providers off-post.
- Coordinate child care facilities with housing developments and the facilities of major employers.
- Increase funding for child care.
- School Districts, employers, local churches, and child care providers should pursue strategic partnerships to offset or avoid the capital costs of new facilities.
- Promote early intervention and support for children with special needs.

Colorado Springs Town Hall A Success!

The fourth Fort Carson Town Hall meeting was convened in Colorado Springs on January 14th. The public event started with five workshops that highlighted specific plan assessments: Housing and Economic Impact; Education; Early Childhood Development; Behavioral Health. In addition, Terrance McWilliams of the El Pomar Foundation held a workshop on how local nonprofits can work more closely to deliver support for soldiers and families.

Approximately 250 community members attended the early bird workshops and then joined over 600 for the Town Hall Meeting. Fort Carson Commander General Mark Graham gave a presentation on expected changes. Rob MacDonald, Executive Director of PPACG gave an overview of the Regional Growth Plan. A question and answer session moderated by the Publisher of the Colorado Springs Independent, John Weiss concluded the town hall.

The entire event culminated with a networking social hour with information tables from over 30 community organizations and event sponsors. This gave people the chance to find out more about the growth plan and meet others working to meet the challenges presented by the growth at Fort Carson.

How to Get Involved

- **Review** the project and Working Papers on our website, www.ppacg.org
- **Email** your comments to: roconnor@ppacg.org
- **Mail** your comments to:

  Fort Carson Growth Plan
  Pikes Peak Area Council of Governments
  15 South 7th Street
  Colorado Springs, CO 80905

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Rob O'Connor
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Colorado Springs, CO 80905
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Pikes Peak Area
Council of Governments
Communities Working Together

Fort Carson
Regional Growth Plan

July 2008, Issue 4

What's In This Issue?

- Final Fort Carson Regional Growth Plan (Phase 1) now available!
- Hitting a Moving Target
- A Living Document
- Phase 2 Kicks Off with New Funding, New Numbers
- How to Stay Informed and Get Involved

Fort Carson Regional Growth Plan - Phase 1 Completed

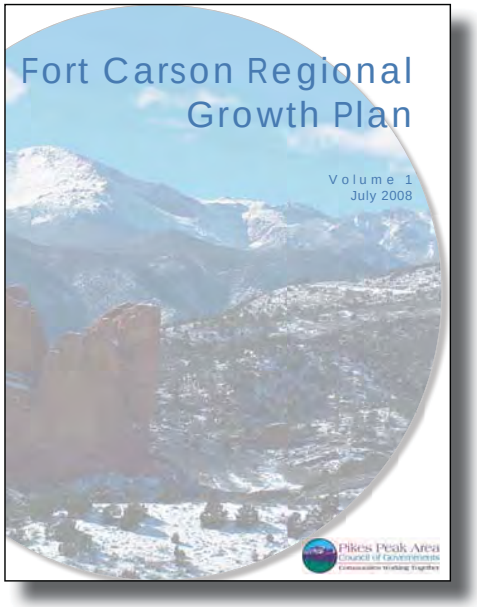
After incorporating public comments on the Draft Plan, the final Fort Carson Regional Growth Plan was recently approved by the Colorado Mission Defense Coalition (CDMC) and Pikes Peak Area Council of Governments (PPACG) Board of Directors. The Final Plan represents a collective effort to assist the region in effectively planning and preparing to maintain and enhance our quality of life as the installation grows. It is truly a product of regional partnerships between elected officials, business and community leaders, and stakeholders from El Paso, Fremont, and Pueblo counties who participated closely in its development. We are especially grateful to the many committed policy and subject matter experts who generously contributed their time and talents, as well as for the financial support provided by the Department of Defense, Office of Economic Adjustment (OEA) that has assisted the region in addressing and preparing for the impacts of Fort Carson growth.

How Do I Use the Plan?

Findings and recommendations in the Fort Carson Regional Growth Plan are divided into twelve resource areas:

1. Economic Impacts
2. Housing
3. Education
4. Transportation
5. Public Utilities and Infrastructure
6. Health and Behavioral Health Care
7. Social Services
8. Child Care and Development
9. Public Safety and Emergency Services
10. Planning and Zoning
11. Compatibility and Installation Operations
12. Quality of Life

In order to display the analyses and findings in an easily readable format, the final report is organized into two volumes. Volume 1 contains an executive summary of the entire plan, general background on the growth planning process, and demographic information regarding the number of incoming troops and dependents. Volume 1 also contains an overview of each of the twelve resource areas noted above with recommendations and action steps to address Fort Carson's growth impacts. These recommendations and action steps are summarized in the implementation tables included at the end of each resource area section. Volume 2 is a technical appendix to Volume 1 providing more detailed data in the form of technical reports for each of the key resource areas. It also includes additional project documents developed over the course of the planning effort, such as the newsletters.



The most important way to use the Plan is to help the region accomplish the Plan's recommendations. The Plan has identified the continuing efforts needed to ensure that the region will be able to accommodate Fort Carson's growth. You can find the most important actions summarized in the implementation tables for each resource area in Volume 1, Part 3. These recommendations and action steps will require the involvement of the entire community and your participation in this effort is encouraged. Please see the information below and on the back page of this newsletter for more details on how to get involved.

How Do I Access the Plan?

The easiest way to review the final plan and assist in its implementation is to visit www.ppacg.org and click on "Military Impact." On the PPACG Web site you can download the entire plan, review summaries for each resource area, find links to related Web sites, or find out who has participated in partnership groups. Hard copies will also be available at the Pikes Peak Area Council of Governments office and the Penrose Library in Colorado Springs.

Hitting a Moving Target

Change, it seems, has been the only constant as the project team prepared the Fort Carson Regional Growth Plan. Fortunately, our region is well acquainted with adapting to military changes. Staying on top of troop arrivals and the effects of repeated deployments has presented major challenges to assessing and projecting impacts. The expected number of new troops and family members has also risen. In addition to the BRAC decision of 2005 (that between 2006 and 2011 Fort Carson would become home to 11,400 more soldiers), the Army announced in December 2007 that Fort Carson will receive another brigade with approximately 4,900 soldiers by 2013 as a part of the *Grow the Army* initiative.

It is important to note that the impacts and recommendations in Phase 1 of the Fort Carson Growth Plan did not include the 4,900 troops that the Pentagon announced in December 2007. The impacts of additional troops and their dependents on our community will continue to be assessed as part of Phase 2 of the Plan which is described below.

A Living Document

The demographic and troop forecast information in the initial phase of the Plan was developed in September 2007 based on FY 2006 data and serves as the basis for assumptions, projections, and recommendations throughout the initial study. While the forecasted impacts were based on the best available information at the time, they are now changing as the growth at Fort Carson and its surrounding communities unfolds in real time. Regular updates to the forecasted impacts in Phase 2 will be needed as part of the ongoing monitoring and implementation of the Plan.

Even though forecasted impacts will be revised, the general issues of rapid growth related to Fort Carson will remain the same, such as the need for major transportation improvements; coordination and communication of troop arrivals to assist the housing community in planning for growth; additional health care, behavioral health and social services; and other capacity and service enhancements. Therefore, PPACG will continue to work with Fort Carson, school districts, service providers, and other stakeholders in order to provide more up-to-date projections of capacity, supply, and demand to regional stakeholders. These updates will be provided through the web-based version of this Plan as the data become available in Phase 2. Check for updates regularly via PPACG's Fort Carson Regional Growth Plan Web site (http://www.ppacg.org).

Phase 2

With the completion of Phase 1 of the Fort Carson Regional Growth Plan, PPACG is rolling into the next phase of the planning effort. Phase 2 will pick up where Phase 1 left off, providing revised numbers for new soldiers and families, updated assessments of impacts, and planning and organizational support for implementing the recommendations of Phase 1. Changing conditions in the regional housing market and the economy will also be taken into account.

New Numbers

As mentioned above, when the first phase of the Plan began, it was estimated that 11,400 new soldiers and 21,000 family members would be added to the region by 2011. Those estimates were based on the 2005 Base Realignment and Closure Act (BRAC) and other Department of Defense initiatives. Then, in December of 2007, with the Grow the Army initiative, the Army announced that another brigade combat team with support units (approximately 4,900 additional troops) would be assigned to Fort Carson by 2013. The post is also assessing the potential re-stationing to Fort Carson of a medium Combat Aviation Brigade (with approximately 2,800 soldiers) by 2013. As a result, Phase 2 will start off with developing new sets of population numbers in order to update the projected impacts through 2013. Actual data on troop numbers and arrivals in 2007 and 2008 will also be compared to previous projections in order to validate or correct them as needed. These new numbers will then ripple through updates to the assessments.

Another consideration that has affected the impacts of Fort Carson's growth, but which was not addressed in Phase 1, is the repeated deployments of troops to Iraq and Afghanistan. This has resulted in a situation where troops are officially assigned to Fort Carson but not physically present at the post for extended periods of time. The arrival of the families of those deployed troops may also be effected. Phase 2 will examine the effects of deployment schedules on troops and family members arriving in the region and the impacts this may have on the demand for services such as housing and schools.

New Tasks and Tools

Altogether, new population numbers, changing conditions, and the implementation of recommendations from Phase 1 will drive the updated assessments of regional impacts in Phase 2. As mentioned above, updates for impacts on housing, education, the economy, health, social services, and transportation will be made and incorporated into the Plan to make it a living document. In addition to an emphasis on conducting first-hand research and capturing reliable data, Phase 2 will focus on enhancing regional coordination and communication through a dedicated, up-to-date Plan Web page and by providing ongoing opportunities for direct public involvement. New products and tools for implementation will also be developed. These include

- Matching the need for additional child care services for Fort Carson families with support for job creation, training and business development.
- More detailed economic analysis of Fort Carson's growth to assist communities in economic development and workforce planning.
- Business and organizational planning for impacted school districts to assist them in meeting the increase in students from Fort Carson.
- A housing information database to provide timely and critical information to the housing industry.
- A comprehensive needs assessment of Fort Carson-specific social services.

New Funding

The Office of Economic Adjustment (OEA) has awarded PPACG additional grant funding to support Phase 2 of the Fort Carson Regional Growth Plan. With this new funding, PPACG and a consultant project team will work with the CDMC and other regional and state stakeholders over the next 18 months to ensure that the region is prepared to accommodate Fort Carson's growth and that quality of life in the region is maintained and enhanced.

Public Involvement

The Colorado Defense Mission Coalition (CDMC) will continue to act as the steering committee for Phase 2 of Plan. Policy oversight will be provided by a reconstituted Growth Plan Executive Committee that will include representatives from the Pueblo and Upper Arkansas Councils of Governments. Additionally, key stakeholders, subject matter experts, Fort Carson and local government staff, as well as interested members of the public are invited to participate in the plan through the partnership groups established for each resource area of the Plan. These partnership groups include the following:

- Child Development
- Economic Impacts
- Education
- Health and Behavioral Health (through the Military Community Collaborative or MCC)
- Housing
- Social Services (through the MCC)
- Transportation
- Quality of Life/Sustainability

For additional information on these and other opportunities for involvement in the planning process, please see "Ways to Stay Informed and Get Involved" on the following page.

Invite Us!

If you are a group or organization that would like to be involved or more informed about the process, please feel free to contact us and we would be happy to provide you with an informational presentation.

Kate Hatten
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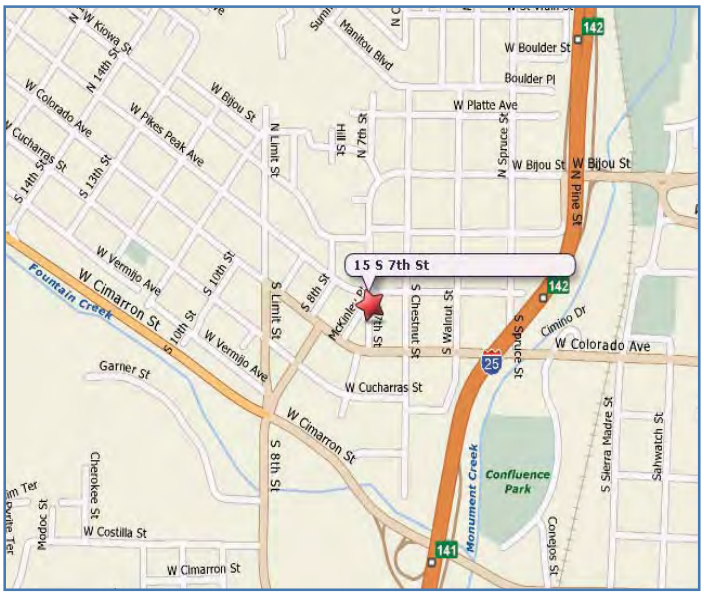
Phase 2 Kick-off Meeting Scheduled

The Colorado Defense Mission Coalition (CDMC) will reconvene on

Wednesday, August 20, 2008 at 3:00pm in the downstairs meeting room at PPACG's offices

on 15 S. 7th Street to kick off the official beginning of Phase 2. Direct access to parking and the downstairs building entrance are from16 South Chestnut Street. The meeting is open to the public. An overview of the scope of work, the public involvement process, and the schedule for Phase 2 will be presented, followed by comments and questions.



How to Stay Informed and Get Involved

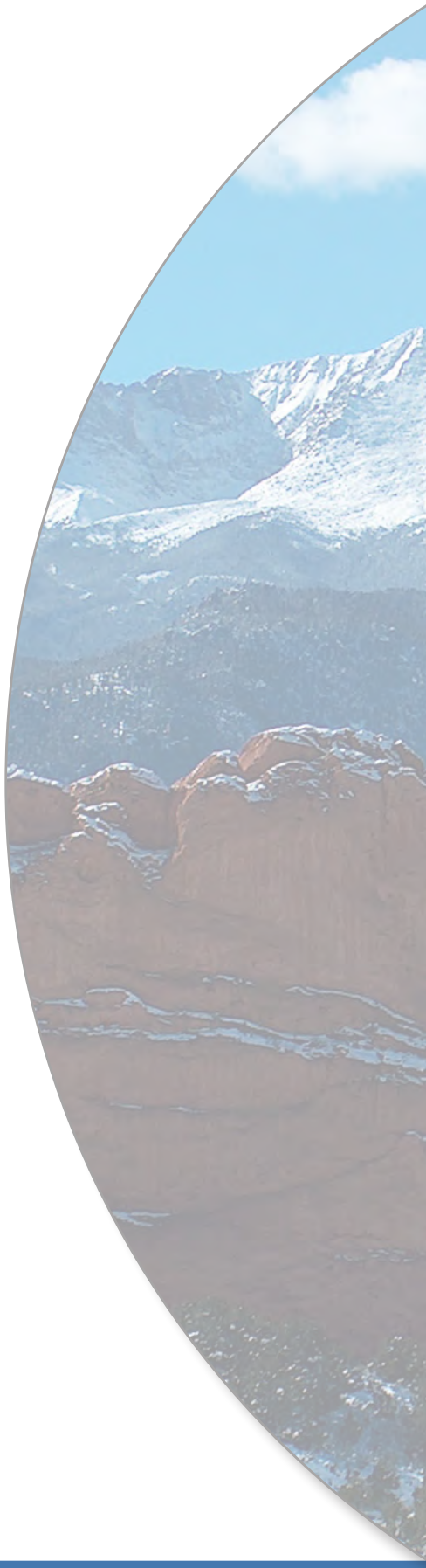
Review the project status and the latest information by going to PPACG's website www.ppacg.org and clicking on "Military Impact."

Attend a monthly CDMC steering committee meeting.

Join a Partnership Group

Email, fax, or phone in comments and suggestions

Email: khatten@ppacg.org

Fax: 719-471-1226

Phone: 719-471-7080 x130