1 - INTRODUCTION

1.1 Statement of Purpose

This report is an assessment of the socioeconomic relationships between the Kiowa/Rita Blanca (KRBNG) and Black Kettle/McClellan Creek (BKMCNG) National Grasslands and their neighboring communities. This assessment was commissioned by the Regional Office of the USDA Forest Service (FS), and serves as a source of information for the development of a revised plan for the National Grasslands. The specific purposes of the assessment include the following:

- To document and analyze the present contributions of the National Grasslands to the economic, social and cultural vitality of the communities that neighbor these public lands;
- To identify opportunities to enhance the sustainable use of public lands by their constituent communities, and to better understand limitations that may constrain such efforts; and
- To provide a compendium of information and an analytical framework that will enable Forest Service planners and managers to evaluate the consequences of potential management strategies for its constituent communities.

1.2 Sources of Information and Analytical Methods

This assessment is based largely on existing (or secondary) data sources.

- **Demographic and economic information** was obtained primarily from the United States Census Bureau.
- **Administration, land management and resource use data** was provided by various public agencies including the USDA Forest Service (FS), the Bureau of Land Management (BLM) and wildlife management offices of the states of Oklahoma, Texas and New Mexico.
- **Contextual and historical information** was gathered from archival sources, including newspapers, newsletters, books, magazines and other published sources. Primary sources of information, including interviews with key officials and, to a lesser extent, concerned citizens, were used selectively to support the analysis of secondary information sources. Sources of information are comprehensively documented in the body of the report and the attached appendices.

A principal concern of this assessment is to help us to understand the relationships between the grasslands and interested communities. These communities exist on various geographic scales, from those who interact with the public lands on a daily basis to those whose interests are tied to public lands indirectly. The analysis focuses on persons and activities in counties that contain or are adjacent to the grassland units, particularly in the assessment of economic impacts. However, analysis is often extended to the state and regional scales to understand the significance of the grasslands' opportunities and limitations within a larger geographical context. For example, to understand the

recreational value of the grasslands for communities in Texas, we must acknowledge the relative scarcity of public lands in Texas and the significance of the National Grasslands to a population of a larger geographical area.

There are two key geographical issues that are central to this analysis. The first concerns the appropriate spatial scale of analysis. **Figures 1.1** and **1.2** are maps of the two Districts and their surrounding regions, with details of roadways. As these maps show, each of the two Grassland Districts is comprised of two non-adjacent areas, separated by a distance of at least 80 miles[1]. To minimize an over-estimation of the impact of the grasslands that would occur if the areas were considered part of single regions, the individual areas of each of the Districts are considered separately.

Thus, throughout the report, analysis considers four distinct geographical regions, comprised of counties that either encompass or are adjacent to the Grassland areas:

- Mills Canyon and Uplands Region, which includes Harding County, New Mexico;
- Kiowa/Rita Blanca Region, which includes Union County, New Mexico, Cimarron County, Oklahoma and Dallam County, Texas;
- McClellan Creek Region, which includes Donley and Gray Counties, Texas; and
- Black Kettle Region, which includes Roger Mills County, Oklahoma and Hemphill and Wheeler Counties, Texas.

1 Mills Canyon and Uplands are approximately 80 miles by road from the nearest boundary of the Kiowa/Rita Blanca grassland, near Clayton, New Mexico. Lake McClellan is approximately 90 miles from nearest boundary of the Black Kettle grassland in Reydon, Oklahoma and, by a different route, by about 100 miles from the District headquarters in Cheyenne, Oklahoma.

Figure 1.1: Kiowa-Rita Blanca National Grasslands and Region

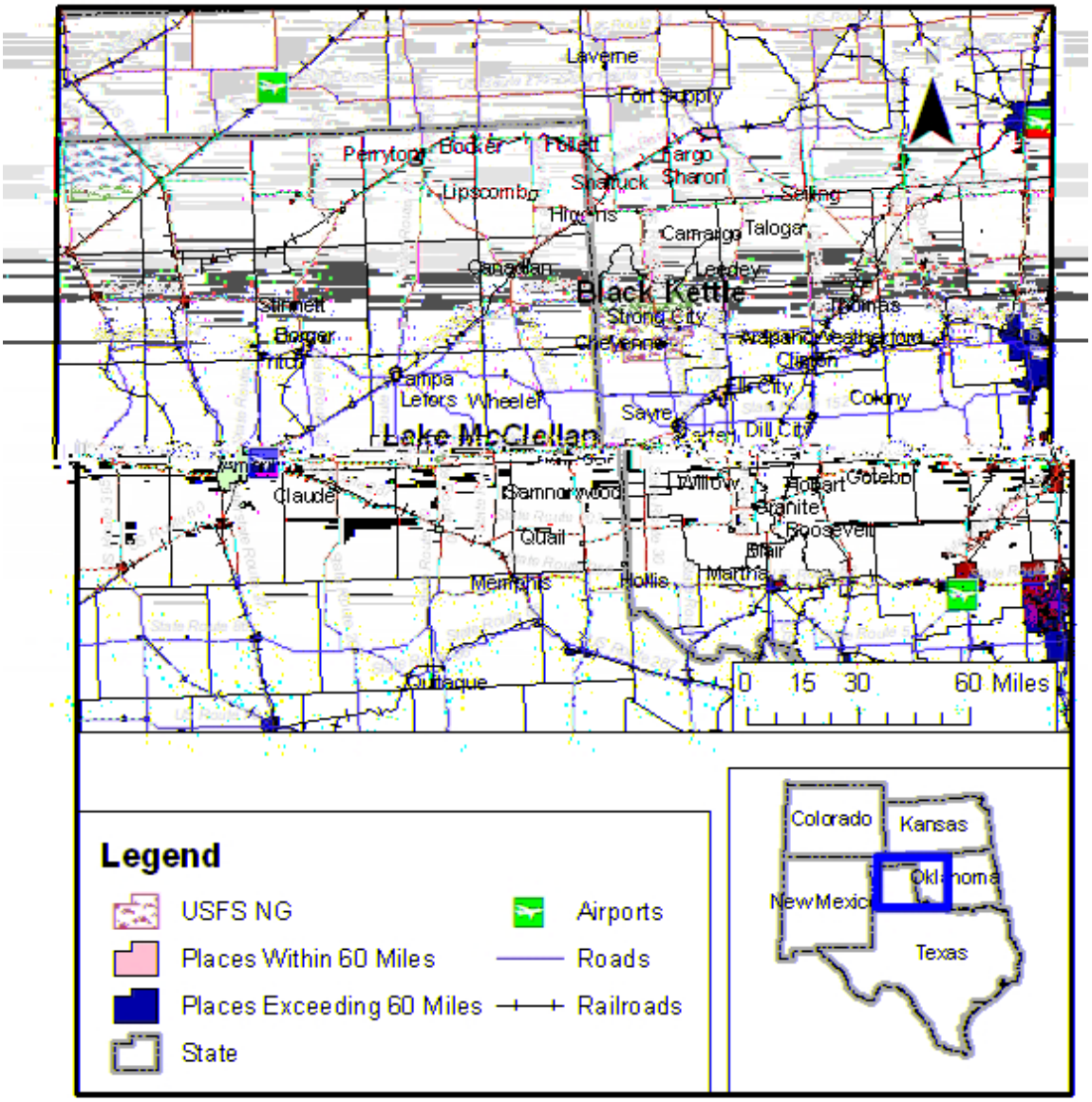

Figure 1.2: Black Kettle—Mcclellan Creek National Grasslands and Region

For clarity, the counties that comprise the four analytical units are referred to as 'regions'; the land that falls within the boundaries of the four grassland areas are called 'units'; the two administrative areas (Kiowa-Rita Blanca and Black Kettle-McClellan Creek) are described as 'Forest Districts' to correspond to FS's designation; and finally, when taken as a whole, the two Districts are referred to as the 'assessment area' or the 'National Grasslands'.

The second geographical issue regards the "checkerboard" distribution of publicly owned land within the boundaries of the individual Grassland units. Kiowa-Rita Blanca National Grassland is comprised of 145 allotments; Black Kettle, including Lake Marvin, alone is comprised of 69 allotments. In many cases, the individual allotments are not contiguous. The public-private patchwork of landownership raises important management concerns, which are considered in this report. However, because the parcels are joined within the boundaries of four grassland units, they are considered as single units in most aspects of the analysis.

1.3 Historical Context of Land Use on the National Grasslands

Available evidence suggests the earliest period of human occupation of the eastern Southern Plains, including the present-day northeastern New Mexico and into Oklahoma and Texas, dates to the late Pleistocene period, between 11,650 and 10,250 years ago. According to most commonly accepted accounts, the Paleo-Indian or ancestral Native American peoples of the early period lived in small, highly mobile groups of hunters and gathers who relied heavily on mega fauna, initially mammoth and later bison. Data is not conclusive, but evidence suggests that during the subsequent Archaic period, from 7,500 to 1,800 years ago, geographical and subsistence patterns came to focus increasingly on upland and grassland areas that were characterized by a greater diversity of flora and fauna. By 200 A.D., the climate and vegetation of the area assumed the essentially modern form, with persistent variability in moisture levels. From that time and until European contact and colonialization in the 16th century, people of the Plains Village Tradition of the eastern Southern Plains practiced a diverse strategy that combined deer and bison hunting and agricultural production, particularly corn. Compared to the Puebloan Traditions, the people of the Plains Village Tradition remained relatively mobile, particularly as the climate became drier and pressure from the nomadic Plains Apachean groups increased during the century prior to European contact.

The eastern Southern Plains region was a site of intense conflict during the centuries following European contact. Hispanic explorers out of New Mexico encountered highly mobile Apache and Comanche hunters and traders in the area, and attempts to establish settlements were generally unsuccessful. Under U.S. administration, Indian Wars forced Native American groups onto more and more limited reservations, effectively opening the region of northeastern New Mexico and the panhandles of Oklahoma and Texas for settlement by peoples of European heritage. With the authorization of the Homestead Act 1862, European settlement of the prairies took hold. During the following decades, through the 1920s, settlers established intensive wheat and row crop agriculture, as well as cattle ranching. Beginning in the early 1930s, the region experienced severe drought and strong winds swept across the exposed soils, removing as much as 4 inches of the

organic matter, clay and silts that formed the surface soils, creating conditions that have come to be known as the 'Dust Bowl.' With the farms ruined, thousands of families migrated westward, leaving vast tracts of land abandoned.

In 1937, at the height of the Depression, the Congress of the United States authorized the Bankhead Jones Farm Tenant Act requiring the Department of Agriculture, under the auspices of the Soil Conservation Service, to "develop a program of land conservation and utilization, to correct maladjustments in land use, and assist in: controlling soil erosion; reforestation; preserving natural resources; protecting fish and wildlife; developing and protecting recreational facilities; mitigating floods; preventing impairment of dams and reservoirs; developing energy resources; conserving surface and subsurface moisture; protecting the watersheds of navigable streams; protecting the public lands, health, safety and welfare." During subsequent years, the Soil Conservation Service purchased abandoned lands and initiated a number of Land Utilization Projects, intended not only to stabilize environmental conditions but also to reintroduce and sustain human presence on the southern plains.

In 1960, with the establishment of the National Grasslands, responsibility for the administration of the Bankhead Jones Act was transferred to the National Forest Service. The Kiowa, Rita Blanca and Black Kettle National Grasslands were designated with the initial authorization of the National Grasslands. Since that time, the administration of the National Grasslands were restructured, with the Kiowa National Grasslands in New Mexico and the Rita Blanca National Grasslands in the Texas and Oklahoma panhandles forming a single Ranger District. The Kiowa-Rita Blanca National Grasslands, with District offices in Clayton, New Mexico, and the Black Kettle-McClellan Creek National Grasslands, with its offices in Cheyenne, Oklahoma, are administered by the Cibola National Forest. The Supervisor's Office of the Cibola National Forest is in Albuquerque, New Mexico.

1.4 Organization of the Report

The principal purpose of this assessment is to provide information to support the planning and management initiatives of the FS. To best facilitate this purpose, this report presents a brief and focused analysis of a vast information base that underlies the assessment. The analysis is organized into seven chapters, concerning demographics, access, land cover and use, users, special areas and places, economic impacts, and community relationships, respectively. The first five chapters provide basic information on the Grasslands, and economic impacts and community relations build upon this information to provide a more analytical account. The report concludes with a discussion of findings and recommendations.

2 - DEMOGRAPHIC AND SOCIOECONOMIC TRENDS

This section examines the historical, current, and projected demographic trends for each of the National Grassland districts. Major sources of data for this section include the Census Bureau's summary files for 1980, 1990, and 2000 decennial census. Summary tape files 1 and 3 include data on demographics patterns, housing, income, poverty, household structure and education at the geographical scales of census designated places (CDPs), county and state. Forecasts of population projections were obtained from the census bureau (national population projection) and state data centers for state and county level projections.

2.1 Population Growth

Table 2.1 presents the percentage of land covered by national grasslands in relation to the 2000 Decennial Census population density for each county in the various National Grassland Districts. The ratio of land cover to population density is an indicator of the impact the grasslands policies have on the population of the areas being examined. Gray County, Texas has less then 0.2% of its land cover belonging to the McClellan region but, has a high population density (24.5 persons per square mile) and is one of the smallest counties in the study area, similarly, Dallam County has 8% land cover from the National Grasslands and the 3rd highest population density; both counties are likely to be affected more by the grasslands than counties like Donley County.

Table 2.1 Percent of County Lands Covered by National Grasslands with 2000 County Population Density

	% of County Land Cover[1]	Populations Density[2,3]
Mills Region		
Colfax Co. NM	<-/1%	3.77
Harding Co. NM	5%	0.38
Mora Co. NM	<0.5%	2.69
Kiowa/Rita Blanca Region		
Union Co. NM	2%	1.09
Comarron Co. OK	1%	1.71
Dallam Co. TX	8%	4.13
McClellan Region		
Donley Co. TX	0%	4.10
Gray Co. TX	<0.2%	24.48
Black Kettle Region		
Roger Mills Co OK	4%	3.00
Hemphill Co. TX	<0.1%	3.67
Wheeler Co. TX	0%	5.77

[1]Source US Department of Agriculture Forest Service
[2]Source US Census Bureau, 2000 Decennial Census.
[3]Calculated as population per square mile

Table 2.2 summarizes Census Bureau historical and forecast population and population growth statistics for the counties and regions in the assessment area. Figure 2.1 is a map

of 2000 population for counties in New Mexico, Oklahoma and Texas; Figure 2.2 shows population change during the period 1990-2000 for the same counties.

Table 2.2: Population Growth Forecast

	Actual			*Projection*			*% Change*	
TOTAL POPULATION (#)	1980	1990	2000	2010	2020	2030	1980-2000	2000-2030
Mills Region	18,962	18,176	20,204	22,219	23,753	24,564	7%	22%
Colfax Co. NM	13,667	12,925	14,189	15,234	15,890	16,026	4%	13%
Harding Co. NM	1,090	987	810	780	726	676	-26%	-17%
Mora Co. NM	4,205	4,264	5,205	6,205	7,137	7,862	24%	51%
Kiowa/Rita Blanca Region	14,904	12,886	13,544	14,495	15,444	16,068	-9%	19%
Union Co. NM	4,725	4,124	4,174	4,365	4,507	4,619	-12%	11%
Cimarron Co. NM	3,648	3,301	3,148	3,200	3,400	3,500	-14%	11%
Dallam Co. TX	6,531	5,461	6,222	6,930	7,537	7,949	-5%	28%
McClellan Region	30,461	27,663	26,572	26,246	26,103	25,424	-13%	-4%
Donley Co. TX	4,075	3,696	3,828	3,812	3,738	3,565	-6%	-7%
Gray Co. TX	26,386	23,967	22,744	22,434	22,365	21,859	-14%	-4%
Black Kettle Region	17,240	13,746	12,071	12,056	12,023	11,614	-30%	-4%
Roger Mills Co. OK	4,799	4,147	3,436	3,400	3,400	3,400	-28%	-1%
Hemphill Co. TX	5,304	3,720	3,351	3,563	3,659	3,548	-37%	6%
Wheeler Co. TX	7,137	5,879	5,284	5,093	4,964	4,666	-26%	-12%
TOTAL	81,567	72,471	72,391	75,016	77,323	77,670	-11%	7%
NM-OK-TX (TOTAL)	18,557,375	21,647,164	26,121,520	30,150,629	34,352,708	38,649,532	41%	48%

Source: US Census Bureau, Decennial Census, 1980, 1990 and 2000. Calculations by UNM-BBER.

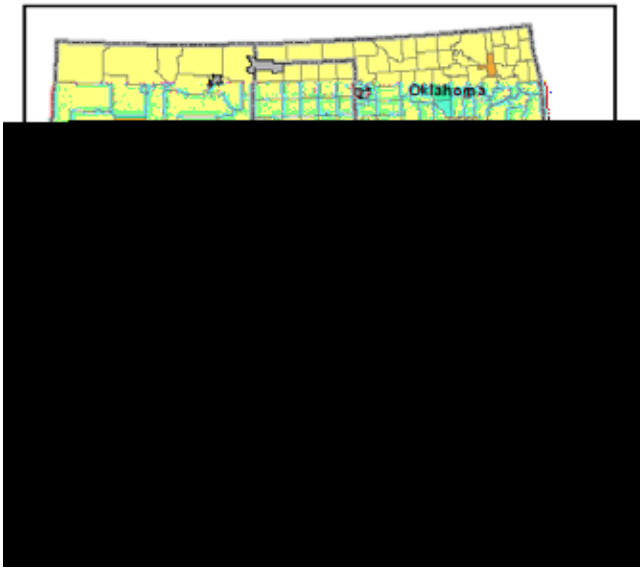

Figure 2.1 2000 County Population

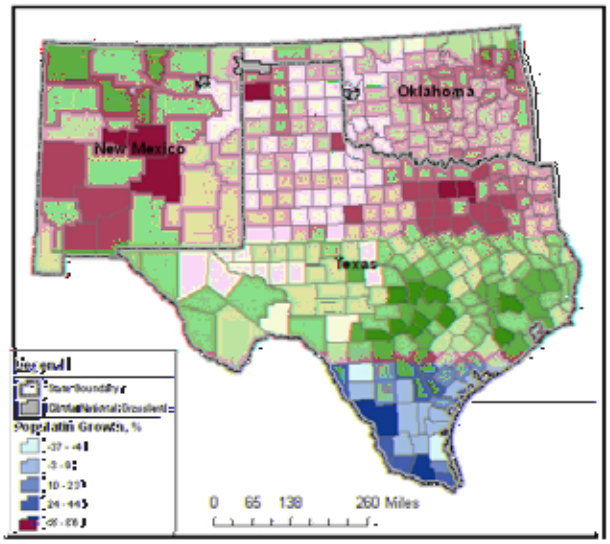

Figure 2.2 Population Growth 1990 to 2000 by County

As these data indicate, total population of the counties that neighbor the Kiowa-Rita Blanca, including Mills Canyon and Uplands and Black Kettle/McClellan Creek has fallen by 10.3% over the past decade, from 55,282 to 49,561. Only the Kiowa/Rita Blanca region has experienced an increase in its population, but that growth is almost entirely concentrated in the larger market center towns of Dalhart and Dumas. The decline in the overall population seems to be the result of both an increase in out-migration and a weakening of the in-migration. The number of new arrivals was lower during the 1995-2000 period than it was during the corresponding period ten years earlier.

The loss of population has not altered the rural character of the regions. The population of rural communities has fallen throughout the study areas, but so too has the population of the few urban areas that are located in the counties neighboring the national grasslands.

Significantly, the population decline in the study areas is associated with changes in the racial and ethnic structure of the grassland areas as shown below in **Table 2.3**. In each district with the exception of Mills Canyon Region, the White (non-Hispanic) share of total population declined between 1990-2000 while the Hispanics communities and to a lesser extent African American, have increased in each regions. During the 1990-2000 period, Hispanic and/or African American populations grew from 16% to 26% of total population of the grassland regions. Furthermore, the growth of this population cuts across the urban-rural division, with significant gains in all communities of all sizes, again with the exception of the small towns in Harding County.

Table 2.3 Race and Ethnic Structure of Grasslands Areas

	1990						2000					
	White (Non-Hispanic)	Hispanic	African American	American Indian	Asian Or Pacific Islander	Other	White (Non-Hispanic)	Hispanic	African American	American Indian	Asian Or Pacific Islander	Other[1]
Mills Canyon & Uplands Region												
Colfax County, New Mexico	50.8%	47.9%	0.2%	0.5%	0.1%	0.4%	49.9%	47.5%	0.3%	0.8%	0.3%	1.2%
Harding County, New Mexico	52.4%	46.7%	0.2%	0.5%	0.1%	0.1%	52.8%	44.9%	0.4%	0.5%	0.0%	1.4%
Mora County, New Mexico	14.4%	85.0%	0.0%	0.3%	0.0%	0.3%	16.9%	81.6%	0.1%	0.8%	0.0%	0.5%
Kiowa/Rita Blanca Region												
Union County, New Mexico	65.9%	33.7%	0.0%	0.2%	0.1%	0.0%	62.7%	35.1%	0.0%	0.3%	0.5%	1.5%
Cimarron County, Oklahoma	86.4%	12.5%	0.0%	0.7%	0.4%	0.1%	81.0%	15.4%	0.5%	1.0%	0.2%	1.9%
Dallam County, Texas	76.1%	21.1%	1.9%	0.6%	0.3%	0.1%	68.4%	28.4%	1.6%	0.6%	0.2%	0.8%
McClellan Region												
Donley County, Texas	92.4%	3.8%	3.4%	0.4%	0.1%	0.0%	88.1%	6.3%	3.9%	0.8%	0.1%	0.8%
Gray County, Texas	87.0%	7.9%	3.7%	0.8%	0.5%	0.1%	78.3%	13.0%	5.8%	0.7%	0.4%	1.8%
Black Kettle Region												
Roger Mills County, Oklahoma	94.3%	1.8%	0.0%	3.9%	0.1%	0.0%	90.2%	2.6%	0.3%	5.2%	0.1%	1.6%
Hemphill County, Texas	88.0%	11.1%	0.2%	0.6%	0.1%	0.0%	81.2%	15.6%	1.6%	0.7%	0.3%	0.7%
Wheeler County, Texas	90.1%	6.4%	2.5%	0.6%	0.4%	0.1%	83.0%	12.6%	2.6%	0.5%	0.6%	0.7%
TOTAL	74.7%	22.2%	1.8%	0.8%	0.3%	0.2%	68.0%	27.0%	2.5%	0.9%	0.3%	1.3%
NM-OK-TX (TOTAL)	62.8%	23.1%	10.3%	2.0%	1.6%	0.1%	54.8%	29.1%	10.2%	1.9%	2.4%	1.6%

Source: US Census Bureau, Decennial Census, 1990 and 2000. Calculations by UNM-BBER.
[1] Includes those who indicated two or more races

According to projections generated by the Census Bureau, with exception of KRBNG region, these areas will continue to experience population decline throughout the 2005-2030 forecast period. Population decline in the counties that comprise the BKMCNG regions is expected to be slow at first, but accelerate as time progresses. Harding County, New Mexico, is forecast to contract at a steady rate, declining to as few as 676 persons by 2030. The region surrounding KRBNG is a notable exception. The population of each of the three counties in the tri-state area, particularly Dallam County, Texas, is expected to grow slowly throughout the 2005-2030 period.

The stagnant and declining population in and around the grassland regions starkly contrasts with the broader pattern of rapid population growth projected for the three states: New Mexico, Oklahoma and Texas. New Mexico and Texas are expected to grow at a higher rate than United States overall, the combined population of the three states, dominated by Texas, is forecast to grow by 37.5% during the 2005-2030 period. In this context, it is evident that the sub-regions of interest – compassing the panhandles of Texas and Oklahoma and the northeastern plains of New Mexico – are an exception to the broader patterns that are shaping these states.

2.2 Housing

Tables 2.4 and 2.5 provide data on housing stock and housing quality for the assessment area, respectively.

Between 1980 and 2000, in response to a decline in the total population in the study regions, the number of occupied and especially vacant housing units declined. Housing density declined as well, with fewer residents per occupied housing unit in 2000 than in 1990. Because of an improvement in overall economic conditions, new housing construction was stronger in 1999 than 1989 (196 compared to 114). However, in the

context of the broader housing market and in comparison to areas with stronger, more diverse economies, these numbers are minimal, representing an addition to the housing stock of only 0.75%. Overall, these patterns conform to a more general pattern of economic stagnation – between 1990 and 2000 the average age of the housing stock increased from 35 to 42 years old, and the rate of appreciation of housing values lagged well behind the overall rate of the three state region, 28.4% compared to 50.6% in nominal terms.

Table 2.4: Housing Stock by Region 1980, 1990 and 2000

	1980			1990			2000		
	Housing Units Total	Housing Units Occupied	Housing Units Vacant	Housing Units Total	Housing Units Occupied	Housing Units Vacant	Housing Units Total	Housing Units Occupied	Housing Units Vacant
Mills Region	9,554	6,703	2,851	11,365	6,874	4,491	12,477	8,209	4,268
Colfax County, NM	6,896	4,901	1,995	8,265	4,959	3,306	8,959	5,821	3,318
Harding County, NM	553	412	141	614	396	218	545	371	174
Mora County, NM	2,105	1,390	715	2,486	1,519	967	2,973	2,017	956
Kiowa/Rita Blanca Region	6,521	5,489	1.-32	6,566	5,037	1,529	65,05	5,307	1,198
Union County, NM	2,137	1,724	413	2.200	1,615	684	2,225	1,733	492
Cimarron County, OK	1,592	1,379	213	1,690	1,300	390	1,583	1,257	326
Dallam County, TX	2,792	2,386	406	2,577	2,122	455	2,697	2,317	380
McClellan Region	13,263	11,832	1.431	13,836	11,063	2,773	12,945	10.371	2,574
Donley County, TX	2,071	1,608	463	2,304	1,515	789	2,378	1,578	800
Gray County, TX	11,192	10,224	968	11,532	9,548	1,984	10,567	8,793	1,774
Black Kettle Region	7,210	6,346	864	6,831	5,284	1,547	5,984	4,860	1,124
Roger Mills County, OK	2,005	1,769	236	2,048	1,586	462	1,749	1,428	321
Hemphill County, TX	2,024	1,837	198	1,712	1,348	364	1,548	1,280	268
Wheeler County, TX	3,181	2,740	441	3,071	2,350	721	2,687	2,152	535
TOTAL	**27,547**	**24,079**	**3,468**	**27,847**	**21,780**	**6,067**	**25,979**	**20,909**	**5,070**
NM-OK-TX (TOTAL)	**7,293,905**	**6,489,294**	**804,611**	**9,047,556**	**7,819,781**	**1,227,775**	**10,452,554**	**9,413,618**	**1,038,936**

Source: US Census Bureau, Decennial Census, 1980, 1990 and 2000. Calculations by UNM-BBER.

This general characterization of the housing market for the four grassland regions varies from region to region according to underlying demographic trends. Again, the counties surrounding Mills Canyon and Uplands, and Black Kettle experienced the sharpest declines in the size of the housing stock and in the density of housing use (residents per occupied housing unit) and the greatest increase in the age of the housing stock. By comparison, the Kiowa/Rita Blanca area of Union, Cimarron and Dallam Counties, saw a small increase in the number occupied housing units and no decline in the number of residents per household.

Table 2.5: Housing Quality in the Grassland Region, 1980, 1990 and 2000

	1980	1990		2000	
	Avg Age Housing Stock	Avg Age Housing Stock	Lacking complete plumbing facilities	Avg Age Housing Stock	Lacking complete plumbing facilities
Mills Region	24.4	31.1	2.91%	35.2	4.30%
Colfax Co. NM	19.0	27.8	0.80%	33.5	1.40%
Harding Co. NM	24.4	45.0	4.89%	53.3	7.71%
Mora Co. NM	35.7	38.5	9.45%	37.0	12.45%
Kiowa/Rita Blanca Region	34.3	36.3	1.33%	42.4	3.56%
Union Co. NM	38.4	38.0	0.78%	44.9	1.71%
Cimarron Co. NM	29.7	38.0	1.48%	44.2	5.94%
Dallam Co. TX	33.8	34.0	1.71%	43.1	2.11%
McClellan Region	30.4	34.1	1.24%	14.2	2.10%
Donley Co. TX	34.0	35.0	1.35%	39.6	1.01%
Gray Co. TX	29.7	34.0	1.21%	43.0	1.84%
Black Kettle Region	32.2	33.5	1.79%	42.4	1.73%
Roger Mills Co. OK	32.0	31.0	0.88%	41.2	1.43%
Hemphill Co. TX	29.9	33.0	0.41%	41.8	0.97%
Wheeler Co. TX	33.9	36.0	3.16%	45.2	1.64%
TOTAL	32.0	34.7	2.55%	42.0	2.55%
NM-OK-TX	21.4	21.8	1.31%	27.6	1.44%

Source: US Census Bureau, Decennial Census, 1980, 1990 and 2000. Calculations by UNM-BBER.

The regional variation in changes to the housing stock is reflected in the movement of housing values. Figure 2.3 shows changes in housing values, as reported in the 1990 and 2000 Decennial Census. Note that the areas neighboring Mills Canyon and Uplands and the Black Kettle experienced sharp increases in the cost of housing during the 10 year period, while values in the counties in the tri-state region near Kiowa-Rita Blanca relatively stable.

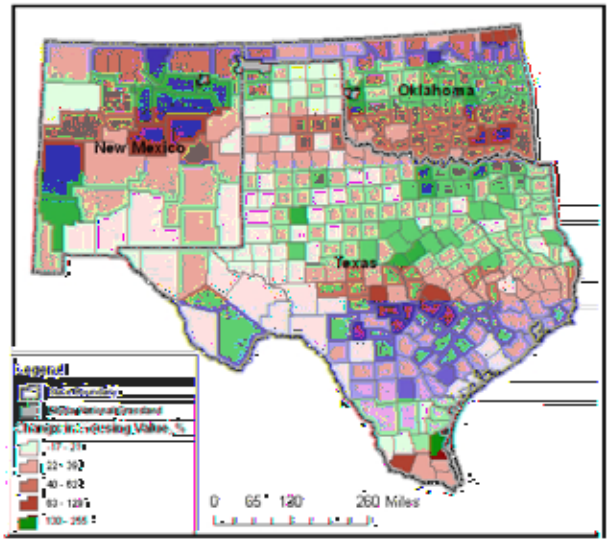

Figure 2.3: Change in Housing Values 1990 to 2000

Despite regional differences in the supply and value of housing, there is little variation in a downward trend in the quality of housing. As shown in Table 2.3, the stagnation in building activity resulted in an increase in the average age of the housing stock throughout the 1980-2000 period and in all areas. From 1990 to 2000 alone, the average age of the stock for all regions increased from 34.7 to 42.0 years old. Furthermore, from 1990-2000, the share of housing units lacking complete plumbing – a common measure of minimum housing quality – increased, in some areas substantially.

2.3 Poverty and Income

Consistent with demographic patterns, incomes throughout the assessment area have been stagnant to declining during the past two decades. While employment in the three-state region increased by nearly 20% during the period 1990-2000, the number of jobs in nine counties canvassed fell by 1.7%. As shown in Table 2.6, the household incomes followed downward trends in employment. During the period 1989-1999, real household incomes remained unchanged in the assessment area, compared to a 7% increase in the three-state region. On a per capita basis, real incomes rose by only 7.8%, compared to 14% in the three states.

Table 2.6: Income and Poverty in the Grassland Region, 1979, 1989 and 1999

	1979		1989		1999	
	Per Capita Income	**Persons below the Poverty Line**	**Per Capita Income**	**Persons below the Poverty Line**	**Per Capita Income**	**Persons below the Poverty Line**
Mills Canyon & Uplands Region	5,033	24%	9,341	23%	15,360	24%
Colfax County, New Mexico	5,515	20%	10,076	19%	16,418	15%
Springer			9,773	26%	14,606	33%
Harding County, New Mexico	5,267	19%	9,731	15%	16,240	16%
Roy			8,709	10%	17,651	15%
Mora County, New Mexico	3,404	38%	7,021	36%	12,340	51%
Wagon Mound			7,980	37%	10,459	46%
Kiowa/Rita Blanca Region	5,688	18%	9,857	19%	14,462	16%
Union County, New Mexico	5,957	21%	10,603	21%	14,700	18%
Clayton			10,587	25%	13,967	18%
Cimarron County, Oklahoma	6,138	14%	9,929	18%	15,744	18%
Boise City			10,558	18%	15,821	19%
Dallam County, Texas	5,242	18%	9,250	18%	13,653	14%
Dalhart			11,503	15%	16,530	12%
McClellan Region	7,636	11%	12,319	15%	16,595	14%
Donley County, Texas	6,279	19%	9,388	21%	15,958	16%
Gray County, Texas	7,845	10%	12,771	14%	16,702	14%
Pampa			12,981	14%	17,791	15%
Black Kettle Region	7,378	13%	11,272	15%	16,528	13%
Roger Mills County, Oklahoma	6,736	15%	9,886	18%	16,821	16%
Cheyenne			9,265	16%	16,428	18%
Hemphill County, Texas	7,808	8%	14,244	10%	16,929	13%
Canadian			13,320	8%	16,384	14%
Wheeler County, Texas	7,489	16%	10,370	17%	16,083	13%
TOTAL	**6,620**	**16%**	**10,936**	**18%**	**15,840**	**17%**
NM-OK-TX	**7,149**	**15%**	**12,641**	**18%**	**19,193**	**15%**

Source: US Census Bureau, Decennial Census, 1980, 1990 and 2000. Calculations by UNM-BBER.

The share of persons living in poverty varies significantly across the assessment area, yet the overall trend suggests that poverty is somewhat worse in this area than in the three-state region. The overall level is about two percentage points higher (17% versus 15% in the three states). However, rates vary from 24% in the region surrounding Mills Canyon and Uplands, with a remarkable 51% of persons in Mora County living below the poverty line, to 13% in the region of the Black Kettle.

As Table 2.7 shows, the rates of ethnic and racial groups below the poverty line vary somewhat from the three-state region and between counties in the study areas. African Americans count for 43% of those in poverty with high concentrations in Colfax County (Mills Canyon & Uplands Region), Cimmaron County (Kiowa/Rita Blanca Region), and the McClellan Region. Asians and American Indians also contain high concentrations of

poverty rates in counties where they occur. White (Non-Hispanics) have the highest poverty rates in New Mexico counties whereas Hispanics total 24% of those in poverty.

Table 2.7: Percentage of Race and Ethnic Groups below Poverty Level in 1999

	RACE GROUP					HISPANIC ETHNICITY	
	WHITE	AFRICAN AMERICAN	AMERICAN INDIAN	ASIAN	OTHER[1]	WHITE (NON-HISPANIC)	HISPANIC
Mills Canyon & Uplands Region							
Colfax County, New Mexico	13%	65%	11%	52%	22%	8%	21%
Harding County, New Mexico	17%	0%	50%	0%	11%	17%	16%
Mora County, New Mexico	20%	0%	59%	0%	34%	28%	25%
Kiowa/Rita Blanca Region							
Union County, New Mexico	17%	0%	61%	50%	20%	15%	23%
Cimarron County, Oklahoma	15%	40%	59%	0%	33%	13%	37%
Dallam County, Texas	12%	20%	57%	0%	20%	11%	20%
McClellan Region							
Donley County, Texas	13%	48%	51%	0%	32%	13%	42%
Gray County, Texas	11%	46%	0%	0%	28%	11%	28%
Black Kettle Region							
Roger Mills County, Oklahoma	14%	0%	48%	0%	29%	14%	32%
Hemphill County, Texas	12%	0%	8%	0%	18%	12%	15%
Wheeler County, Texas	11%	31%	0%	0%	29%	11%	27%
TOTAL	13%	43%	30%	18%	26%	12%	24%
NM-OK-TX (TOTAL)	12%	24%	26%	12%	24%	9%	25%

Source: US Census Bureau, Decennial Census, 1990 and 2000. Calculations by UNM-BBER.
[1] Includes those who indicated: Hawaiian or Pacific Islander only, other (1 race alone), and two or more races

2.4 Single and Female Headed Households

As shown in Table 2.8, the number of households in the three-state region increased by 20% between 1990 and 2000, while the corresponding number of households in the four grassland regions grew by only 1.7% during the same 10-year period. Yet, despite the significant differences in the rate of household formation, there was little difference in terms of the relative structure of households. The share of single households increased marginally in the assessment area, while it remained unchanged in the larger three-state region, and the share of female-headed households increased slightly and by relatively equal proportion in both geographies, though the proportion remained somewhat lower in the Grassland region. The implication is that while population growth and household formation in the assessment clearly lags behind that of the larger region, the structure of these households has not changed appreciably.

Table 2.8: Total Households

	1990			2000		
	Total Households (#)	Single households	Female headed, family households	Total Households (#)	Single households	Female headed, family households
Mills Region						
Colfax Co. NM	4959	25%	11%	5821	28%	10%
Harding Co. NM	396	30%	7%	371	35%	8%
Mora Co. NM	1519	23%	12%	2017	27% 1	2%
Kiowa/Rita Blanca Region						
Union Co. NM	1615	27%	9%	1733	30%	9%
Cimarron Co. NM	1300	26%	6%	1257	29%	6%
Dallam Co. TX	2122	27%	9%	2317	26%	10%
McClellan Region						
Donley Co. TX	1515	28%	6%	1578	31%	8%
Gray Co. TX	9548	26%	8%	8793	29%	9%
Black Kettle Region						
Roger Mills Co. OK	1586	24%	6%	1428	29%	7%
Hemphill Co. TX	1348	22%	6%	1280	24%	6%
Wheeler Co. TX	2350	28%	7%	2152	29%	8%
TOTAL	28258	26%	8%	28747	28%	9%
NM-OK-TX	7819781	24%	11%	9413618	24%	13%

Source: US Census Bureau, Decennial Census, 1990 and 2000. Calculations by UNM-BBER.

2.5 Educational Attainment

Table 2.9 summarizes 1990 and 2000 Census Bureau statistics on educational attainment in the assessment area and the three-state region. The figures represent the educational attainment of the population 25 years and older; the five categories sum to the 100%. The data indicates that while the counties in the assessment region have been notable gains in basic educational attainment, even with an increase in college attendance, these areas remain far behind the average level of achievement in higher education of the larger three-state region. Among counties in the assessment area, there is notable consistency in the rate at which individuals complete secondary education and significant variation in attainment of higher education, but these variations are minor in relation to the underlying differences between the Grassland areas and the three-state region. To the extent that educational attainment is an indicator of workforce skill development, the implication of these findings is significant – individuals in the assessment areas have realized some success in preparing for mid-skill employment, but they lag far beyond other parts of their respective states in preparing for higher-skill jobs.

Table 2.9: Educational Attainment for Population 25 Years and Older in the Grassland Region, 1990 And 2000

	1990					2000				
	Less than 9th Grade	9th-12th grade; no diploma	High school graduate	Some college; no degree	A.B. or more	Less than 9th Grade	9th-12th grade; no diploma	High school graduate	Some college; no degree	A.B. or more
Mills Region	15%	17%	33%	16%	19%	9%	14%	33%	21%	23%
Colfax Co. NM	12%	16%	34%	18%	19%	6%	13%	34%	22%	25%
Harding Co. NM	17%	17%	32%	14%	19%	13%	15%	32%	19%	21%
Mora Co. NM	21%	19%	33%	11%	16%	14%	16%	32%	18%	20%
Kiowa/Rita Blanca Region	14%	19%	35%	18%	13%	11%	16%	36%	21%	16%
Union Co. NM	15%	22%	35%	15%	14%	9%	12%	44%	20%	16%
Cimarron Co. NM	16%	13%	32%	22%	17%	12%	11%	32%	24%	21%
Dallam Co. TX	13%	20%	38%	18%	10%	13%	22%	32%	20%	13%
McClellan Region	12%	18%	34%	20%	17%	8%	17%	33%	25%	18%
Donley Co. TX	13%	19%	28%	21%	19%	6%	16%	26%	28%	23%
Gray Co. TX	11%	18%	35%	19%	16%	8%	17%	34%	25%	17%
Black Kettle Region	13%	17%	34%	20%	15%	9%	14%	33%	24%	19%
Roger Mills Co. OK	11%	17%	40%	19%	13%	6%	14%	39%	21%	20%
Hemphill Co. TX	13%	14%	35%	23%	15%	10%	10%	29%	29%	21%
Wheeler Co. TX	16%	19%	30%	18%	17%	11%	17%	31%	23%	18%
TOTAL	13%	18%	34%	18%	16%	9%	15%	33%	23%	19%
NM-OK-TX	13%	15%	27%	21%	25%	11%	13%	26%	23%	28%

Source: US Census Bureau, Decennial Census,1990 and 2000. Calculations by UNM-BBER.

2.6 Demographic and Socioeconomic Trends Relevant to FS Planning

The region surrounding the National Grasslands is experiencing flat and even negative growth in population, household formation and incomes, and is lagging significantly behind the three-state region in important measures of socioeconomic development. This has direct implications for FS planning. While demographic trends and projections suggest that the scope of the local 'market' for Grassland resources is unlikely to grow during the coming years, the needs of those who remain are likely to continue to increase as households face greater economic challenges.

3 - Access and Travel Patterns

This section examines current and potential future access issues for each of the National Grasslands districts. The analysis will look at current traffic patterns along major routes and current and near future capital outlays to find potential limitations to future access.

The analysis is based entirely on secondary data, including information for the Department of Transportation Divisions (DOT) in the States of New Mexico[2], Oklahoma[3] and Texas[4]. The source of data on average annual daily traffic is Highway Performance Monitoring System (HPMS), maintained by the United States Federal Highway Administration (FHWA) and available online from the Bureau of Transportation Statistics[5]. Forecasted growth of vehicle miles traveled for the counties in the three states is provided by the United States Environmental Protection Agency (EPA) and is based on the HPMS 1996 dataset. Geographical data on national roads is obtained from the ESRI Streetmaps USA 2004, and corresponding data on roads within the forest boundaries was made available by FS Cibola Supervisor's Office.[6]

3.1 Location and Major Transportation Routes

Road networks in the areas adjacent to the Grasslands areas are managed by the Departments of Transportation for the States of New Mexico, Texas and Oklahoma. In New Mexico, the Kiowa Grasslands are within District 4; in Oklahoma, the Rita Blanca is within Region 6, and the Black Kettle is within Region 5; and in Texas, all areas are within the Amarillo District. Table 3.1 below shows lane miles in each district by type of road classification. Most of the roads in the districts are highly rural. The US DOT considers rural areas to be areas where the population is under 5,000 persons; anything with more than 5,000 persons is an urbanized area.[7] The majority of the lane miles of roads in each district are collector and local. Oklahoma Region 6, the region that contains part of Rita Blanca, is not serviced by any interstates but has a large concentration of other principal arterial roads (Major US Routes). Mills Canyon in NMDOT District 4 has a large amount of Interstate and Other Principal Arterial roads.

2 http://www.nmshtd.state.nm.us/

3 http://www.okladot.state.ok.us/

4 http://www.dot.state.tx.us/

5 http://www.transtats.bts.gov

6 ESRI Steetmaps USA 2004 is a product of Geographic Data Technology, Inc. and is used with ArcGIS 9.0 software.

7 Bureau of Transportation Statistics: http://www.transtats.bts.gov/TableInfo.asp?Table_ID=1102

Table 3.1: Lane Miles of Road by Relevant District and Classification

District	Interstate	Other Principal Arterial	Minor Arterial	Collector and Local	Total
Texas, Amarillo District	734	1,941	967	25,464	29,106
New Mexico, District 4	1,168	703	640	15,521	18,032
Oklahoma, Region 5	345	667	892	30,695	32,599
Oklahoma, Region 6	0	1,030	1,027	29,888	31,945
Total	2,247	4,341	3,526	101,568	111,682

Source: US Department of Transportation HPMS Database

The assessment area spans from northeastern New Mexico, into the panhandles of Oklahoma and Texas, and in northwestern Oklahoma. The principal metropolitan areas in this southern Plains region include Denver, Albuquerque, Lubbock, Amarillo, Oklahoma City and Dallas/Fort Worth. Table 3.2 present distances along the shortest routes from each of these six metropolitan areas to the four geographically distinct Grasslands areas. Note that, with the exception of Amarillo to the relatively small McClellan Creek region, travel distances from the metropolitan centers to the Grasslands exceed 150 miles, with a median distance of 320 miles. In this context, the National Grasslands are, by any standard, remote of major population centers.

Table 3.2 Distance from Major Metropolitan Areas to the National Grasslands

	(Miles)			
	Mills, NM	**Clayton, NM (Kiowa-Rita Blanca)**	**Lake McClellan, TX**	**Cheyenne, OK (Black Kettle)**
Albquerque, NM	225	304	340	441
Denver, CO	296	302	489	559
Oklahoma City, OK	470	530	205	158
Amarillo, TX	212	272	53	154
Lubbock, TX	337	397	178	279
Dallas/Fort Worth, TX	578	499	420	357

Figure 3.1 shows the principal highways on a broad regional scale. Interstates 40 and 25 are the major highways that provide access to the National Grasslands. Interstate 40 runs east-west across the region, passing 25 miles south of the Black Kettle National Grasslands in Oklahoma; 3 miles south of McClellan Creek in Texas; 85 miles by secondary roads to Mills Canyon in Kiowa National Grasslands; and more than 100 miles to the nearest border of the Kiowa-Rita Blanca in Texas. Interstate 40 gives access to National Grasslands from Albuquerque, Oklahoma City and Dallas/Fort Worth. Interstate 25 runs north-south, approximately 85 miles west of Clayton, where the Rangers Office of Kiowa-Rita Blanca Grasslands is located. Interstate 25 gives access to the Kiowa-Rita Blanca for Albuquerque and Denver.

Figure 3.1: Map of Principle Highways in Region

Figure 3.2 and 3.3 shows the principal roads on a local scale for Black Kettle and Kiowa Rita Blanca respectively; Table 3.3 identifies these roadways, with the exception of Interstate highways, in reference to the various Grasslands units. The Kiowa-Rita Blanca Grassland, which is relatively distant from the Interstate network, is serviced by a large number of US and state routes that converge in Clayton, where the District Office is located. US 56 and US 64 connect Clayton to Interstate 25 at Springer (84 miles) and Raton (76 miles), respectively. US 56 continues northeast from Clayton, joining US 287 in Boise City, Oklahoma, while US 87 passes through Texline en route to Dalhart Texas, nearly 50 miles to the southeast. Mills Canyon and Uplands in Harding County, New Mexico is about 15 miles from US 56, linking the area to Interstate 25 at Springer about 20 miles to the west. The Black Kettle and McClellan Creek units, both located near Interstate 40, depend less on secondary routes for access. US 283 connect Cheyenne, Oklahoma, the location of the District offices, to the Interstate; McClellan Creek is only 3 miles from the Interstate.

According to DOT Strategic Plans for New Mexico, and Texas, Routes 56, 64 and 87 are designated as major shipping routes, allowing for greater traffic volume but also greater demand by larger trucks. Route 87 which passes near the Mills Canyon and Kiowa Rita Blanca Regions has been designated as part of the Port-to-Plains transportation corridor. The designation will carry with it an expansion of route 87 from a two-lane to four-lane

road to support additional traffic loads across New Mexico, Oklahoma, and Texas and through the Mills Canyon and Kiowa Rita Blanca regions. The increased access could spell out increased recreational opportunities for the regions when completed.

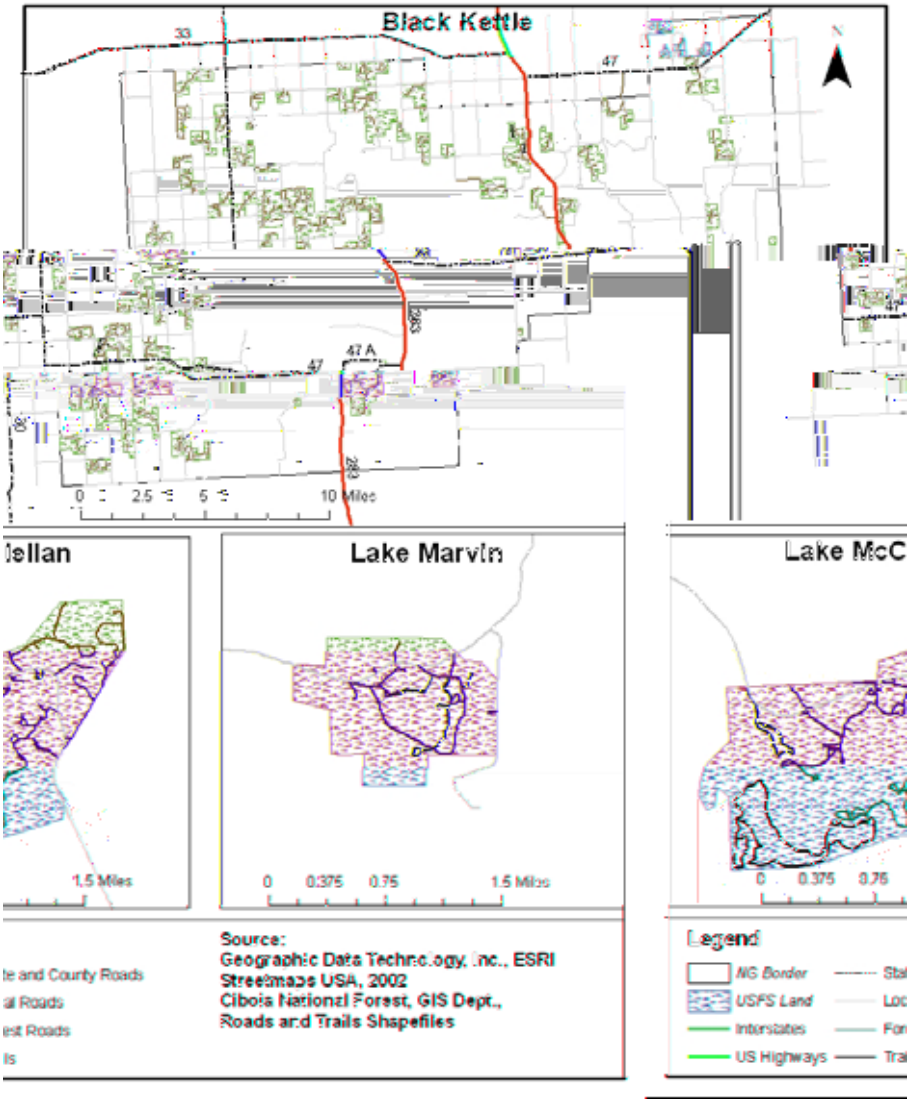

Figure 3.2: Black Kettle Principle Roads – Local Scale

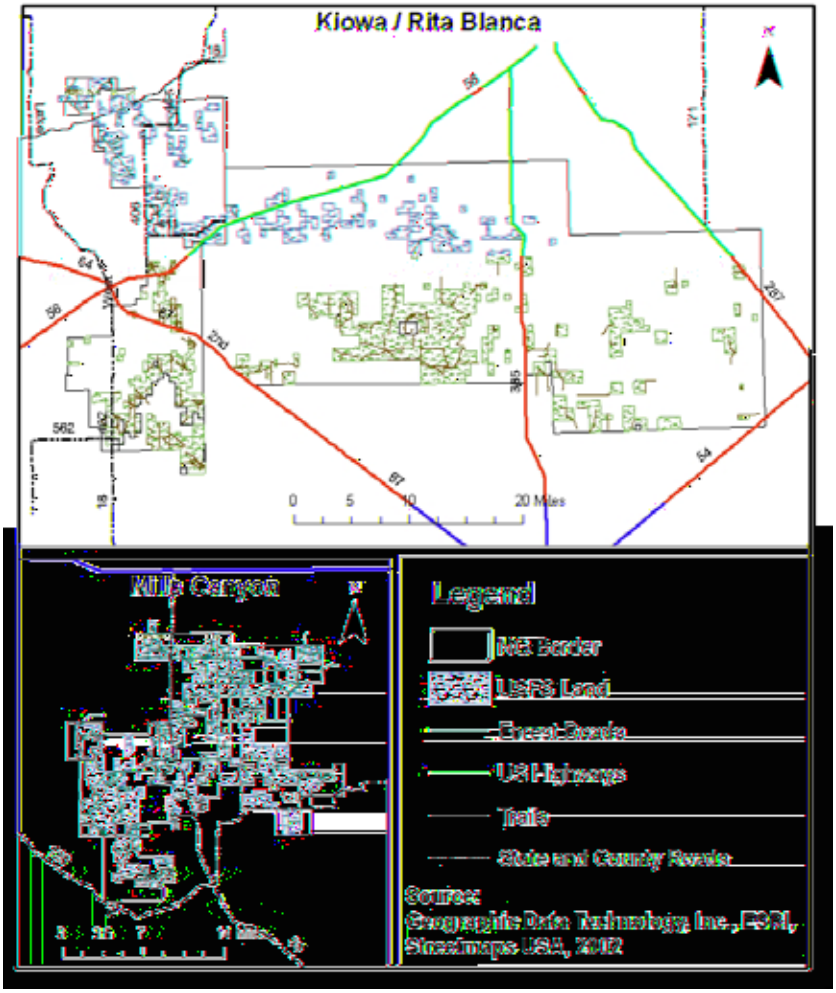

Figure 3.3: Kiowa Rita Blanca Principle Roads – Local Scale

Table 3.3 Roadways around Grassland Areas

	Mills Canyon & Uplands	Kiowa-Rita Blanca	Black Kettle
Interstate	Interstate Route 25		Interstate Route 40
US Route	US Route 56	US Route 56 US Route 64 US Route 87 US Route 287 US Route 385	US Route 283
State Road	NM Route 39 NM Route 120	TX Route 296 NM Route 402 NM Route 406	OK Route 33

Source: Geographic Data Technology Inc., ESRI, Streetmaps USA, 2002

3.2 Airports

On a regional scale, several large airports comprise the bulk of the airport access to the region followed by a number of smaller more limited access municipal airports shown below in table 3.5. Of those airports, the majority of the larger airports exceed 60 miles travel to both of the grasslands areas. Both Albuquerque International Sunport and Denver International are reasonable access points for the region to the Kiowa Rita Blanca and Mills Canyon areas due to their close proximity to Interstate 25. Amarillo International, Will Rogers World Airport in Oklahoma City, and Dallas/Fort Worth International Airports are access points in the region to the Black Kettle Regions because of their proximity to Interstate 40.

On a more local scale, Amarillo International Airport is the closest major airport to both the Clayton and Roger Mills offices, however it is not the best access point for the Mills Canyon area. Guymon Municipal Airport in Texas County, Oklahoma is the closest airport with 60 miles of the Kiowa Rita Blanca area however its location puts in on the eastern side of the unit and still puts it at a far range from Mills Canyon. Considering this, Mills Canyon is most accessible from either the Albuquerque International or one of the smaller regional airports outside of the 60-mile distance being considered. Kiowa Rita Blanca is accessible from the Guymon Municipal Airport, but is also accessible from one the larger major airports outside of 60 miles.

Taking the full consideration of airport locations and proximity to major roads, Amarillo is the closest major Airport to the Black Kettle area and its proximity to Interstate 40 makes it an excellent arrival point to for accessing the grasslands district. Visitors, trying to access Kiowa/Rita Blanca require a bit more travel as there are a number of smaller regional airports some distance away from the grasslands, or Major Airports in the Denver or Albuquerque areas with access to major interstates.

3.3 Traffic Flows

Table 3.4 shows estimated daily vehicle miles traveled (VMT) and VMT per lane-mile by county for each forest unit.[8] VMT per lane-mile offers a useful measure of the intensity of road traffic, and strongly correlate with population density. This data shows that roads in the counties most closely associated with the Grasslands – Kiowa-Rita Blanca's Union and Cimarron Counties, Mills Canyon's Harding County and the Black Kettle's Roger Mills County – have exceptionally limited traffic flow, with 61 or fewer vehicles on an average day. Traffic is heavier in Dallam County, where commercial activity centers around Dalhart, and Gray County, where traffic is concentrated around the relatively large community of Pampa (2000 population of 19,959) some distance from McClellan Creek. By contrast, traffic in neighboring counties, such as Colfax and Hemphill, is somewhat greater.

8 VMT and VMT per lane-d (ilesnCounegreat/CS0 csT2 1 T scn/TT2 1 Tf5201933 Tw 11.http:laercig(ewer)]TJewer]TJ-(d)5asurnd Gray Cacletun208i239Concs:2201o239=) sAADT Pampa 1 Tf0.0001

Table 3.4: Daily Vehicle Miles Traveled

	Estimated VMT	VMT per Lane-Mile
Kiowa-Rita Blanca Region		
Union, NM	**264,904**	**61**
Cimarron, OK	**211,767**	**60**
Dallam, TX	**286,443**	**169**
Mills Canyon Region		
Colfax, NM	**673,508**	**285**
Harding, NM	**49,215**	**31**
Mora, NM	**387,063**	**341**
Black Kettle Region		
Hemphill, TX	**121,047**	**110**
Roger Mills, OK	**130,520**	**46**
McClellan Region		
Gray, TX	**587,495**	**224**

Source: US Department of Transportation, HPMS Database

Figure 3.4 shows EPA projections for the growth of VMT between 1996 and 2007 by county for a region that includes the assessment area. The projections are based on the Federal Highway Administrations (FHWA) Highway Performance Management System (HPMS) 1996 dataset and were generated by the Environmental Protection Agency according to the EPA's tier 2 rulemaking in 2000.[9] As this figure indicates, vehicle miles traveled are expected to increase rapidly, nearly doubling in northeastern New Mexico. The increase in traffic is expected to be somewhat lower in the Texas panhandle, and significantly lower in Oklahoma, near both KRBNG and BKLMNG regions. In EPA modeling, the pattern generally follows actual and projected demographic trends.

9 Environmental Protection Agency, Technology Transfer Network, Ozone Implementation: http://www.epa.gov/ttn/naaqs/ozone/areas/vmt/stindex.htm.

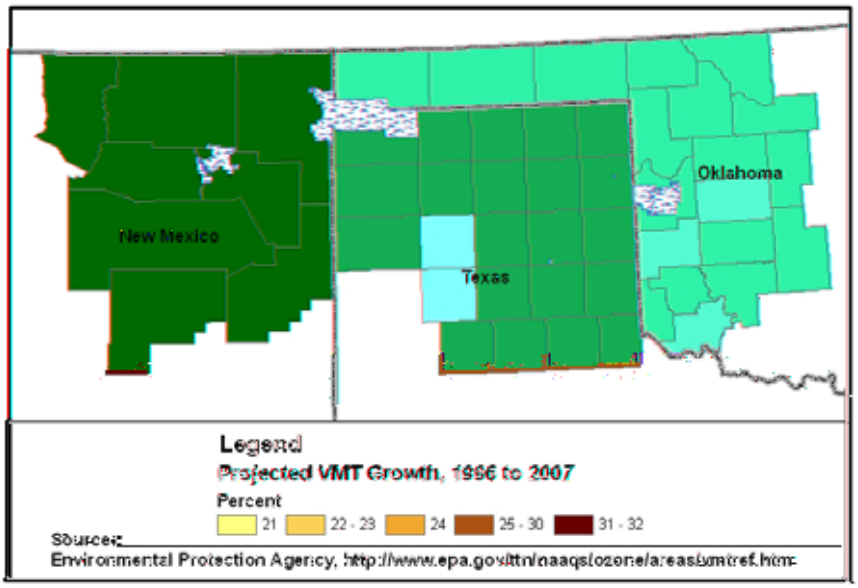

Figure 3.4: EPA Projections of Growth for VMT by Region

3.4 Forest Roads and Trails

Trails and Forest Roads provide access for both forest users and Forest Service employees to areas of interest in the forest area. These are important because they provide access for Forest Service personnel and fire fighters during forest fires. Without roaded and trail access, fire fighting in the forest units would be extremely difficult. The Grasslands units do not share the same concerns as other forest areas because they consist of small allotments spread out across a large area within the forest unit boundaries. The forests allotments are interspersed with plots of privately held land to which the states and counties are responsible for providing and maintaining access.

Trails provide another method of access; however, unlike other national forests that contain vast wilderness areas and significant miles of trails, the grasslands are smaller plots of land with very few trails and more state and county road access with the forest boundaries. Below are brief summaries of the trail and road access within the Black Kettle and Kiowa Rita Blanca forest boundaries.[10]

Kiowa/Rita Blanca:

- Kiowa/Rita Blanca has a significant amount of roaded access both within and around its borders. The Mills Canyon and Kiowa/Rita Blanca areas are accessible using 8 state highways and 4 U.S. highways. Within the borders of the district, 630 miles of forest road provide access to the Mills Canyon and Kiowa Rita Blanca grasslands. There are also an additional 6 privately owned roads in the forest boundaries that provide and additional 55 miles of forest access.

10 Summaries are based on GIS spatial files provided by the Cibola Forest District Supervisors Office. Data includes road segments for US major highways, state and county roads, forest service roads, and forest service trails.

- The Kiowa/Rita Blanca area only contains one section of trail. The trail itself is actually part of the Santa Fe National Historic Trail that crosses the Kiowa Rita Blanca district on its northern half. The trail crosses 2.4 miles of the Kiowa National Grassland.

Black Kettle:

- Black Kettle contains a significant amount of roaded access from: forest roads (460 separate sections of road totaling 198 miles), state and county roads (137 separate roads with 554 miles), and one US highway (US 283 which crosses directly through the Black Kettle area). The majority of the forest, and state and county roads cross through the larger Black Kettle area, while Lake Marvin and McClellan Creek have primary access from forest roads.
- Black Kettle has a very small number of trails contained in the Lake Marvin, Black Kettle and McClellan Creek boundaries. The Lake Marvin and Black Kettle areas combine for 7 trails with a total mileage of approximately 5.2 miles. The McClellan Creek area added an additional 4 trails with 6.3 miles contained mostly on its western side.

Table 3.5 shows the estimates of road density[11] in Grassland Boundaries. The estimates show high road density in both Lake Marvin and Lake McClellan, with 4.6 and 6.0 miles of road for every square mile inside the grassland boundary. Conversely, the Kiowa Rita Blanca region has the lowest concentration of roads inside the grassland boundary with close to a third of a mile of for every square mile of land within the grassland boundary. Mills Canyon and Black Kettle both have just over a mile of road for every square mile of land within their boundaries.

Table 3.5: Road Density on Grassland Regions

	Kiowa/Rita Blanca	Mills Canyon	Black Kettle	Lake Marvin	Lake McClellan
Road Density[1,2]	0.36	1.17	1.64	4.55	5.98

[1] Road Density = Miles of Road / Square Miles
[2] Source Cibola National Forest, GIS Dept., Travel Routes Shapefiles

It should be noted that road density on grassland regions have not changed in 10 to 20 years. While Lake Marvin and Lake McClellan provide high levels of access per square mile of land, Kiowa Rita Blanca, Mills Canyon, and Black Kettle have somewhat low levels of access. This is of larger concern in those regions because the actual forest owned allotments of land are very spread out creating an access issue for grassland users.

In 2000, approximately 7,000 acres (approximately 10 square miles) of NFS land in the Mills Canyon region along the Canadian River was officially designated as Inventoried Roadless Area. The area will be managed under Interim Directive 36 CFR 294 and will be maintained for its roadless attributes.

11 Road Density is calculated as road miles/square miles.

3.5 Right-of-Way and Other Access Issues

The checker board structure of land ownership within the National Grasslands poses potential restrictions to access to FS land because of the need to maintain right-of-way across private land. This is problematic in some parts of Mills Canyon and Rita Blanca, where restrictions to public right-of-way threaten to restrict access by recreationists and hunters. There are few such restrictions on the BKMCNG.

3.6 Capital Outlays and Transportation Infrastructure Improvements

The state DOTs are responsible for managing the maintenance and improvement of both the US highways and their state roads for the FHWA. Each state maintains a State Transportation Improvement Plan (STIP) that documents the outlays of funds allocated to road maintenance and improvement over the course of the year and several out years.[12] Table 3.6 shows a summary of projects near the two grasslands Districts for each of the three states by road and project type.

Table 3.6: Road Projects near Grasslands Areas

State	Road	Total Projected Cost	Project Type
NM	I-25	$21,100,000	road/bridge improvements and maintenance
NM	I-25	$4,000,000	intersection/interchange improvements
NM	I-40	$110,575,000	road/bridge improvements and maintenance
NM	NM 120	$2,000,000	road/bridge improvements and maintenance
NM	NM 402	$800,000	road/bridge improvements and maintenance
NM	US 56	$17,842,000	road/bridge improvements and maintenance
NM	US 64	$94,750,000	road/bridge improvements and maintenance
NM	US 64	$3,000,000	preliminary engineering
OK	I-40	$22,802,839	road/bridge improvements and maintenance
OK	OK 33	$350,000	utilities
OK	OK 33	$350,000	right of way
OK	OK 34	$3,781,217	road/bridge improvements and maintenance
OK	US 54	$1,750,000	road/bridge improvements and maintenance
OK	US 54	$1,600,000	utilities
OK	US 54	$2,204,678	right of way
TX	I-40	$3,000,000	road/bridge improvements and maintenance
TX	US 87	$10,000,000	road/bridge improvements and maintenance

New Mexico has the largest capital outlay of the three. The significant contributor to New Mexico's spending is the GRIP (Governor Richardson's Investment Partnership). GRIP has scheduled investments to improve Interstate 40 in eastern New Mexico, and US 56 and US 64, which links Kiowa-Rita Blanca Grasslands to Interstate 25 at Springer and Raton.[13] Oklahoma is investing in improvements to I-40; US 54, linking the Guymon to Dalhart, Texas; and state routes 33 and 34, which connect US Route 283 in the Black Kettle to eastern Roger Mills County and Custer County, including the Washita National

12 STIPs for each state's DOT can be found on their respective websites.

13 State of New Mexico, Department of Transportation, Strategic Plan and Performance Report, Fourth Quarter, 2004.

Wildlife Refuge and Foss State Park. According to Oklahoma's State Transportation Improvement Program (STIP), the latter project will involve the purchase of right of way near Black Kettle east of route 283. In Texas, US 87 in Dallam County, which links Clayton and Texline to Dalhart, is undergoing substantial reconstruction and expansion, but little else is slated to occur as Texas DOT continues to concentrate its expenditures in the more populated eastern region of the state and in creating the east-west Trans-Texas Corridor. In general, these projects will enhance intra-regional transportation, particularly improving access to the agricultural and commercial areas of Dalhart, south of the Rita Blanca; and improving regional access to the Grasslands with investments in the Interstate highways and roads that connect these highways to the Grasslands.

3.7 Summary Issues

The National Grasslands are located a considerable distance from major population centers. A well-developed road system provides reasonable access to the Grasslands, particularly the Black Kettle and McClellan Creek, but the remoteness of the area remains the critical barrier to an increase in the level of activity. Given the expected pattern of continued population loss in the counties closest to the grasslands, investments in the improvement of transportation systems are unlikely to substantially alter current conditions.