Perkins County Project Participants 2013

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INTRODUCTION

LOCATION

Perkins County is located in the southwest region of the State of Nebraska. Perkins County is adjacent to Chase to the south, Hayes County to the southeast, Sedgwick County, Colorado to the west, Phillips County, Colorado to the southwest, Keith County to the north, and Lincoln County to the east. The City of Grant is the County seat and is located in the approximate center of the County. The City of Ogallala, Keith County is located 20 miles to the north of the City of Grant. The Kansas-Nebraska-Colorado Rail Net serves all parts of the County. State Highways 61 and 23, extends north and south and east and west, respectively, through the central part of Perkins County.

CLIMATE

The climate in Perkins County is sub-humid, characterized by extremes of temperatures and moisture conditions. Winters are cold in Perkins County due to frequent incursions of cold continental air. Summers are hot, but cooler air occasionally moves in from the north. Snowfall is fairly frequent in winter, but the snow cover is usually not continuous. Rainfall is heaviest in late spring and early summer. During summer, the average temperature is 74 degrees (F), and the average daily maximum temperature is 89 degrees (F). During winter, the average temperature is 28-degree (F), and the average daily minimum temperature is 15 degrees (F).

The total annual precipitation is approximately 19 inches, and about 15 inches (79%), usually falls in April through September. The average seasonal snowfall is about 28.8 inches. Perkins County receives sunlight 70% of the time during summer and 60% during winter. The prevailing wind is from the southeast.

HISTORY OF PERKINS COUNTY

Perkins County was settled during the early 1880s, after settlers had acquired land through both Homestead Acts and Tree Claims. Settlers who planted and maintained a specified number of trees on the land could establish a Tree Claim and then take ownership of the land. The first white settlers were cattlemen who ranched in the area on open range, but water for livestock was not available. Perkins County, originally part of Keith County, was established in 1887, and was named after Charles E. Perkins, president of the Chicago, Burlington, and Quincy Railroad. The town of Grant, was established in March 1886 and named after Ulysses S. Grant, the Civil War General and 16th President of the United States. Originally, the town was located three-quarters of a mile north of its present location. It was later moved closer to the railroad, and became the county seat in October 1888¹.

Construction of the first railroad, the Burlington and Missouri Railroad Company, began in Perkins County in the 1880s. Upon completion, the railroad ran east to west and opened the county to further development and trade with other areas. By 1920, the main crop was winter wheat, which was grown on about 25% of the acreage in the county. During the 1930s, conservation practices helped to conserve soil moisture and to control soil blowing and water erosion. By 1980, wheat grew on about 190,000 acres and corn on 88,000 acres. Prior to the 1960s, irrigation had not yet been developed in the county. The county had no perennially flowing streams and only a few small bodies of water, none of which were large enough to be used as a source of irrigation water. Irrigation was not feasible until deep wells were developed to supply enough water for crops. In January 1967, the county had 66 irrigation wells. By January 1981, Perkins County had 756 irrigation wells supplying water to about 115,000 acres of crop land. In 1986, Perkins County had 866 irrigation wells.

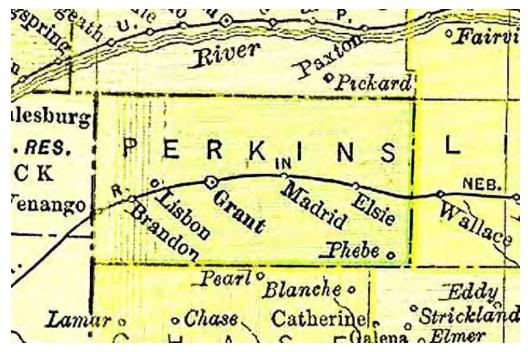
According to the 2010 Census, the population of Perkins County was 2,970. This number is down 667 people from the 1990 census of 3,637, and down 230 people from the 2000 census of 3,200. Grant had a population of 1,239in 1990 and a population of 1,165 in 2010. Grant is

¹ For a more complete history, refer to <u>Plainscape: A Portrait of Perkins County</u>, 1987, Robert Richter and Larry Gauthier, Grant: NE, Perkins County Historical Society.

Perkins County, Nebraska Comprehensive Plan 2013

the County seat and the largest town. Other communities in the County are Madrid, Venango, Elsie, Brandon and Grainton.

FIGURE 1: MAP, PERKINS COUNTY, 1895



SOURCE: HTTP://WWW.LIVGENMI.COM/1895/NE/COUNTY/PERKINS.JPG

COMPREHENSIVE PLAN HISTORY

This Comprehensive Plan is an updated version of the original plan adopted in 2000. At the time of adoption in 2000, the County Board of Commissioners were Michael Perlinger, James Deaver, and Mary Buss. The Planning Commission consisted of the following members: Dennis Demmel (chair), Bill Richmond (Secretary/Treasurer), James Harms, Eloise Hughes, Joe Krajewski, Greg Pelster, Ardyth Triplette, John Vlasin, and Larry Walters.

THE PURPOSE OF COMPREHENSIVE PLANNING

The Perkins County Comprehensive Development Plan (hereafter-Comprehensive Plan) is designed to promote orderly growth and sustainable development for the rural areas and unincorporated communities of the County. The Comprehensive Plan will provide policy guidelines to enable citizens and elected officials to make informed decisions about the future of the community.

The Plan acts as a tool to "Develop a road map that guides the community through change"

The Comprehensive Plan will provide a guideline for the location of future developments within the planning jurisdiction of Perkins County. The Plan is intended to encourage a strong economic base, so the goals of the community are achieved.

The Comprehensive Plan will assist Perkins County in evaluating the impacts of development (i.e. economic, social, fiscal, service and amenity provision, health, safety and welfare) and encourage appropriate land uses throughout the jurisdictional area of the County. The objective of planning is to provide a framework for guiding the community—whether a village, city or county, toward orderly growth and development. The Plan assists the County in balancing the physical, social, economic, and aesthetic features as it responds to private sector interests.

Planned growth will make Perkins County more effective in serving residents, more efficient in using resources, and able to meet the standard of living and quality of life every individual desires.

THE PLANNING PROCESS

Planning begins with the collection of data in order to provide a picture of the past and present community conditions. Analyses of data provide the basis for developing forecasts for future land-use demands in the County.

The second phase of the comprehensive planning process is the development of general goals and policies. These are practical guidelines for improving existing conditions and guiding future growth. The Comprehensive Plan is a vision presented in text, graphics and tables that represent the desires of the community for the future.

The Comprehensive Plan represents a blueprint designed to identify, assess, and develop actions and policies in the areas of population, land use, transportation, housing, economic development, community facilities, and utilities. The Plan contains recommendations that when implemented will be of value to the community and its residents.

Implementation is the final phase of the process. A broad range of development policies and programs are required to implement the Comprehensive Plan. The Plan identifies the tools, programs, and methods necessary to carry out the recommendations. Nevertheless, the implementation of the development policies contained within the Plan is dependent upon the adoption of the Plan by the governing body, and the leadership exercised by the present and future elected and appointed officials of the community.

The Comprehensive Plan was prepared under the direction of the Perkins County Planning Commission with the assistance and participation of the Perkins County Board of Commissioners, and the citizens of Perkins County. The planning time period for achieving goals, programs, and developments identified in the Perkins County Comprehensive Plan is 20 years, that is, 2013 to 2033. However, the community should review the Plan annually and update the document in ten to fifteen years, or when a pressing need is identified. Updating the Plan will allow the community to incorporate ideas and developments that were not known at the time of the present comprehensive planning process.

COMPREHENSIVE PLAN COMPONENTS

Nebraska State Statutes require the inclusion of certain elements in a Comprehensive Plan. A Comprehensive Plan shall consists of both graphic and textual material (according to Nebraska State Statutes), and is designed to accommodate anticipated long-range future growth. The Comprehensive Plan is comprised of the following components:

- Community Profile,
- Community Facilities,
- Energy Element
- Goals/Objectives and Policies,
- Environment, Natural and Man-made Resources,
- Existing Land Use,
- Future Land Use Plan,
- Transportation Plan, and
- Plan Implementation.

Analyzing past and existing demographic, housing, economic and social trends permits the projection of likely conditions in the future. Projections and forecasts are useful tools in planning for the future; however, these tools are not always accurate and may change due

to unforeseen factors. Also, past trends may be skewed or the data may be inaccurate; creating a distorted picture of past conditions. Therefore, it is important for Perkins County to closely monitor population, housing and economic conditions that may impact the community. Through periodic monitoring, the community can adapt and adjust to changes at the local level. Adaptability to socio-economic change allows the community to maintain an effective Comprehensive Plan for the future; to enhance the quality of life and standard of living for all residents.

The Comprehensive Plan documents where Perkins County has come from, where it is now, and the likely direction it may be heading in the future. The Comprehensive Plan is not a static document, but should evolve as changes in the land-use, population or local economy occur during the planning period. The Comprehensive Plan is a management tool for community leaders to base their decision-making process upon when considering future developments. These decisions will assist Perkins County in achieving their physical, social, and economic goals.

GOVERNMENTAL AND JURISDICTIONAL ORGANIZATION

The governmental functions of Perkins County, Nebraska are provided and coordinated by the County Board of Commissioners, comprised of three (3) elected officials. Each incorporated community in Perkins County has elected officials and officers that oversee the governing of their community.

The planning and zoning jurisdiction for the incorporated communities in Perkins County that have adopted Comprehensive Planning and Zoning Ordinances includes the area within one mile of their corporate limits, as written under the authority of Section 17-1002, Nebraska Revised Statutes, 1943 (as amended). As these communities grow and annex contiguous land area into their corporate limits, their extraterritorial jurisdictions will extend further into Perkins County. There are four (4) communities in Perkins County that are incorporated, including the City of Grant; Villages of Elsie, Madrid and Venango. Brandon and Grainton are unincorporated communities in Perkins County and therefore fall under the jurisdiction of the County. The Village of Venango is presently undergoing a comprehensive planning process. Both Madrid and Grant have Zoning and enforce their ETJ's (Extra Territorial Jurisdictions).

The planning and zoning jurisdiction of Perkins County includes the unincorporated portions of the County, excluding the established extraterritorial jurisdiction of each community and their corporate limits, as written under the authority of Section 23-114, Nebraska Revised Statutes, 1943 (as amended).

PERKINS COUNTY PROFILE

DEMOGRAPHIC PROFILE

Population statistics aid decision-makers by developing a broad picture of Perkins County. It is important for Perkins County residents to understand where it has been, where it is and where it appears to be going.

Population is the driving force behind housing, local employment, economic, and fiscal stability of the county. Historic population conditions assist in developing demographic projections, which in turn assist in determining future housing, retail, medical, employment and educational needs within the county. Projections provide an estimate for the county to base future land-use and development decisions. However, population projections are only estimates and unforeseen factors may affect projections significantly.

POPULATION TRENDS AND ANALYSIS

Table 1 indicates the population for Perkins County, the incorporated communities in Perkins County, and the unincorporated areas as a whole, between 1980 and 2010. This information provides the residents of Perkins County with a better understanding of their past and present population trends and changes. In addition, this comparison allows the county to see what the dynamics of the overall population are within the county.

The Perkins County population in 2010 was 2,970 people, which was an overall decrease of 667 people or -18.3% from 1980. Perkins County has seen a continual decline in population since it reached its peak population in 1930.

Table 1 indicates all five communities within Perkins County have seen a decrease in population between 1980 and 2010, with Venango showing the largest decrease at -28.7%. Also of note in this table is the fact that Grainton became unincorporated somewhere between 1990 and 2000, which shows up as a -100% decrease.

Community	1980	1990	% Change 1980 to 1990	2000	% Change 1990 to 2000	2010	% Change 2000 to 2010	% Change 1980 to 2010
Elsie	133	153	15.0%	139	-9.2%	106	-23.7%	-20.3%
Grainton *	20	16	-20.0%	0	-100.0%	0	-	-100.0%
Grant	1,270	1,239	-2.4%	1225	-1.1%	1165	-4.9%	-8.3%
Madrid	284	288	1.4%	265	-8.0%	231	-12.8%	-18.7%
Venango	230	192	-16.5%	175	-8.9%	164	-6.3%	-28.7%
Incorporated Areas	1,937	1,888	-2.5%	1,804	-4.4%	1,666	-7.6%	-14.0%
Unincorporated Areas	1,700	1,479	-13.0%	1,396	-5.6%	1,304	-6.6%	-23.3%
Perkins County	3,637	3,367	-7.4%	3,200	-5.0%	2,970	-7.2%	-18.3%

TABLE 1: POPULATION TRENDS, PERKINS COUNTY AND COMMUNITIES, 1980 to 2010

Source: U.S. Census Bureau, 1980/1990/2000/2010 *Unincorporated

The decreasing population in Perkins County is not limited to the incorporated areas but the unincorporated areas have seen an overall change of -23.3% between 1980 and 2010. The population decline in the unincorporated areas is actually greater than that within the communities.

MIGRATION ANALYSIS

Migration Analysis allows a county to understand a specific dynamic that is influencing population change. Migration indicates the population size that has migrated in or out of the county over a given period of time.

TABLE 2: MIGRATION ANALYSIS - PERKINS COUNTY, 1970 TO 2010

Time Period	Total Change (persons)	Natural Change (persons)	Total Migration (persons)
1970-1980	214	190	24
1980-1990	(270)	118	(388)
1990-2000	(167)	(110)	(57)
2000-2010	(230)	(27)	(203)
Total	(453)	171	(624)

Source(s): U.S. Census Bureau 1970/1980/1990/2000/2010

Nebraska Department of Health and Human Services System, Vital Statistics Report(s), 1970-2010

Based upon Table 2, Perkins County has seen the majority of its changes due to the outmigration of people. Overall between 1970 and 2010 the population has changed by 453 people; there have been 171 more births than deaths, resulting in a total out-migration of 624 people. Only one decade in Table 2 actually saw in-migration, 1970 to 1980.

The largest period of out-migration occurred between 1980 and 1990 when there were 388 people that moved out of Perkins County; out-migration is the primary reason for the overall loss of people in the past several decades.

AGE STRUCTURE ANALYSIS

Age structure is an important component of population analysis. By analyzing age structure, one can determine which age groups (cohorts) within Perkins County are being affected by population shifts and changes. Each age cohort affects the population in a number of different ways. For example, the existence of larger young cohorts (20-44 years) means that there is a greater ability to sustain future population growth than does larger older cohorts. On the other hand, if the large, young cohorts maintain their relative size, but do not increase the population as expected, they will, as a group, tend to strain the resources of an area as they age. Understanding what is happening within the age groups of the County's population is necessary to effectively plan for the future.

Table 3 exhibits the age cohort structure for Perkins County in 2000 and 2010. Examining population age structure can indicate significant changes affecting the different population segments within the county. Realizing how many persons are in an age cohort, and at what rate the age cohorts are changing in size, will allow for informed decision-making in order to maximize the future use of resources.

One method of analyzing cohort movement in a population involves comparing the number of persons aged between 0 and 4 years in 2000 with the number of persons in the same age cohort approximately 10 years later, or aged between 10 and 14 years in 2010. For example, in Perkins County, there were 173 children between the ages of 0 and 4 in 2000, and in 2010 there were 208 children between the ages of 10 and 14, an increase of 35 children. A review of population by this method permits one to undertake a detailed analysis of which specific cohorts are moving in and out of the community. The positive change in this cohort indicates in-migration into the county.

	20	000 2010 2000-2010		-2010	2000-20)10		
Age	Male and Female	% of Total	Male and Female	% of Total	Net Change	% Change	Cohort Change	% Change
0-4	173	5.4%	194	6.5%		12.1%		-
5-9	225	7.0%	212	7.1%	-	-5.8%		-
10-14	265	8.3%	208	7.0%		-21.5%		20.2%
15-19 20-24	261 119	8.2% 3.7%	168 130	5.7% 4.4%		-35.6% 9.2%		-25.3% -50.9%
20-24 25-29	163	5.1%	130	4.4%		9.2% -9.8%		-30.9% -43.7%
30-34	142	4.4%	14/	4.7%		-7.0%		-43.7%
35-44	446	13.9%	304	10.2%		-31.8%		-0.3%
45-54	471	14.7%	426	14.3%		-9.6%		-4.5%
55-64	318	9.9%	420	14.1%	102	32.1%		-10.8%
65-74	246	7.7%	290	9.8%	44	17.9%		-8.8%
75 & older	371	11.6%	312	10.5%		-15.9%		-49.4%
Total	3,200	100.0%	2,970	100.0%	-230	-7.2%	-230	-7.2%
	2000		2010		Total Cha	inge		
	Under 18 years	s of age	852	Under 18 yea	rs of age	735	18 and under	-117
	% of total pop	ulation	26.6%	% of total pop	oulation	24.7%	% change	-13.7%
	Total 65 yrs an	d older	617	Total 65 yrs ar	nd older	602	65 and older	-15
	% of total pop	ulation	19.3%	% of total pop	oulation	20.3%	% change	-2.4%
	Median Age		40.7	Median Age		43.9	Median Age	3.2
	Total Females		1,594	Total Females	5	1,471	Total Females	-123
	Total Males		1,606	Total Males		1,499	Total Males	-107
	Depende	ncy Ratio	0.85	Depende	ency Ratio	0.82		
	Total Populatic	n	3,200	Total Populati	on	2,970	Total Change	-230

TABLE 3: AGE-SEX CHARACTERISTICS, PERKINS COUNTY, 2000 TO 2010

Source: U.S. Census Bureau 2000-2010

Perkins County saw growth in a number of its age cohorts. The 0 to 4 and 5 to 9 cohorts always indicate an increase, since these persons were not born when the previous census was completed. Note that the cohorts represented in Table 3 differ from those listed below in Tables 4 and 5 due to the consolidation of the 25-29 and 30-34 cohorts from 2000 into a 35-44 cohort in 2010.

TABLE 4: POSITIVE COHORTS, 2000 TO 2010

2000 Age Cohort	Number	2010 Age Cohort	Number	Change
NA	NA	0 - 4 years	194 persons	+ 194 persons
NA	NA	5 - 9 years	212 persons	+ 212 persons
0 - 4 years	173 persons	10 - 14 years	208 persons	+ 35 persons
20 - 24 years	119 persons	30 - 34 years	159 persons	+ 40 persons
Total Change				+ 481 persons

Source: U.S. Census Bureau 2000, American Community Survey 2006-2010

Outside of the 2000 age groups of 0-4 and 5-9 years, the greatest increase was in the 30-34 (2010) age group followed by the 10-14 (2010) age group. These specific cohorts indicate that younger adults, including those married and/or with families, are moving into the county. These age cohorts will be vital to attract in the future in order to maintain a strong and viable county. Some issues to be potentially concerned about include a lack of younger cohorts that are in their middle to late teens.

2000 Age Cohort	Number	2010 Age Cohort	Number	Change
5 - 9 years	225 persons	15 - 19 years	168 persons	- 57 persons
10 – 14 years	265 persons	20 - 24 years	130 persons	- 135 persons
15 - 19 years	261 persons	25 - 29 years	147 persons	- 114 persons
25 – 34 years	305 persons	35 – 45 years	304 persons	- 1 person
35 – 44 years	446 persons	45 – 54 years	426 persons	-20 persons
45 - 54 years	471 persons	55 - 64 years	420 persons	- 51 persons
55 - 64 years	318 persons	65 - 74 years	290 persons	- 28 persons
65 years +	617 persons	75 years +	312 persons	- 305 persons
Total Change				- 711 persons

TABLE 5: NEGATIVE COHORTS, 2000 TO 2010

Source: U.S. Census Bureau 2000, American Community Survey 2006-2010

Table 5 shows the cohorts that saw population decreases during the past 10 years. These cohorts include the specific groups that are needed to maintain the younger population base in the county. In some cases these population shifts ranged from 10% to 35% of the 2000 cohort population. These data are supported by the data in Table 2 above, which shows an out-migration of people between 2000 and 2010. It is very likely that out-migration between

2000 and 2010 account for nearly 70% of the overall negative shift in the age groups in Table 5.

One cohort of note is the 75 years+ and its decrease for the past decade. The majority of this change was likely due to deaths in the county. Based upon data from the Nebraska Health and Human Services there were 392 resident deaths in Perkins County from 2000 through 2009.

The median age in Perkins County increased from 40.7 years in 2000 to 43.9 years in 2010. The change equals approximately 7.9% for the time period. The median age for the state of Nebraska in 2010 was 37.3 years and increased approximately 5.7% from 2000. Perkins County is experiencing a population that is aging at approximately 150% the rate of the state.

The proportion of persons less than 18 years of age decreased by 13.7% between 2000 and 2010, while those aged 65 years and older decreased by 2.4% overall. The population proportion for 18 years and younger and those 65 years and older can be examined to determine another piece of useful data called the "dependency ratio".

In 2000, Perkins County had a Dependency Ratio of 0.85 (45.9%/54.1%). By 2010 the Ratio had decreased to 0.82

Dependency Ratio

The dependency ratio examines the portion of a community's earnings that is spent supporting age groups typically and historically dependent on the incomes of others.

- < 1: 1 Independent resident is able to support more than 1 Dependent resident
- =1: 1 Independent resident able to support 1 Dependent resident
- >1: 1 Independent resident able to support less than 1 Dependent resident

<u>(%18 years and younger + % 65</u> <u>years +</u> % of remaining population

(45.0%/55.0%). These data indicate that there are more wage earners living in Perkins County than those populations that tend to be dependent upon tax dollars and revenues generated by those between the ages of 19 and 64 years of age.

POPULATION PROJECTIONS

Population Projections are estimates based upon past and present circumstances. The use of population projections allows Perkins County to estimate what the population will be in future years by looking at past trends. By scrutinizing population changes in this manner, the County will be able to develop a baseline of change from which they can create different future scenarios. A number of factors (demographics, economics, social, etc.) may affect projections positively or negatively. At the present time, these projections are the best crystal

ball Perkins County has for predicting future population changes. There are many methods to project the future population trends; the five projections used below are intended to give Perkins County a broad overview of the possible population changes that could occur in the future.

Trend Line Analysis

Trend Line Analysis is a process of projecting future populations based upon changes during a specified period of time. In the analysis of Perkins County, three different trend lines were reviewed: 1980 to 2010, 1990 to 2010, and 1970 to 2010. A review of these trend lines indicates Perkins County will see relatively stable population scenarios during the coming 28 years. The following projections summarize the decennial population for Perkins County through 2040.

Perkins County Trend Analysis				
Year	1980 to 2010	1990 to 2010	1970 to 2010	
2020	2,757 persons	2,795 persons	2,872 persons	
2030	2,558 persons	2,630 persons	2,777 persons	
2040	2,375 persons	2,475 persons	2,685 persons	

Cohort Survival Analysis

Cohort Survival Analysis reviews the population by different age groups and sex. The population age groups are then projected forward by decade using survival rates for the different age cohorts. This projection model accounts for average birth rates by sex and adds the new births into the future population.

The Cohort Survival Model projection indicates Perkins County's population will decline slightly in 2020 and then begin a steady increase each decade through 2040. The following projection for Perkins County is based on applying survival rates to age cohorts, but does not consider the effects of either in-migration or out-migration.

Perkins County Cohort Survival Analysis

Year	Cohort Survival Model
2020	2,678 persons
2030	2,783 persons
2040	2,850 persons

The Modified Cohort takes the same age group model but modifies it to account for either in-migration or out-migration trends which equals -23.1 people per year over a 40 year period. In this case, the in-migration numbers from Table 2 was added to the Cohort results. The following are the new projections:

Perkins County Modified Cohort Survival Analysis

Year	Cohort Survival Model
2020	2,447 persons
2030	2,321 persons
2040	2,157 persons

SUMMARY OF POPULATION PROJECTIONS

Using the modeling techniques discussed in the previous paragraphs, a summary of the six population projections for Perkins County through the year 2040 is shown in Figure 2. Three population projection scenarios were selected and include (1) a Low Series; (2) a Medium Series; and, (3) a High Series. Two of the three projections forecast an overall increase for Perkins County through the year 2030. The following population projections indicate the different scenarios that may be encountered by Perkins County through the year 2040.

Year	Low Series = Cohort Modified	Medium Series = 90-10	High Series = 70-10
2020	2,447 persons	2,795 persons	2,872 persons
2030	2,321 persons	2,630 persons	2,777 persons
2040	2,157 persons	2,475 persons	2,685 persons

Figure 2 reviews the population history of Perkins County between 1930 and 2010, and identifies the three population projection scenarios into the years 2020, 2030, and 2040. Figure 2 indicates the peak population for Perkins County occurred in 1930 with 5,834 people.

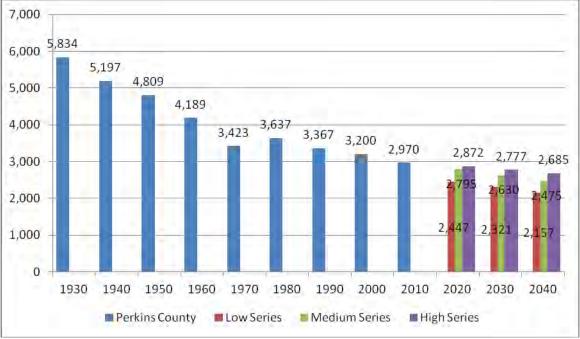


FIGURE 2: POPULATION TRENDS AND PROJECTIONS, PERKINS COUNTY, 1930 TO 2040

As stated previously, the projections have been developed from data and past trends, as well as present conditions. A number of external and internal demographic, economic and social factors may affect these population forecasts. Perkins County should monitor population trends, size and composition periodically in order to understand in what direction their community is heading.

Source: U.S. Census Bureau

HOUSING PROFILE

The Housing Profile in this Plan identifies existing housing characteristics of Perkins County. The primary goal of the housing profile is to allow the county to examine past and present conditions. The housing profile is an analysis that aids in determining the composition of owner-occupied and renter-occupied units, as well as the existence of vacant units. It is important to evaluate information on the value of owner-occupied housing units, and monthly rents for renter-occupied housing units, to determine if housing costs are a financial burden to Perkins County residents.

To project future housing needs, several factors must be considered. These factors include population change, household income, employment rates, land use patterns, and residents' attitudes. The following tables and figures provide the information to aid in determining future housing needs and develop policies designed to accomplish the housing goals for Perkins County.

AGE OF EXISTING HOUSING STOCK

The age of Perkins County's housing stock can reveal a great deal about population and economic conditions of the past. The age of the housing stock may also indicate the need for rehabilitation efforts, or new construction within the county. Examining the housing stock is important in order to understand the overall quality of housing in Perkins County. The data in Figure 3 includes the communities as well as the more rural areas of the county.

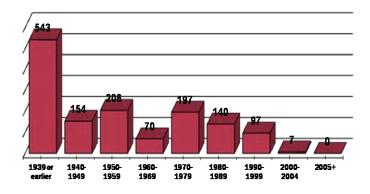


FIGURE 3: AGE OF EXISTING HOUSING STOCK, PERKINS COUNTY, 2010

Source: American Community Survey 2006-2010

Overall, Perkins County has 1,414 housing units within the communities and rural areas. Figure 3 is a breakdown of the housing units built during certain periods of the county's history. The Figure indicates 543, or 38.4% of Perkins County's total housing units, were constructed prior to 1940. Housing units of this age need to be examined carefully to determine key issues such as dilapidation, deterioration as well as the presence of the hazard building materials of lead and asbestos. Several of these homes may be in need of repair or demolition. Several different building practices were used during this period and in some cases the quality of materials and construction may not have been the same as other homes in the county.

However, between 1950 and 1959 there were 206 housing units, or 14.6% of the total, constructed. This time period has the greatest amount of housing units constructed of any decade. The 1950s were closely followed by 197 units constructed between 1970 and 1979. The amount of construction during the 1970's indicates a strong economy during this time.

Approximately 82% of all housing units in Perkins County were constructed prior to 1980. These units may be in need of a special weatherization program in the county due to the age of the housing. These programs can assist with items such as replacement windows, insulation upgrades, heating and cooling system, weather-stripping, etc.

HOUSING TRENDS

An analysis of housing trends can reveal a great deal about the different sectors of the population in the county. Housing trends indicate the breakdown between owner- or renteroccupied housing as well as the number of people living in Group Quarters. Examining housing trends is important in order to understand the overall diversity of the population and their quality of life within Perkins County.

Selected Characteristics	2000	2010	% Change 2000-2010	
Population	3,200	2,970	-7.2%	
Persons in Household	3,146	2,926	-7.0%	
Persons in Group Quarters	54	44	-18.5%	
Persons per Household	2.47	2.36	-4.5%	
Total Housing Units	1,444	1,414	-2.1%	
Occupied Housing Units	1,275	1,240	-2.7%	
Owner-occupied units	965	909	-5.8%	
Renter-occupied units	310	331	6.8%	
Vacant Housing Units	169	174	3.0%	
Owner-Occupied vacancy rate	2.5%	4.9%	-	
Renter-Occupied vacancy rate	9.4%	8.6%	-	
Single-family Dwellings	1,248	1,286	3.0%	
2 unit Dwellings	14	9	-35.7%	
3 or 4 unit Dwellings	18	41	127.8%	
5 to 9 unit Dwellings	-	-		
10-19 unit Dwellings	7	-	-100.0%	
20 or more unit Dwellings	39	38	-2.6%	
Mobile Homes, trailer, other	121	40	-66.9%	
Median Contract Rent - 2000 and 2010				
Perkins County	\$389	\$593	52.4%	
Nebraska	\$491	\$648	32.09	
Median Value of Owner-Occupied Units -	2000 and 2010			
Perkins County	\$52,200	\$77,100	47.79	
Nebraska	\$88,000	\$123,900	40.8%	

TABLE 6: COMMUNITY HOUSING TRENDS, PERKINS COUNTY, 2000 AND 2010

Source: U.S. Census Bureau, 2000/American Community Survey 2006-2010

Persons in Households/Group Quarters

In 2010 there were 220 fewer people living in households than in 2000, this represents a decrease of 7.0%. This continues to indicate a declining household population. This decrease in household population was most seen more in those living in mobile homes than in any other housing type. Between 2000 and 2010 there was an increase in the number of people living in single-family dwelling units.

The number of people living in group quarters in Perkins County in 2010 decreased by 18.5% from 2000 (this was actually a change of -10 people). Group Quarters identifies people that are living in special housing conditions such as a nursing home facility. Therefore, this increase is likely due to increases in group homes and convalescent care facilities.

Persons per Household

Table 6 also indicates that the number of persons per household decreased from 2.47 to 2.36 persons. The trend nationally has been towards a declining household size; however, the person per household in Perkins County is higher than several other similar counties:

- Keith County has 2.08 persons per household
- Chase County has 2.32 persons per household
- Frontier County has 2.26 persons per household
- Red Willow County has 2.29 persons per household
- Dundy County has 2.19 persons per household
- Lincoln County has 2.35 persons per household
- Dawson County has 2.78 persons per household

Finally, the person per household for the state of Nebraska is 2.45, nearly 4% higher than Perkins County.

Occupied vs. Vacant Housing Units

Table 6 also indicates the number of occupied housing units decreased from 1,275 in 2000 to 1,240 in 2010, or -2.7%; however, vacant housing units increased, going from 169 in 2000 to 174 in 2010, or 3.0%. For the period vacant units increased at approximately the same rate as occupied units decreased. The occupancy type with the highest vacancy rate for both 2000 and 2010 was rental units at 9.4% and 8.6% respectively. The vacancy rate for rental occupied is very comparable to the state of Nebraska which was at 9.5%.

Median Contract Rent

Median contract rent in Perkins County increased from \$389 per month in 2000 to \$593 per month in 2010, or 52.4%. The State's median monthly contract rent increased by 23.6%. This indicates Perkins County has seen contract rent increase at a greater rate than the state but was still less than the state's average.

Comparing changes in monthly rents between 2000 and 2010 with the Consumer Price Index (CPI) enables the local housing market to be compared to national economic conditions. Inflation between 2000 and 2010 increased at a rate of 23.6%, indicating Perkins County rents increased at a rate more than two times faster than the rate of inflation. Thus, Perkins County tenants were paying considerably higher monthly rents in 2010, in terms of real dollars, than they were in 2000, on average.

In terms of real dollars, tenants and homeowners in Perkins County were seeing greater contract rent. This trend is consistent with the state, as data show housing costs across Nebraska have equaled or exceeded inflation. With the economic downturn in recent years it is likely that some of these increases have been or may be eliminated. It may take several years of this planning period to fully see the complete and eventual impact of the present time.

Median Value of Owner-occupied Units

The Median value of owner-occupied housing units in Perkins County increased from \$52,200 in 2000 to \$77,100 in 2010 and represents an increase of 47.7%. The median value for owner-occupied housing units in the state showed an increase of 36.0%. Housing values in Perkins County increased at a rate more than equal to the statewide average.

In comparison to the CPI, the local value of owner-occupied housing increased at a rate of more than two times the CPI. This indicates housing values statewide and in the county increased in value in terms of real dollars when accounting for inflation.

Tenure of Households

Table 7 shows tenure (owner-occupied and renter-occupied) of households by number and age of persons in each housing unit. Analyzing these data gives Perkins County the opportunity to determine where there may be a need for additional housing. In addition,

Perkins County could work with the different communities to target efforts for housing rehabilitation and construction at those segments of the population exhibiting the largest need.

2000

The largest section of owner-occupied housing in Perkins County in 2000, based upon number of persons, was two person households, with 388 units, or 40.2% of the total owneroccupied units. By comparison, the largest household size for rentals was the single person households which had 123 renter-occupied housing units, or 39.7% of the total renteroccupied units.

		20	00			20	10		0.0.	R.O.
Householder Characteristic	Owner- Occupied	% 0.0	Renter- Occupied	% R .O	Owner- Occupied	% 0.0	Renter- Occupied	% R.O	Percent	Change
Tenure by Number of Persons in Housing Unit (Occupied Housing Units)										
1 person	227	23.5%	123	39.7%	236	24.5%	122	44.4%	4.0%	-0.8%
2 persons	388	40.2%	74	23.9%	447	46.4%	47	17.1%	15.2%	-36.5%
3 persons	120	12.4%	47	15.2%	97	10.1%	40	14.5%	-19.2%	-14.9%
4 persons	143	14.8%	35	11.3%	90	9.3%	36	13.1%	-37.1%	2.9%
5 persons	54	5.6%	19	6.1%	71	7.4%	22	8.0%	31.5%	15.8%
6 persons or more	33	3.4%	12	3.9%	23	2.4%	8	2.9%	-30.3%	-33.3%
TOTAL	965	100.0%	310	100.0%	964	100.0%	275	100.0%	-0.1%	-11.3%
Tenure by Age of H	louseholder	(Occupied	Housing Unit	ts)						
15 to 24 years	11	1.1%	30	10.9%	24	2.5%	29	10.5%	118.2%	-3.3%
25 to 34 years	97	10.1%	63	22.9%	96	10.0%	63	22.9%	-1.0%	0.0%
35 to 44 years	163	16.9%	70	25.5%	114	11.8%	38	13.8%	-30.1%	-45.7%
45 to 54 years	209	21.7%	55	20.0%	178	18.5%	55	20.0%	-14.8%	0.0%
55 to 64 years	161	16.7%	17	6.2%	225	23.3%	24	8.7%	39.8%	41.2%
65 to 74 years	136	14.1%	14	5.1%	171	17.7%	13	4.7%	25.7%	-7.1%
75 years and over	188	19.5%	61	22.2%	156	16.2%	53	19.3%	-17.0%	-13.1%
	965	100.0%	310	112.7%	964	100.0%	275	100.0%	-0.1%	-11.3%

TABLE 7: TENURE OF HOUSEHOLD, PERKINS COUNTY, 2000 TO 2010

Source: U.S. Census Bureau, 2000; American Community Survey 2006-2010

Perkins County had 812 1-or 2-person households, or 63.7% of all households. Households having 5-or more persons comprised only 9.0% of the owner-occupied segment, and 10.0% of the renter-occupied segment. Countywide, households of 5-or more persons accounted for only 118 units, or 9.3% of the total.

In 2000, the age cohorts representing the largest home ownership group was 45 to 54 years. Of the total residents that lived in owner-occupied housing units, 21.7% were between the age of 45 and 54 years. This group was closely followed by the 75 years and over cohort at 19.5%.

The renter occupied housing was dominated by three cohort groups; the 35 to 44 years (25.5%), the 25 to 34 years (22.9%), the 75 and over (22.2%), and the 45 to 54 years (20.0%). These four cohorts represent 90.6% of all the renter-occupied units in 2000.

2010

In 2010, the largest section of owner-occupied housing in Perkins County was still the two person households, with 447 units, or 46.4% of the total owner-occupied units; an increase of

15.2% over 2000. By comparison, the largest household size for rentals was again, the single person households which had 122 renter-occupied housing units, or 44.4% of the total renter-occupied units; an increase of 4.0% over 2000.

Perkins County was comprised of 852 1-or 2-person households, or 68.8% of all households; which represents a slight change from 2000. Households having 5-or more persons comprised only 9.8% of the owner-occupied segment, and 10.9% of the renter-occupied segment. Countywide, households with 5-or more persons accounted for only 124 units, or 10.0% of the total, representing an increase of 5.1% from 2000.

In 2010, the age cohorts representing the largest home ownership group was the 55 to 64 years. Of the total residents that lived in owner-occupied housing units, 23.3% were between the age of 55 and 64 years. This group was followed by the 45 to 54 year cohort at 18.5%. In 2010, there was a decline in the owner-occupied units for the cohort 35 to 44 years and the 25 to 34 years. Using the 10-year cohort shift, similar to Table 2, one can find that in reality some of the cohorts from 2000 actually saw increases in ownership by 2010; however, the largest cohort in 2000 gained 16 units or 7.6% during the period.

The renter occupied housing was again dominated by the same cohort groups; the 25 to 34 years (22.9%), the 45 to 54 years (20.0%), the 75 years and more (19.3%) and the 35 to 44 years (13.8%). These cohorts represent 76.0% of all the renter-occupied units in 2010. This is a significant decrease over 2000.

Housing Profile	Perkins (County	State of Nebraska		
Housing Profile	Total	% of Total	Total	% of Total	
2000 Housing Units	1,444		722,668		
2000 Occupied Housing Units	1,275	88.3%	666,184	92.2%	
2000 Owner-occupied Units	965		449,317		
2000 Renter-occupied Units	310		216,867		
2010 Housing Units	1,450		796,793		
2010 Occupied Housing Units	1,239	85.4%	721,130	90.5%	
2010 Owner-occupied Units	964		484,730		
2010 Renter-occupied Units	275		236,400		
Change in Number of Units 2000 to 2010					
Total Change	6	0.4%	74,125	10.3%	
Annual Change	0.6	0.0%	7,413	1.0%	
Total Change in Occupied Units	-36	-2.8%	54,946	8.2%	
Annual Change in Occupied Units	-3.6	-0.3%	5,495	0.8%	
Total Change in Owner-occupied Units	-1	-0.1%	35,413	7.9%	
Total Change in Renter-occupied Units	-35	-11.3%	19,533	9.0%	
Characteristics					
2000 Units Lacking Complete Plumbing Facilities	0	0.0%	6,398	0.9%	
2000 Units with More Than One Person per Room	20	1.4%	17,963	2.5%	
2010 Units Lacking Complete Plumbing Facilities	20	1.4%	2,540	0.3%	
2010 Units with More Than One Person per Room	0	0.0%	12,201	1.5%	
Substandard Units					
2000 Total	20	1.4%	24,361	3.4%	
2010 Total	20	1.4%	14,741	1.9%	

TABLE 8: SELECTED HOUSING CONDITIONS, PERKINS COUNTY, 2000 AND 2010

Source: U.S. Census Bureau, 2000 and American Community Survey 2006-2008

Occupied Units

Table 8 indicates changes in housing conditions and includes an inventory of substandard housing for Perkins County. The household occupancy rate in Perkins County in 2000 was 88.3% and dropped to 85.4% in 2010. The major change was in the renter-occupied units in the county.

Between 2000 and 2010 there were an additional six housing units which is confirmed by Figure 2 of this plan. The county saw an average annual change of 0.6 housing units between 2000 and 2010; while the occupied units actually saw an average annual change of -3.6 units per year.

Substandard Housing

According to the U.S. Department of Housing and Urban Development (HUD) guidelines, housing units which lack complete plumbing or are overcrowded are considered substandard housing units. HUD defines a complete plumbing facility as hot and cold-piped water, a bathtub or shower, and a flush toilet; overcrowding is more than one person per room.

These criteria when applied to Perkins County indicate 20 housing units, or 1.4% of the total units, were substandard in 2000. This figure was reached by adding the number of housing units meeting one criterion to the number of housing units meeting the other criterion. However, the largest amount of substandard units was based on overcrowding. In 2010 the total number of substandard housing units remained the same but the largest contributing factor was a lack of complete plumbing. Comparing Perkins County to the state of Nebraska as a whole, the percent of substandard housing units in Perkins County was less than the state.

What these data fail to consider are housing units that have met both criteria and were counted twice. Even so, the county and the communities should not assume that these data overestimate the number of substandard housing. Housing units containing major defects requiring rehabilitation or upgrading to meet building, electrical or plumbing codes should also be included in an analysis of substandard housing. A comprehensive survey of the entire housing stock should be completed every five years to determine and identify the housing units that would benefit from remodeling or rehabilitation work. This process will help ensure that a county or community maintains a high quality of life for its residents through protecting the quality and quantity of its housing stock.

Conclusion

According to surveys and town hall meetings conducted by the Planning Commission in 2010, additional housing was identified as a major dilemma in Perkins County. Some of the housing challenges identified were: age of existing housing (the average is greater than 50 years old), cost of available housing is seen as too high, and housing in the condition and square footage young families want is seen as not available. In addition, it's viewed that lots are not available where new upper scale housing could be built (in the cities/villages).

ECONOMIC AND EMPLOYMENT PROFILE

Economic data are collected in order to understand area markets, changes in economic activity and employment needs and opportunities within Perkins County. In this section, employment by industry, household income statistics, commuter analyses and agricultural statistics were reviewed for Perkins County and Nebraska.

INCOME STATISTICS

Income statistics for households are important for determining the earning power of households in a county. The data presented here show household income levels for Perkins County in comparison to the state. These data were reviewed to determine whether households experienced income increases at a rate comparable to the state of Nebraska and the Consumer Price Index (CPI).

		200	0		2010				
Household Income Ranges	Perkins County	% of Total	State of Nebraska	% of Total	Perkins County	% of Total	State of Nebraska	% of Total	
Less than \$10,000	146	11.4%	55,340	8.3%	32	2.6%	45,321	6.4%	
\$10,000 to \$14,999	83	6.5%	43,915	6.6%	67	5.4%	41,617	5.8%	
\$15,000 to \$24,999	214	16.8%	98,663	14.8%	177	14.3%	81,800	11.5%	
\$25,000 to \$34,999	206	16.1%	97,932	14.7%	146	11.8%	83,307	11.7%	
\$35,000 to \$49,999	255	20.0%	122,654	18.4%	232	18.7%	108,311	15.2%	
\$50,000 to \$74,999	221	17.3%	136,141	20.4%	324	26.1%	146,702	20.6%	
\$75,000 to \$99,999	72	5.6%	58,361	8.7%	132	10.6%	90,871	12.8%	
\$100,000 to \$149,999	59	4.6%	36,565	5.5%	121	9.8%	76,556	10.8%	
\$150,000 to \$199,999	7	0.5%	8,551	1.3%	4	0.3%	19,998	2.8%	
\$200,000 or more	14	1.1%	8,873	1.3%	5	0.4%	17,288	2.4%	
Total	1,277	100.0%	666,995	100.0%	1,240	100.0%	711,771	100.0%	
Median Household Income	\$34,205		\$39,2	\$39,250		\$47,000		\$49,342	
Number of Households	1,277	7	666,9	95	1,240)	711,2	771	

TABLE 9: HOUSEHOLD INCOME, PERKINS COUNTY, 1990 AND 2010

Source: U.S. Census Bureau, 2000, American Community Survey 2006-2010

Table 9 indicates the number of households in each income range for Perkins County for 2000 and 2010. In 2000, the household income range most commonly reported was \$35,000 to \$49,999, which accounted for 20.0% of all households. By 2010, the income range reported most often was the \$50,000 to \$74,999 which accounted for 26.1% of the total. This income range was however closely followed by the \$35,000 to \$49,999 income range.

Those households earning less than \$15,000 decreased from 17.9% in 2000 to 8.0% in 2010. These household groups account for the poorest of the poor in the county. However, the decrease between 2000 and 2010 was -56.8%, which indicates solid improvement. The biggest improvement came with those households earning less than \$10,000, which declined by 78.1%. The improvements in these two income ranges were much better in Perkins County than in Nebraska as a whole.

Households in Perkins County earning \$50,000 or more saw an increase of 62.2% from 2000 to 2010. In 2000, 29.1% of the households earned \$50,000 or more; while in 2010, 47.2% were earning over that amount. The categories showing the greatest increases were those households earning \$150,000 and \$199,999, which rose from 0.5% in 2000 to 1.3% in 2010, an increase of 160.0% during the time period.

The median household income for Perkins County was \$34,205 in 2000, which was over \$5,000 less than the State median income. By 2010, the median household income increased to \$47,000 or an increase of 37.4% but was still less than the state-wide income. The CPI for this period was 23.6%, which indicates household incomes in Perkins County increased nearly 160% faster than inflation. Therefore, households were actually earning more in real dollars in 2010 than in 2000. This difference basically indicates that for every \$1.00 earned in a household during 2000, it was earning \$1.60 in 2010.

Income Categories	under 25 years	25 to 44 years	45 to 64 years	65 years and older	Total	% of Total Households age 65 & over
Less than \$10,000	0	12	2	18	32	56.3%
\$10,000 to \$14,999	2	3	30	32	67	47.8%
\$15,000 to \$24,999	0	39	50	88	177	49.7%
\$25,000 to \$34,999	0	48	27	66	141	46.8%
\$35,000 to \$49,999	22	27	133	52	234	22.2%
\$50,000 to \$74,999	0	122	129	73	324	22.5%
\$75,000 to \$99,999	0	47	60	25	132	18.9%
\$100,000 to \$124,999	29	9	39	2	79	2.5%
\$125,000 to \$149,000	0	33	9	0	42	0.0%
\$150,000 to \$199,999	0	0	0	4	4	100.0%
\$200,000 or more	0	0	5	0	5	0.0%
Total	53	340	484	360	1,237	29 .1%

TABLE 10: HOUSEHOLD INCOME BY AGE, PERKINS COUNTY, 2010

Source: American Community Survey 2006 -2010

Table 10 indicates household income for Perkins County householders by age group in 2010. The purpose for this information is to determine the income level of Perkins County by age group, especially the senior households.

The Table indicates a total of 1,237 households with the primary age group being between 45 and 64 years of age. Of the 1,237 households in Table 10, 276 or 22.3% had incomes less than \$25,000 per year. Furthermore, 99 of these households, or 8.0% of the total households, had incomes less than \$15,000 per year. The senior population, those 65 years of age or older accounted for 50.5% of those households earning less than \$15,000 annually. On the other side of the income spectrum, those households 65 years and older only account for 17.7% of all households earning \$50,000 or more.

The household age group that appears to have the most evenly distributed income structure is the 45 to 64 years group. This group, in Perkins County, has the best earning potential. There are households in nearly all income classes with no specific area of the range being more dominant than another (not too many on the low income side with no one on the upper level and vice versa).

This information indicates many of these households could be eligible for housing assistance to ensure they continue to live at an appropriate standard of living. The number of senior households will likely continue to grow during the next twenty years. Typically, as the size of the 65 and over age cohort increases, these fixed income households may be required to provide their entire housing needs for a longer period. In addition, the fixed incomes that seniors tend to live on generally decline at a faster rate than any other segment of the population, in terms of real dollars. As data from future US Census surveys and the American Community Survey become available the community may need to review these statistics for additional changes.

INCOME SOURCE AND PUBLIC ASSISTANCE

The table below shows personal income by source for Perkins County and the State. These data are compared to the CPI, in order to determine if increases are consistent with inflation and in terms of real dollars. Between 1970 and 201, the CPI was 436.1%.

Income Characteristics	1970	1980	1990	2000	2010	% Change 1970-2010	% Annual Change	2010 Perkins County vs. State of Nebraska
Perkins County								
Total Personal Income	\$14,631,000	\$42,910,000	\$67,859,000	\$82,604,000	\$121,389,000	729.7%	18.2%	0.2%
Non-farm Income	\$9,540,000	\$28,778,000	\$47,904,000	\$52,315,000	\$98,979,000	937.5%	23.4%	0.1%
Farm Income	\$5,007,000	\$13,402,000	\$25,245,000	\$15,368,000	\$22,410,000	347.6%	8.7%	1.1%
Per Capita Income	\$4,286	\$11 <i>,</i> 795	\$20,160	\$25,968	\$40,762	851.0%	21.3%	90.8%
State of Nebraska								
Total Personal Income	\$5,648,337,000	\$14,578,213,000	\$28,591,103,000	\$48,997,941,000	\$72,353,077,000	1181.0%	29.5%	
Non-farm Income	\$5,108,567,000	\$14,482,219,000	\$26,437,554,000	\$47,577,270,000	\$55,527,838,000	987.0%	24.7%	
Farm Income	\$539,770,000	\$95,994,000	\$2,153,549,000	\$1,420,671,000	\$3,440,216,000	537.3%	13.4%	
Per capita income	\$3,796	\$9,272	\$18,088	\$28,598	\$39,534	941.5%	23.5%	

TABLE 11: INCOME BY SOURCE - STATE AND PERKINS COUNTY, 1970 TO 2010

Source: Bureau of Economic Analysis, Regional Economic Information System, 2010

Non-farm and Farm Income

Non-farm income increased from \$9,540,000 in 1970 to \$98,979,000 in 2010, or an increase of 937.5%, which was over 2 times the rate of inflation for the same time period. By 2010, farm income had risen from \$5,007,000 to \$22,410,000, or 347.6%, which is just below the rate of inflation.

When compared to the state of Nebraska totals, Perkins County had 0.1% of the state's non-farm income. In addition, Perkins County had 1.1% of the total state Farm Income in 2010.

Per Capita Income

The per capita income in Perkins County increased from \$4,286 in 1970 to \$40,762 in 2010, or an increase of 851.0%, over twice the rate of inflation. In addition, Perkins County's per capita income was only 103% of the state's per capita income level of \$39,534. The average person in Perkins County was making more in 2010 than the average person statewide.

Transfer Payments

Another income source that deserves examination is the amount of Transfer Payments to individuals in Perkins County from 1970 to 2010, which is provided in Table 12. Note the total amount of Transfer Payments equals Government Payments to Individuals plus Payments to Non-Profit Institutions plus Business Payments. The remaining categories listed in the table are subsets of the Government Payments to Individuals category.

In 1970, Total Transfer Payments to Perkins County were \$1,338,000, and the State was \$497,553,000. By 2010, Total Transfer Payments to Perkins County were \$21,609,000, or an increase of 1,515.0%, and the State total was \$10,076,098,000 or an increase of 1,925.1%.

In 2010, transfer payments per capita in Perkins County were \$7,256, which was 17.5% of the overall per capita income in Perkins County. The state's transfer payment per capita was \$6,323 which was 16.0% of the overall per capita income. Both Perkins County and the state have seen their transfer payments per capita nearly double since 1970.

Total transfer payments between 1970 and 2010 have shown an increase in each reporting period. Government payments overall have increased by over 1,500% in the 40 year period which equals nearly 40% annually. The funding source with the greatest impact on this increase has been medical payments which have increased by over 3,800% or nearly 100% annually.

Payment Type	1970	1980	1990	2000	2010	% Change 1970 to 2010	% Change Per Year
Perkins County							
Government payments to individuals	\$1,261,000	\$4,074,000	\$8,003,000	\$13,084,000	\$21,036,000	1568.2%	39.2%
Retirement, Disability & Insurance Benefits	\$828,000	\$2,637,000	\$5,355,000	\$6,813,000	\$8,877,000	972.1%	24.3%
Medical Payments	\$239,000	\$1,097,000	\$1,937,000	\$4,798,000	\$9,429,000	3845.2%	96.1%
Income Maintenance Benefits (SSI, AFDC, Food Stamps, etc.)	(D)	\$146,000	\$298,000	\$717,000	\$1,102,000	(-)	(-)
Unemployment Insurance Benefits	(D)	(D)	(D)	\$88,000	\$435,000	(-)	(-)
Veteran's Benefits	\$125,000	\$226,000	\$281,000	\$533,000	\$848,000	578.4%	14.5%
Federal Education and Training Assistance	(D)	\$51,000	\$93,000	\$130,000	\$285,000	(-)	(-)
Payment to Non-profit Institutions	(D)	\$134,000	\$159,000	\$264,000	\$345,000	(-)	(-)
Business Payments	(D)	\$101,000	\$237,000	\$359,000	\$228,000	(-)	(-)
Total	\$1,338,000	\$4,309,000	\$8,399,000	\$13,707,000	\$21,609,000	1515.0%	37.9%
Transfer Payments Per Capita	\$394	\$1,184	\$2,495	\$4,309	\$7,256	1741.6%	43.5%
Total Per Capita Income	\$4,311	\$11,795	\$20,160	\$25,968	\$41,551	863.8%	21.6%
Per Capita Transfer Payments as % of Per Capita Income	9.1%	10.0%	12.4%	16.6%	17.5%	91.1%	2.3%
State of Nebraska							
Total	\$497,553,000	\$1,693,794,000	\$3,365,241,000	\$6,088,074,000	\$11,572,269,000	2225.8%	55.6%
Transfer Payments Per Capita	\$334	\$1,077	\$2,128	\$3,553	\$6,323	1793.1%	44.8%
Total Per Capita Income	\$3,793	\$9,155	\$17,948	\$28,598	\$39,534	942.3%	23.6%
Per Capita Transfer Payments as % of Per Capita Income	8.8%	11.8%	11.9%	12.4%	16.0%	81.6%	2.0%

TABLE 12: TRANSFER PAYMENTS - STATE OF NEBRASKA AND PERKINS COUNTY, 1970 TO 2010

Source: Bureau of Economic Analysis, Regional Economic Information System, 2010

INDUSTRY EMPLOYMENT

Analyzing employment by industry assists a community in determining the key components of their labor force. This section indicates the type of industry that makes up the local economy, as well as identifying particular occupations that employ residents. Table 13 indicates employment size by industry for Perkins County and the State of Nebraska for 2000 and 2010 (these data indicate the types of jobs residents have, not the number of jobs locally).

		Perkins	County		State of Nebraska			
Industry Categories				% of		% of		% of
	2000	% of Total	2010	Total	2000	Total	2010	Total
Agriculture, Forestry, Fishing and								
Hunting and Mining	360	23.5%	342	21.7%	48,942	5.6%	44,982	4.8%
Construction	103	6.7%	38	2.4%	56,794	6.5%	61,002	6.5%
Manufacturing	45	2.9%	48	3.0%	107,439	12.2%	102,617	10.9%
Wholesale Trade	91	5.9%	104	6.6%	31,265	3.6%	28,960	3.1%
Retail Trade	135	8.8%	136	8.6%	106,303	12.1%	108,772	11.6%
Transportation and warehousing and								
utilities	148	9.7%	174	11.0%	53,922	6.1%	56,344	6.0%
Information	22	1.4%	25	1.6%	21,732	2.5%	19,308	2.1%
Finance, insurance, real estate, and								
rental and leasing	61	4.0%	75	4.8%	67,370	7.7%	72,370	7.7%
Professional, scientific, management,								
administrative, and waste								
management	46	3.0%	71	4.5%	63,663	7.3%	76,363	8.1%
Educational, health, and social								
services	311	20.3%	358	22.7%	181,833	20.7%	216,939	23.1%
Arts, entertainment, recreation,								
accommodation and food services	60	3.9%	70	4.4%	63,635	7.3%	71,022	7.6%
Other services (except public								
administration)	91	5.9%	108	6.9%	40,406	4.6%	41,913	4.5%
Public Administration	60	3.9%	27	1.7%	33,933	3.9%	36,982	3.9%
Total Employed Persons	1,533	100.0%	1,576	100.0%	877,237	100.0%	937,574	100.0%

TABLE 13: EMPLOYMENT BY INDUSTRY, PERKINS COUNTY/STATE OF NEBRASKA, 2000 AND 2010

Source: U.S. Census Bureau 2000 and American Community Survey 2006-2010

Table 13 shows that the employment sector with the greatest number of employees in Perkins County in 2000 was Agriculture, Forestry, Fishing and Hunting and Mining with 23.5% of the employment in this sector. In 2010, the largest employment sector in Perkins County switched to Educational, health and social services with 22.7% of the total; however, Agriculture was a close second with 21.7% of the total. In 2000, individuals employed in either agriculture or education accounted for 43.8% of all employees. By 2010 the same two sectors accounted for 44.4% of all employees.

REGIONAL BASIC/NON-BASIC ANALYSIS

The following data examine six occupational areas established by the U.S. Census Bureau to evaluate trends in employment and the area economy. Basic employment and non-basic employment are defined as follows:

- Basic employment is business activity providing services primarily outside the area through the sale of goods and services, the revenues of which are directed to the local area in the form of wages and payments to local suppliers.
- Non-Basic employment is business activity providing services primarily within the local area through the sale of goods and services, and the revenues of such sales re-circulate within the community in the form of wages and expenditures by local citizens.

In order to establish a number of Basic jobs, a comparative segment or entity must be selected. For purposes of this analysis, the State of Nebraska will be used. This allows the analysis to establish where Perkins County is seeing exports from the state as a whole.

This analysis is used to further understand which occupational areas are exporting goods and services outside the area, thus importing dollars into the local economy. The five occupational categories used in the analysis are listed below:

- Management, business, science and arts
- Service occupations
- Sales and office
- Natural resources, construction, and maintenance
- Production, transportation, and material moving

A related concept to the basic/non-basic distinction is that of a Base Multiplier. The base multiplier is a number which represents how many non-basic jobs are supported by each basic job. A high base multiplier means that the loss of one basic job will have a large potential impact on the local economy if changes in employment occur. The rationale behind this analysis is that if basic jobs bring new money into a local economy, that money becomes the wages for workers in that economy. Therefore, more money brought in by basic jobs creates more non-basic jobs that are supported.

Occupation Category	Basic	Non-Basic	% of Perkins County Workforce	% of State workforce
Management, business, science				
and arts	5.3%	34.9%	40.2%	34.9%
Service occupations	1.6%	16.2%	17.8%	16.2%
Sales and office occupations	0.0%	18.7%	18.7%	25.0%
Natural resources, construction,				
and maintenance	2.0%	10.1%	12.1%	10.1%
Production, transportation, and				
material moving	0.0%	11.2%	11.2%	13.8%
TOTAL	8.9 %	91 .1%	100.0%	100.0%
Economic Base Multiplier	10.24			

TABLE 14: BASIC / NON-BASIC EMPLOYMENT - PERKINS COUNTY, 2010

Source: American Community Survey 2006-2010

Other categories that contain Basic Employment are:

- Service occupations
- Natural resources, construction, and maintenance.

Overall, 8.9% of the employment base in Perkins County is tied to exportation of goods or services. The county needs to continually work on their Business Retention and Expansion process in order to make these employers stay in Perkins County.

Base Multiplier

The information in Table 14 shows that Perkins County has a base multiplier of 10.24, which means that for every job that falls into the basic category, 10.24 other jobs in the county are supported and/or impacted. This is illustrated by comparing the basic and non-basic percentages against each other. This indicates that for every job tied to exportation of goods or services, there are 10.24 jobs created/supported by the dollars coming into the county. Therefore, if Perkins County lost just one of the jobs tied to exports (regardless of the community) then there is the potential to lose approximately 10.24 jobs from the non-basic employment side.

There is not a magical multiplier that a county can aim to achieve. Every county is different and the dynamics involved are different. The unique and ever changing dynamics are what make a particular community or county unique and attractive to different employers. It is critical for a county to determine their future vision for business and industry and work towards that end. As previously mentioned it is also critical to diligently work towards a successful Business Retention and Expansion program to support those employers already located in the county. Some communities or counties become too focused on attracting that next big catch and forget about the opportunities that existing employers can offer through expansion of their operations.

Location	Management, business, science, and arts	Service occupations	Sales and office occupations	Natural resources, construction, and maintenance	Production, transportation and material moving	Base Multiplier
Lincoln County	28.1%	15.8%	24.0%	13.1%	19.1%	11.05
Perkins County	40.2%	17.8%	18.7%	12.1%	11.2%	10.24
Keith County	32.5%	13.9%	24.3%	14.2%	15.1%	17.52
Chase County	30.6%	12.1%	28.1%	16.4%	12.9%	9.64
Nebraska	34.9%	16.2%	25.0%	10.1%	13.8%	N/A

TABLE 15: REGIONAL AND STATE LABOR FORCE COMPARISONS - PERKINS COUNTY, 2010

Source: American Community Survey 2005-2009

Table 15 compares employment (by occupation) in Perkins County to contiguous counties in southwestern Nebraska. In addition the Table also lists the Base Multiplier for each county. The table shows that Perkins County has an average base multiplier, with Keith County having the highest.

Again, higher base multipliers mean more non-basic jobs are impacted by a single basic job. In addition, a higher base multiplier **could** create more instability in the overall economy of the county. Finally, note Perkins County has three categories with Basic Employment compared to only two for Keith County; Keith County will tend to have a less balanced economy, especially if either of the two have a major economic downturn.

Pull Factor

Grant had a retail pull factor of 1.592 in 2005, ranking it 2nd in the state compared to other cities in the state of 1000-2,499 population. Grant's pull factor in 2009 was 1.61. Retail pull factor is a unit of measurement of retail strength that is calculated by dividing the total annual per capita taxable retail sales for the local geographic area by the state average per capita sales which have occurred over the same period. It is frequently used to identify and measure leakage and/or capture of retail trade across political boundaries as well as identifying trends over time. Note: Grant's Pull Factor is the only one discussed due to a lack of data for the smaller communities in Perkins County.

Interpreting the PF is straight-forward. If it is greater than 1.0, then the retail sales activity of that area has exceeded its own population in terms of customer equivalents. That geographic area has experienced some retail capture beyond the level inferred by its population base. And the greater the area's PF exceed 1.0, the more viable is its retailing activity in relative terms. Conversely, if the PF for the area is less than 1.0, that area is losing potential retail activity to other places, and is experiencing trade leakage, with the pull factor falling as leakage grows greater.

Average Wage

From 2002 through 2008, Perkins County had a 37% increase in average wage per job. This ranks Perkins County at 36th in rate of increase amongst the 116 reporting counties and metropolitan areas in the state, and significantly higher than the state average of 28%.

The neighboring counties of Chase and Keith had gains of 39% and 32% respectively during the same timeframe. It is worth noting that Keith County had no active, funded economic development program during this timeframe.

COMMUTER TRENDS

Table 16 indicates the workforce for 1990, 2000, and 2010 had an increasing average travel time to work; ranging from 9.8 minutes to 17.1 minutes. During this period the drive time with the greatest increase was the 30 to 44 minutes, which had an increase of 842.1% from 1990 to 2010. The second largest increase was in the 60 minutes or more range which grew by 590.0% for the same period. However, while more people were commuting, the number of people working from home also rose by 66.3%.

Travel Time Categories	1990	% of Total	2000	% of Total	2010	% of Total	% Change
Less than 5 minutes	406	28.9%	267	17.5%	298	19.7%	-26.6%
5 to 9 minutes	365	26.0%	358	23.4%	254	16.8%	-30.4%
10 to 19 minutes	385	27.4%	344	22.5%	369	24.4%	-4.2%
20 to 29 minutes	52	3.7%	173	11.3%	155	10.2%	198.1%
30 to 44 minutes	19	1.4%	105	6.9%	179	11.8%	842.1%
45 to 59 minutes	89	6.3%	48	3.1%	58	3.8%	-34.8%
60 minutes or more	10	0.7%	52	3.4%	69	4.6%	590.0%
Worked at home	80	5.7%	182	11.9%	133	8.8%	66.3%
Total	1,406	100.0%	1,529	100.0%	1,515	100.0%	7.8%
Mean Travel Time (minutes)	9.8		15.1		17.1		74.5%

TABLE 16: TRAVEL TIME TO WORK, PERKINS COUNTY, 1990 TO 2010

Source: U.S. Census Bureau, 1990, 2000 and American Community Survey 2006-2010

The overall make-up of the commuter population did not change drastically from 1990 to 2010. The same top three groupings remained unchanged for all three time periods.

AGRICULTURAL PROFILE

The agricultural profile evaluates key elements of the agriculture industry. Since most Nebraska counties were formed around county seats and agriculture, the agricultural economy, historically, has been the center of economic activity for counties. The U.S. Census Bureau, Census of Agriculture tracks agricultural statistics every five years. Since that frequency does not coincide with the decennial U.S. Census, it is difficult to compare sets of census data.

AGRICULTURE TRENDS

Table 17 identifies key components affecting Perkins County's agricultural profile. This Table examines the number of farms, size of these farms, cropland data, and certain value criteria for these farms. The data are for 1992 through 2007.

Number of Farms

The table indicates that the number of farms within Perkins County has seen a continual decline from 1992 to 2007; however, there was an increase between 2002 and 2007. The total number of farms in Perkins County had an overall decrease of 6.9% between 1992 and 2007.

Agricultural Characteristics	1992	1997	2002	2007	% Change 1992-2007
Number of Farms	479	490	438	446	-6.9%
Land in Farms (acres)	532,901	552,882	548,264	558,405	4.8%
Average size of farms (acres)	1,113	1,128	1,252	1,252	12.5%
Total area for Perkins County	566,470	566,470	566,470	566,470	0.0%
Percentage of land in farm production	94.1%	97.6%	96.8%	98.6%	4.8%
Total cropland (acres)	450,965	446,112	437,642	444,497	-1.4%
Harvested cropland (acres)	242,334	272,263	265,997	310,566	28.2%
Estimated Market Value of Land & Bldg (avg./farm)	\$551,959	\$606,223	\$931,829	\$1,223,128	121.6%
Estimated Market Value of Land & Bldg (avg./acre)	\$495	\$521	\$641	\$977	97.4%

TABLE 17: AGRICULTURAL PROFILE, PERKINS COUNTY, 1992-2007

Source: U.S. Census of Agriculture, 1992, 1997, 2002, 2007

LAND IN FARMS/AVERAGE SIZE OF FARMS/CROPLAND

Table 17 also shows the total land in farms within Perkins County. From 1992 to 2007, Perkins County actually had an increase in the total land considered to be in farms. The overall increase was 4.8% or an approximate increase of 26,000 acres. The total land in farms accounts for 98.6% of the total acres in Perkins County, which is an increase from 94.1% in 1992. This specific increase seems to indicate a potential change in the definition of farm land by the USDA, considering the geography and topography of Perkins County.

The average size of each farm increased from 1,113 acres in 1992 to 1,252 in 2007. This trend has been the norm across Nebraska and the United States for the last several decades. The overall increase from 1992 to 2007 was 12.5%. Perkins County's farms are considerably larger on average than the state of Nebraska. The average farm in Nebraska was 839 acres in 1992 and increased to 953 acres in 2007, an increase of 13.6%.

The total cropland in Perkins County decreased from 450,965 acres in 1992 to 444,497 acres in 2007. A key to these data compared to total farm land is that in 1992 only 84.6% of the Land in Farms was considered cropland. By 2007 the percent of cropland to Total Land in Farm was nearly 79%.

The next term/data to review is harvested cropland. Harvested cropland is as it sounds: cropland that was actually harvested and yielded a crop. In 1992 the Harvested Cropland in Perkins County was 242,334 (53.7% of Total Cropland and only 45.5% of the Total Land in Farms). By 2007 the Harvested Cropland increased to 310,566 acres (69.9% of Total Cropland and 55.6% of the Total Land in Farms).

Estimated Market Value

Table 17 also shows the Estimated Market Values of Land and Buildings, both by average per farm and average per acre. In 1992 the average value per farm acre was \$495. The average value increased in every Census of Agriculture until it reached an average per acre of \$977 in 2007; an increase of 97.4% from 1992. The CPI for this same period was approximately 50%; therefore the average value per acre increased at nearly 2 1/2 times the rate of inflation in Perkins County.

The increase in the average per acre also translates into an increase in the average per farm. The average value per farm in 1992 was \$551,959 and increased to \$1,223,128 in 2007, an overall increase of 121.6%. Again, this increase exceeded the rate of inflation for the period. The average per farm, statewide, was \$429,188 in 1992 and \$1,104,392 in 2007, an increase of 157.3%. Therefore, the average farm value in Perkins County is higher than the state average but the value has been increasing at rate less than the state.

Farm Size (acres)	1992	1997	2002	2007	% Change 1992-2007	
1 to 9	17	9	5	6	-64.7%	
10 to 49	18	12	14	28	55.6%	
50 to 179	53	83	82	83	56.6%	
180 to 499	85	95	85	88	3.5%	
500 to 999	105	103	66	66	-37.1%	
1,000 or more	201	188	186	175	-12.9%	
Total	479	490	438	446	-6.9%	

TABLE 18: NUMBER OF FARMS BY SIZE, PERKINS COUNTY, 1992-2007

Source: U.S. Census of Agriculture, 1992, 1997, 2002, 2007

Table 18 shows the number of farms by size (in acres) in 1992, 1997, 2002, and 2007. The table shows that between 1992 and 2007 there was a mixed change with regard to farm size. Farms 1 to 9 acres in size saw a -64.7% change while those 10 to 49 acres saw an increase of 55.6%. Furthermore, the number of farms between 180 acres and 499 acres stayed basically the same from 1992 to 2007. Ironically as farms are getting larger on average, the number of farms between 500 and 999 acres decreased by 39 for a change of -37.1%. Finally, those farms over 1,000 acres had a decrease as well (26 farms) which accounted for an overall change of -12.9%.

Type of Livestock	1992	1997	2002	2007	% Change 1992 to 2007
Cattle and Calves					
farms	172	175	141	129	-25.0%
animals	29,886	29,886	26,604	29,172	-2.4%
average per farm	174	171	189	226	30.1%
Beef Cows					
farms	137	135	125	104	-24.1%
animals	8,870	9,910	(D)	9,605	-
average per farm	65	73	-	92	-
Milk cows					
farms	10	4	2	-	-
animals	266	157	(D)	-	-
average per farm	27	39	-	-	-
Hogs and Pigs					
farms	32	17	10	8	-75.0%
animals	3,981	2,146	(D)	(D)	-
average per farm	124	126	-	-	-
Sheep and lambs					
farms	20	11	10	8	-60.0%
animals	1,187	425	369	188	-84.2%
average per farm	59	39	37	24	-60.4%
Chickens (layers and pullets)					
farms	26	10	15	9	-65.4%
animals	(D)	238	434	217	-
average per farm	(D)	24	29	24	-

TABLE 19: NUMBER OF FARMS/LIVESTOCK, PERKINS COUNTY, 1992 TO 2007

Source: U.S. Census of Agriculture, 1992, 1997, 2002, 2007

Table 19 indicates the number of farms and livestock by type for Perkins County between 1992 and 2007. The predominant livestock raised in Perkins County are cattle and calves. All livestock production showed a decline in the number of farms raising animals. Only one area has shown an increase in the total number raised, Beef cows.

Cattle and calves operations have declined in number (172 farms in 1992 to 129 farms in 2007), but the total number of animals raised was relatively stable between 1992 and 2007; the total number was 29,886 animals in 1992 and 29,172 animals in 2007, a decrease of 2.4%. The average livestock numbers per farm have also increased from 174 animals per farm to 226 animals per farm in 2007, an increase of 30.1%.

Beef cow operations have decreased from 137 farms in 1992 to 104 farms in 2007, a decrease of 24.1%. In 1992 there were a total of 8,870 animals and by 2007 the number of animals increased to 9,605, an increase of 8.3%.

The other livestock operations in Perkins County have seen drastic declines from 1992 to 2007. The largest decline in terms of farms has been Milk Cows which lost 80.0% of its operators between 1992 and 2002.

Milk cows were followed closely by Hogs and pigs which lost 75.0% of the producers in Perkins County. In addition to losing operators in the hogs and pigs, the numbers have been cut drastically as well; going from 3,981 animals in 1992 to a number that was unable to be disclosed in 2002 and 2007, except for two large facilities developed in the late 1990's. According to the Perkins County Zoning Office, there are two sites; one a nursery site and the other is a finishing operation. The maximum declared capacity of the two sites are 15,960 and 25,000 respectively.

Type of Crop	1992	1997	2002	2007	% Change 1992 to 2007
Corn for Grain					
farms	232	251	229	229	-1.3%
acres	95,266	115,823	130,292	165,787	74.0%
average per farm	411	461	569	724	76.3%
Corn for Silage					
farms	19	17	22	10	-47.4%
acres	617	963	2,637	400	-35.2%
average per farm	32	57	120	40	23.2%
Sorghum					
farms	11	4	3	-	-
acres	1,334	435	(D)	-	-
average per farm	121	109	-	-	-
Wheat					
farms	370	328	271	251	-32.2%
acres	123,005	119,352	97,144	113,720	-7.5%
average per farm	332	364	358	453	36.3%
Oats					
farms	21	8	9	3	-85.7%
acres	970	206	387	78	-92.0%
average per farm	46	26	43	26	-43.7%
Soybeans					
farms	16	12	51	33	106.3%
acres	1,443	1,289	10,967	5,381	272.9%
average per farm	90	107	215	163	80.8%

TABLE 20: NUMBER OF FARMS & CROPS BY TYPE, PERKINS COUNTY, 1992 TO 2007

Source: U.S. Census of Agriculture, 1992, 1997, 2002, 2007

Table 20 indicates the number of farms and crops by type for the period from 1992 to 2007. The table shows the prominent crops grown in the county. In addition, the table indicates the total number of farms producing the specific crop and finally an average per farm.

Corn and wheat have been the two most frequently raised crops in Perkins County since 1992. Two of the six categories showed an increase in acres farmed; these include Corn for grain and Soybeans. The crop with the largest percentage increase (acres) is Soybeans at 272.9%, while Corn for grain increased by 74.0%. In 2007, the total acres harvested of corn for grain was 165,787 which accounted for 53.4% of all harvested cropland. Wheat accounted for 113,720 acres of cropland in Perkins County during 2007, which was 36.6% of all harvested cropland. Finally, soybeans had a total of 5,381 acres which was 1.7% of the harvested cropland. Corn for grain is the dominant crop in Perkins County by a large margin.

Agriculture has historically been a major part of the Perkins County economy. It appears that its importance will only grow during the planning period of this document. It will be critical to maintain a balance in the type of livestock and grains raised in order to minimize future economic downturns.

COMMUNITY FACILITIES

INTRODUCTION

State and local governments provide a number of goods and services for their citizens. The people, buildings, equipment and land utilized in the process of providing these goods and services are referred to as public facilities.

Public facilities represent a wide range of buildings, utilities and services that are built and maintained by the different levels of government. Such facilities are provided to insure the safety, well being and enjoyment of the residents of a jurisdiction, in this case, Perkins County. These facilities and services provide county residents with social, cultural, educational, law enforcement, fire protection and recreational opportunities designed to meet area needs. It is important for all levels of government to anticipate the future demand for their goods and services if they are to remain strong and vital. The sequential step is to evaluate the ability of the county to meet that future demand and determine the level of services that will be provided. The analysis of existing facilities, future goods and services are contained in the Facilities Plan. Alternatively, in some instances, there are a number of goods and services that are not provided by the local or state governmental body and thus are provided by non-governmental private or non-profit organizations for the County. These organizations are important providers of goods and services, especially in sparsely populated rural counties.

FACILITIES PLAN

The Facilities Plan component of Perkins County's Comprehensive Development Plan reviews present capacities of all public and private facilities and services. The section evaluates the current demands and accepted standards to determine whether capacity is adequate, as well as determine what level of service is required to meet future demands within the planning period. Finally, recommended improvements for public goods and services that are not adequate for present or future needs are provided.

The Facilities Plan for Perkins County is divided into the following categories:

Recreational Facilities Educational Facilities Fire, Ambulance and Police County/Community Buildings & Historical Sites Transportation Facilities Communication Facilities Public Utilities Health Facilities

RECREATIONAL FACILITIES

Perkins County

The recreational facilities within Perkins County are located in and supported by the various municipalities in the county.

Grant has one fitness center located on Central Avenue. It is equipped with treadmills, stationary bikes, weight lifting equipment, etc. In addition, several fitness classes are offered to the public.

Municipal Facilities

The Grant City Park is on Central Avenue five blocks north of the business district. The park has an outdoor swimming pool, which is the only municipal swimming pool in the county. The park also has a band shell; playground equipment; picnic tables and is well shaded. There are two softball fields and one baseball field located in the city.

The Grant municipal golf course is located three miles north of the city on Highway 61. It is a well cared for nine-hole course with grass greens and a clubhouse.

The Village of Madrid has a new grass baseball field, which is equipped with a sprinkler system and a fenced perimeter.

The Village of Venango has a playing field.

The Village of Elsie has two parks; one park contains a baseball field and a tennis court, while the other park contains a sand volleyball court.

Other Recreational Facilities and Locations

In addition to recreational facilities in the Perkins County, the plan reviews data on recreational facilities in nearby counties that may serve the residents of Perkins County. The following is a breakdown of those facilities.

State Parks

Presently, there are no state or federal park facilities in Perkins County. The nearest State Park is Lake McConaughy in Keith County. The State Park is approximately 32 miles north of the City of Grant. Lake McConaughy covers 5,492 land acres, 1,000 marsh acres, and 30,500 water acres. The entire area comprises 36,992 acres or 57.8 square miles. The lake is created by an earthen dam, Kingsley Dam, which is a hydroelectric dam. In 1998 the plant produced 134-million kilowatt-hours of power.

Lake Ogallala is located immediately below the face of Kingsley Dam and was created, in part, by the removal of dirt to construct the Kingsley Dam. Through the years it has been an excellent cold water fishery. Lake Ogallala comprises of 719 acres.

Located in Chase County to the south is Champion Mill, a Nebraska State Historical Park. Champion Mill State Historical Park interprets the settler phase of Nebraska history. The facility is approximately 4 acres in land area and amenities include campgrounds and picnic shelters. Also located in Chase County is Enders Reservoir, a State Recreation Area. The facility is approximately 2,900 acres in area, and amenities include campgrounds, fishing, picnic shelters and a boat launch.

Sutherland Reservoir State Recreation Area is located in west central Lincoln County, south of Interstate 80. The facility is approximately 3,100 acres in area, including about 3,000 acres in water. Amenities at Sutherland Reservoir include campgrounds, fishing, swimming and a boat launch.

There is an automobile raceway located at the Lincoln County Fairgrounds in North Platte, called the North Platte Raceway, approximately 72 miles northeast of Grant.

The nearest hike/bike trails, to Perkins County, are located in Ogallala.

EDUCATIONAL FACILITIES

Schools

There is one county-based school district serving residents of Perkins County. The school's website is <u>www.pcs.esu16.org</u>. The High School and Elementary are located in Grant, and the Middle School is located in Madrid. There is a Christian elementary school in Grant located at the Evangelical Free Church, and the Golden Plains Mennonite Church school is located in rural Madrid.

Post-Secondary

Post-secondary schools are in close proximity to Perkins County. Mid Plains Community College is a two-year college with credits transferable to other state colleges and a Vocational Technical Schools in North Platte 38 miles to the northeast. McCook, which is 66 miles to the southeast, has a two- year college with transferable credits. In 2012, Mid Plains Community College opened an extended campus in Ogallala, just 20 miles north of Grant.

The City of Curtis, Nebraska, located approximately 65 miles east of Perkins County, has the University of Nebraska-Nebraska College of Technical Agriculture (NCTA). It is dedicated to provide an educational system that prepares students for careers in agriculture. NCTA offers four Associate of Applied Science degrees, and an associate of science degree that allows transfer to any four year institution to complete_additional degrees. Other post-secondary opportunities are located throughout the state for residents of Perkins County.

The West Central Research and Extension Center (WCREC) located in North Platte is part of the University of Nebraska-Lincoln Institute of Agriculture and Natural Resources Division. Perkins County Extension and the 4-H program offer the following education to the general public:

*4-H development*Human Resource Management*Crop Development*Leadership skills*Livestock Management*Communication skills*Pest Management*Teamwork skills

FIRE, AMBULANCE AND LAW ENFORCEMENT

Fire & Ambulance

There are seven fire districts in Perkins County. All departments serving those districts are members of the Southwest Nebraska Mutual Aid District.

Grant Volunteer Fire Department

The Grant Fire Department serves the Grant Suburban Fire District. In 2012 there were 27 volunteer members of the Grant Fire Department. The Grant Fire Department has two class "A" pumpers, two tankers, a grass rig, a rescue truck and a command vehicle. Grant has nine individuals possessing the Fire Fighter 1 certification. The Grant Fire Department provides the majority of the man power for the Perkins County Ambulance. Perkins County Ambulance has three licensed ambulances with two located at the Grant Fire Department and one located at the Venango Fire Department. Grant has 11 EMT's while Venango and Elsie have two EMT's each. Perkins County Ambulance provides ambulance service throughout Perkins County. The Grant Fire Department conducts monthly training sessions and the firefighters are trained in structural firefighting, wild land fire fighting, pump operations, fire prevention, emergency vehicle operation, vehicle extrication, SCBA, rope rescue, and awareness of hazardous materials training.

Venango Volunteer Fire Department

The Venango Volunteer Fire Department has 18 members serving western Perkins County and into eastern Colorado. The Fire Department has 1 pumper truck, 2 large tankers, 1 heavy rescue truck, and 1 ambulance to serve the community of Venango.

Madrid Volunteer Fire Department

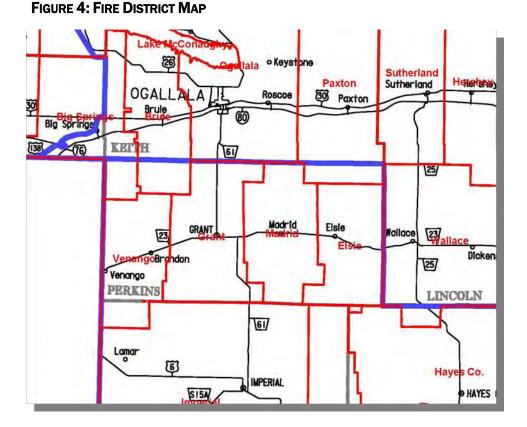
The Madrid Volunteer Fire Department has 1 pumper truck, 2 grass rigs, 3 tankers, and 1 rescue truck. There are 17 firemen, with 3 members as certified EMT's.

Elsie Volunteer Fire Department

The Elsie Fire Department has 1 pumper truck, 2 grass rigs, 2 tankers, and 1 command vehicle. 22 active members serve the county in the Elsie region, with 6 members certified EMT's.

Law Enforcement

The Sheriff and 4 Deputy-Sheriffs staff the Perkins County Sheriff's Department. All members are furnished vehicles and the necessary equipment to carry out their duties efficiently and effectively. The Keith County Jail, as well as other jail facilities, are used for any individuals requiring incarceration. The Perkins County Sheriff's Department provides the communities of Grant, Madrid, Elsie and Venango patrol and investigative services.



Based upon data in the "Crime in Nebraska—2009" published by the Nebraska Crime Commission the following data for Perkins County and the surrounding counties, regarding officers is as follows:

County	Sworn Officers	Sworn Officers per 1,000 persons
Perkins County 5		1.3
McPherson County 3		1.9
Arthur County	2	2.2
Garden Count	ty 6	1.9
Ogallala PD	10	2.1

Perkins County residents are being served in manner that is commensurate, however slightly below, the standard for surrounding counties.

COUNTY/ COMMUNITY BUILDINGS & HISTORICAL SITES

This section is considered a summary of the facilities and county-owned buildings within Perkins County.

County Court House

The County Courthouse is a three-story building and is located in the City of Grant. The building was built in 1927 and has been very well cared for through the years and is considered to be in good condition. The building has been re-wired. An elevator was installed and serves all three floors. When the building was built, extra wide doors were installed, which today provide access for wheel chairs and handicapped persons. The exterior of the building is well maintained and is considered in good condition.

County Road Department/Maintenance Shop(s)

Perkins County has maintenance buildings at four different sites. One site is located 1 mile west of City Hall in Grant. It was constructed in the late 1960s. The second site is located in Madrid and it was built around 1975. This site also has a steel pole building with a dirt floor, which is used as a storage building. Elsie and Brandon also have county maintenance shops. The buildings are in good condition. There are no plans at the present to enlarge or build other buildings.

County Historical Buildings

There is one historical district and 2 properties registered on the National Register of Historical Sites in Perkins County. The Nebraska State Historical Society operates an on-going Renaissance Survey by which surveys are conducted of potential historical sites in Nebraska. The Renaissance Survey Final Report, as it is called, is complete for Perkins County. During the survey, 75 farms, 79 buildings and houses, a grain elevator and two water towers were investigated. At present only 3 sites have been registered. Registration is only approved following application to the Historical Society requesting approval and meeting certain standards.

Grant Historical District

Established in 1897 on the Chicago, Burlington & Quincy Railroad line, Grant developed as a commercial hub for this southwestern Nebraska community. Its prosperity originated from the agriculture success of wheat as a cash crop in the early twentieth century and post World War I years. The roughly three-block district is primarily early twentieth century one-story commercial buildings, representative of the community's economic boom years. Virtually all of the commercial area of Grant constructed since 1910 still exists with outstanding integrity.

Perkins County Court House

Established in 1887, Perkins County was named after the president of the Chicago, Burlington & Quincy Railroad. A modest frame courthouse was built and served the county until 1901. A former bank was acquired for the courthouse and used until 1927. In 1926 the county passed a bond issue to help finance a new courthouse. The following year the Classical Revival style building was completed.

Grant City Park

The Grant City Park is significant for its association with the Works Progress Administration (WPA). The park is an excellent example of the type of recreational facilities constructed by the WPA and other New Deal public programs. Construction on the park began in 1935 and was completed in 1939.

Perkins County Museum

The museum building was built in 1910 as a wedding gift for Frank Edwards and his bride. The Perkins County Historical Society purchased the home in 1964. The Board of Commissioners of Perkins County allocates an annual stipend for up-keep and maintenance. An additional exhibit building was constructed in 1974 and added to in 1979. A rural school was placed on the lot in 1967 as an exhibit. The building has been well maintained and is owned by the Historical Society. A major update to the house was done in 2010-2011, with a new basement constructed, and the entire house was repainted/plastered and wallpapered.

Texas-Ogallala Cattle Trail

The Texas-Ogallala Cattle Trail traverses the county from south to north and is a reminder of the regional heritage regarding the ranching industry. The trail traverses the eastern part of the county and passes Madrid, which is located to the west of the trail.

Senior Center

The City of Grant has a well-maintained and active Senior Center. The Center is located at the north edge of the business district. Meals are available Monday through Friday at the

center with meals on wheels available if requested. Special holiday meals are served during the Thanksgiving and Christmas seasons. The center operates a Thrift Center. Other activities include quilting, cards and visiting.

Perkins County Fairgrounds

The Perkins County Fairgrounds are located at the western edge of Grant and are considered to be in good condition at this time. The county fair is held each year in late July. On an annual basis, the county provides standard repairs and maintenance to the facility.

TRANSPORTATION FACILITIES

Truck Line Service

There is no intrastate or interstate truck lines headquartered within Perkins County. Truck lines hauling into the county are considered to be adequate at this time. Daily deliveries are made by UPS, FedEx, etc.

Railroad Service

Perkins County is served by the Nebraska-Kansas-Colorado Rail Net (NKC). NKC Rail Net is a short line having 450 miles of track serving the three states with freight service. Sterling (Colorado), Holdrege and Orleans, Nebraska are interchange points. Interchange points are locations where the rail cars can be transferred to Burlington Northern line to be forwarded across the United States. NKC provides Grant and Perkins County freight service into and out of the area.

The nearest passenger services are located in McCook with AMTRAK.

Bus Service

There is presently no bus service to Perkins County. The Senior Center operates a handy bus in Grant and schedules trips into Grant from near-by villages of medical appointments and shopping. Occasionally trips are scheduled to Imperial, Ogallala and North Platte for special events.

Dashabout Shuttle provides transportation to Denver International Airport, and to Omaha Eppley airfield with pickup sites from North Platte, Ogallala, Big Springs, Chappell and Sidney. A second route runs from McCook, Trenton, Benkelman and Haigler. Another route runs from Imperial to Denver.

Eppley Express bus service runs a route from Kearney to Omaha Eppley Airfield.

Airports

One municipal airport serves Perkins County and is the Grant Municipal Airport. There is one runway 4,797 feet long. The annual count of arrivals and departures is approximately 800 to 1,000 planes. There is room for growth if the need arises. Medical specialists use the airport to fly to Grant to provide medical treatment and consulting services to patients in the area.

The nearest passenger and freight services are at Lee Bird Field in North Platte. Lee Bird Field is served by Great Lakes Express with three arrivals and departures daily to Denver International Airport. The monthly passenger count is 775 persons. There is adequate room and facilities for future growth. In total there are over 9,300 passengers annually flying in and out of Lee Bird Field.

COMMUNICATION FACILITIES

Telephone Services

Several internet and cell phone providers exist within the county providing various communication services.

Local telephone services, in Perkins County, are provided by three different companies, Grant and Venango are served by Great Plains Communication, Madrid is served by Consolidated Telephone and Elsie is served by Elsie Communications. All three companies are privately owned and operated.

There are various long distance carriers serving Perkins County the primary companies being AT&T, MCI, Excel, Sprint, US West, and LCI. At present both the local and long distance services are adequate.

Radio and Television

Radio and television adequately serve Perkins County residents.

Internet and Fiber Optics

Perkins County is served by a 100GB redundant statewide fiber optic network owned by Great Plains Communications that terminates in Grant and feeds Venango.

This network has access to the Internet carrier hotel in both Denver and Omaha. Perkins County Hospital is connected to the Rural Nebraska Health Network which serves Panhandle Hospitals via a redundant fiber network that terminates at Regional West Medical Center in Scottsbluff.

All of Perkins County is served by NebraskaLink, a broadband company that combines the existing fiber infrastructure of 7 independent Nebraska telephone companies, which includes Great Plains Communications and Consolidated Companies.

Newspapers

The Grant Tribune Sentinel serves Perkins County with a weekly newspaper published on Wednesday. The circulation across the county is approximately 2000. Other newspapers serving the area include the North Platte Telegraph and Keith County News, Omaha World Herald and Denver Post.

PUBLIC UTILITIES

In Perkins County, propane gas, gasoline, diesel fuels and oils are adequately distributed.

The disposal of solid waste within Perkins County is handled by several operations. The City of Grant has a city truck, which collects trash in the city and hauls it to the landfill in north central Perkins County. The Villages of Elsie and Venango contract with Waste Management of Nebraska, Inc., for the disposal of solid waste. Other garbage collection services are available in the county. The J Bar J Solid Waste Disposal Facility, located in Section 30, Township 12 North, Range 39 West is a wholly owned subsidiary of Waste Management of Nebraska, Inc. The landfill has been in operation since 1991 and currently receives municipal solid waste, construction and demolition debris at a rate of 75,000 to 85,000 tons per year (tpy). The facility consists of a 160-acre parcel, of which 80 acres are currently permitted for waste disposal. Waste material originates from a service area including west and southwest Nebraska, northeast Colorado and northwest Kansas. The facility is located over 3 miles west of the nearest state highway and is reached via gravel and county maintained roads.

The City of Grant has an extensive recycling program. The city recycles material and county residents may deposit recyclable materials at the drop-off site.

Perkins County is supplied by numerous power entities and at the present time there is a good supply. At the present time there is a good supply of electrical power to meet future requirements. The transmission and distribution systems are in good condition.

Natural Gas is supplied to Perkins County.

Additional information on energy can be found in the Chapter called Energy Element.

HEALTH FACILITIES

Medical Clinics

As of the year 2012, there are two medical clinics in the City of Grant. These are the Colglazier Medical Clinic, located at 945 Washington Street, and the Grant Medical Clinic, located at 900 Lincoln Avenue. The clinics provide care for all ages of patients, including OB care and child delivery.

Colglazier Medical Clinic

The medical staff includes: 2 FTE medical doctors 1.5 Registered Nurse(s) 1 Mid-Level Nurse Practitioner 3 Trained Assistants Some lab work can be provided in the clinic

Grant Medical Clinic

The medical staff includes: 1 FTE Medical Doctor 1 PT Nurse Practitioner 1 Physician Assistant 2 Medical Technicians 1 RN Triage Nurse 1 Clinic Manager X-rays, MRI, CT Scans and lab work can be provided at the clinic

Hospitals and elderly care facilities

The Perkins County Health Services is a system comprised of the Perkins County Community Hospital and Golden Ours Convalescent Home. Hi-Line Home Health, Grant Medical Clinic, Hugs and Teddy Bears Child Care Center are also included in Perkins County Health Services. There were 190 employees, with approximately 100 full time employees in 2012.

There is one Assisted Living facility attached to the Golden Ours Convalescent Home called Park Ridge Assisted Living. A new facility for the Grant Medical Clinic was built in 2006 that is attached to the hospital. It houses consulting physician exam rooms, chemotherapy and office facilities for the Perkins County Community Hospital.

The Perkins County Community Hospital (PCCH) has twenty (20) beds and (4) nursery beds. The original hospital is now part of the Golden Ours Convalescent Home. The present hospital was built in 1970. In 2012, there are plans to add on to the present hospital. The heating and cooling systems will be upgraded, and plans are to create single occupancy rooms with private bathrooms and showers. The dietary, lab and radiology departments will be expanded, and an aquatics therapy pool will better assist physical therapy needs.

The medical staff is as follows: 13 Registered Nurses 5 X-ray Technicians 6 Licensed Practical Nurses 4 Lab Technicians 6 Nursing Aides The hospital has a consulting staff of 44 medical doctors, representing 16 different specialties that see patients and undertake medical procedures at the Perkins County Community Hospital.

The hospital has an in-house CT scanner and a stationary MRI. Bone density testing and digital mammography are available. There is an operating room, birthing room and

emergency room. Consulting physicians have the use of a new Specialty Clinic area housing two (2) offices and seven (7) exam rooms in close proximity to the X-ray room and lab.

PCCH also has a Physical Therapy department manned by a full time Physical Therapist and one Physical Therapist Aide. Recently, a full time Occupational Therapist was placed on staff.

Hi-Line Home Health is staffed by two (2) Registered Nurses, and three (3) Licensed Practical Nurses.

Additional Medical Facilities near Perkins County Medical Clinics

Ogallala

The Ogallala Medical group has its clinic within The Ogallala Community Hospital. It is an 18 bed hospital, and employs 131 people. It has 92 active physicians including primary care, specialty and ICU physicians. Its key services includes: Infusion Therapy, Medical Imaging, Othropedics, Surgery and Women's services.

The Ogallala Medical group has:

- *5 Physicians
- *1 General Surgeon
- *1 Orthopedic Surgeon
- *2 PA's

*30 visiting specialists

In addition, the Family Medical Center has:

- *2 Physicians
- *1 PA
- *1 RN

*2 Medical Assistants

Phillips County, Colorado

There are two medical clinics located in Phillips County; both are located in Holyoke.

Hospitals

Imperial

Chase County Community Hospital is a county owned, not for profit, 26-bed short, acute care hospital serving the health care of the citizens of Chase County and southwestern Nebraska located at 600 W. 12th Street in Imperial. The building was constructed in 1975 and is in good physical condition. There are four full-time physicians and over 80 employees at the hospital. There are 25-30 specialists that come in from Colorado and surrounding communities in Nebraska. There are 15 RN's, 10 LPN's and 15 aids for their nursing staff. CCCH provides care and services in the following areas of speciality; physical therapy, cardiac rehabilitation, ultrasound and x-ray, CT scanner, laboratory, surgery, coronary care, emergency room, nursery and labor delivery.

Chase County Community Hospital Medical Facility

- 25 bed Critical Access Hospital
- Provides services for outpatient, inpatient, specialty clinic, operating room and emergency services
- Adjoining clinic staffed with 1 Family Practice Physician and 2 Physician Assistants
- Has one room designated for coronary and intensive care
- Has a designated Family room for those who need to stay close to a loved one
- Has all private, comfortable rooms
- Diabetic Education
- Continually growing with our community
- Continually updating services

Phillips County, Colorado

There are two hospitals located in Phillips County, Colorado. The Melissa Memorial Hospital presently has a staff of approximately 48 employees and is located in Holyoke. Haxtun Hospital presently has a staff of approximately 94 employees and is located in Haxtun.

Elder Care Grant Westview Retirement Facility

Westview is an independent living retirement community offering comfortable apartments and duplexes to older adults located on the West side of Grant. Westview grew out of a dream of a group of concerned community leaders who saw a need for a retirement project in Perkins County. Westview was established as a nonprofit corporation and opened its doors to residents in January of 1993.

There are housekeeping services available, as well as cafeteria facilities for the noon and evening meals. All maintenance, trash and snow removal is included. Bed linens and towel laundering is available. Social and recreational activities are planned regularly, and transportation can be scheduled locally.

Assisted Living Facility-Grant

There is one Assisted Living facility attached to the Golden Ours Convalescent Home called Park Ridge Assisted Living.

Imperial

Imperial Heights Retirement Center exists to provide retired adults a better housing alternative to conventional apartments, group living, or home ownership. Imperial Height offers one- or two-bedroom apartments at an affordable monthly rent. Included in the monthly rent is a continental breakfast, regular housekeeping, social and leisure activities, an urgency call system monitored 24 hours a day, weekly laundry service, individually controlled heating and air-conditioning, building and ground maintenance. Imperial Heights is a single story, 20- unit apartment complex designed especially for active senior citizens.

The **Imperial Manor** is a 72-bed, 24-hour care facility intended for those who need long term nursing care. Staff includes RNs and LPNs evaluate resident's needs, coordinate care, administer medications and provide treatment.

Phillips County, Colorado

Elder care facilities are well provided in Phillips County. At present there are two (2) Nursing Homes, one (1) Assisted Living facility and two (2) Retirement Homes.

Regional Medical Facilities

In addition to these medical facilities, a number of regional facilities are located within a short flight in the following cities:

- Denver, Colorado
- Scottsbluff, Nebraska
- North Platte, Nebraska
- Kearney, Nebraska

ENERGY ELEMENT

INTRODUCTION

Energy usage in the early 21st Century is becoming a critical issue throughout Nebraska as well as the entire United States. Our dependency on energy sources that are not renewable has increased significantly over the past 100 years. Energy usage comes in several forms, such as:

- Lighting our homes and businesses
- Heating our homes and businesses
- Heating our water for homes and businesses
- Food preparation
- Transportation both personal and business related
- Recreation and Entertainment vehicular, computers, music, etc.

The 21st Century ushered in an increased concern for energy usage and its impacts on the environment. With the increased concern for the environment came an increased understanding of the carbon footprint generated by any one individual as well as striving towards modifying our behavior patterns in order to lessen that footprint. In addition, the phrase and concept of sustainability has become more widely used, even in the smaller communities of Nebraska and United States.

Energy and the issues connected to the different sources are becoming more critical every year. The need for the Energy Element in the Perkins County Comprehensive Development Plan should be something that is desired as opposed to required. However, during the 2010 Legislative Session of the Nebraska Unicameral, the State Senators passed LB 997 which required this section to become a part of all community and county comprehensive plans, except for Villages. The passage of LB 997 appears to be a first step toward new comprehensive plans addressing the entire issue of Sustainability.

SUSTAINABILITY

Sustainability, in today's discussions, has a number of meanings. According to Webster's Third International Dictionary, the verb "sustain" is defined as "to cause to continue...to keep up especially without interruption, diminution or flagging". However, the Brundtland Commission Report in 1987,¹ described sustainability as "...development that meets the needs of the present without compromising the ability of future generations to meet their own needs". In other words, sustainability is the ability of the present generation to live without jeopardizing the ability of future generations to sustain life as we know it today.

Our generation's ability to stabilize and begin to make the switch to cleaner and more renewable resources will aid future generations with their quality of life. The more renewable energy sources become the norm for our generation, the more likely these sources will be second nature and common place in the future.

Americans have grown to rely more heavily on electricity. However, state and federal policies have been increasingly more insistent on curbing this increasing reliance on electricity; especially, those sources that are produced by non-renewable fossil fuels such as oil and coal. Federal policy has set a goal that 20% of all electricity, by 2030, in the United States be from renewable sources such as solar and wind.

COUNTY RESOURCES

According to NWEA (National Wind Energy Association), Perkins County has excellent wind energy potential on the west edge of the County, and just north of Elsie.

Perkins County has natural gas reserves in the south central region of the county. Noble Gas began mining this reserve in 2008, but has in the past two years abandoned the mining due to falling gas prices.

Energy conservation is the most economical method of obtaining new units of energy. Suppliers such as electrical, can reduce new expensive power plant capacity by conservation, which is less expensive than building more capacity.

Two natural gas pipelines lie in Perkins County, the Trailblazer and the Rockies Express. Both are operated by Kinder Morgan. The Rockies Express 1,679-mile pipeline stretches from northwestern Colorado to eastern Ohio and boasts 1.8 billion cubic feet per day of capacity.

Natural Gas

Trailblazer Pipeline Company LLC owns and operates a 436-mile pipeline system that traverses from Colorado through Southeastern Wyoming to Beatrice, Neb. Kinder Morgan Energy Partners owns 100 percent of Trailblazer. Trailblazer is operated by Natural Gas Pipeline Company of America (NGPL), which is operated and partially owned by Kinder Morgan, Inc. This pipeline provides an outlet for Rocky Mountain gas seeking Midwest and East Coast markets.

Petroleum

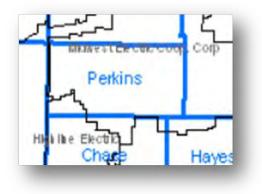
Mid America Bio Energy built an ethanol plant in Madrid which has operated since August of 2007, at a consistent production rate of 48 million gallons per year (anhydrous alcohol). The wet distillers grain from the Madrid Plant is predominantly utilized in S.W. Nebraska, N.W. Kansas, and Eastern Colorado. MAAP/W (Mid America Agri-Products/Wheatland, LLC) purchases over 16 million bushels of No. 2 yellow corn yearly through Frenchman Valley Coop and directly from local producers.

ENERGY INFRASTRUCTURE

Electrical Power

Electrical power is supplied by several entities in Perkins County. These entities include: the High Line Electric Association based in Holyoke, Colorado and Midwest Electric Cooperative Corporation based in Grant, Nebraska.

Midwest is a partner of the Touchstone Energy Cooperative which also includes Basin Electric Power Cooperative which is typically responsible for a portion of the power generation and transmission for Midwest Electric. The remaining generation and transmission is through Tri-State, another Touchstone Energy Cooperative subsidiary.



Highline Electric is also a part of the Touchstone Energy Cooperative and purchases wholesale electricity from Tri-State.

Tri-State is based in Colorado and operates 14 different generation facilities in Colorado, Wyoming and New Mexico. These facilities include both non-renewable and renewable sources for generation including multiple hydro facilities, a solar facility in northern New Mexico and a wind farm in eastern Colorado, as well as Biomass facilities at two hog facilities that collect the methane and converts it to electricity. Tri-State claims that renewable resources make up 17% of their electrical portfolio.

Nebraska Public Power District operates the Gerald Gentleman Power Plant facilities at Sutherland. Recent considerations by NPPD, due to new EPA requirements, may change the status of the Gerald Gentleman facility. NPPD supplies power to Madrid, including the ethanol plant, Elsie and Venango.

FIGURE 5: TRI-STATE RENEWABLE RESOURCE LOCATIONS



Source: http://www.tristategt.org/greenp

Electrical Distribution

The overall distribution system is in good condition. The distribution system not only supplies power to Perkins County but is the foundation for power that is transmitted to other customers east and south of Perkins County.

Natural Gas Service

Natural gas supplies in Perkins County are typically controlled by Source Gas LLC. Unfortunately, contact numbers and addresses were not located for this energy source. Therefore, there is no data for the system available as well as consumption.

ENERGY USE BY SECTOR

This section analyzes the energy use by residential, commercial, and industrial and other users. This section will examine the different types of energy sources that are utilized by in these different sectors.

Residential Uses

Within Perkins County the residential uses are provided a number of options for both power and heating and cooling. These include electrical power (both fossil fuel and renewable resources), natural gas, oil propane, and wood. The most dominant of the energy sources that are available and used by the residents of Perkins County is electricity produced from both fossil fuels and renewable resources.

The use of natural gas, oil, propane and wood will be found typically as heating sources during the winter months. The type of fuel used will depend a great deal on where a residence is located within the county. Residents located within the more urban parts of Perkins County are more likely to have natural gas heating or electrical furnaces. Propane and wood stoves are most likely to be found in the rural parts of the county where natural gas infrastructure is not available.

Commercial Uses

Perkins County's commercial uses also have a number of options for both power and heating and cooling. These include electrical power (both fossil fuel and renewable resources), natural gas, propane, oil and wood. The type of energy source is very dependent upon the specific commercial use and the facilities employed to house the use. The most

dominant of the energy sources that are available and used by the residents of Perkins County is electricity produced from both fossil fuels and renewable resources.

The use of natural gas, oil propane and wood will be found typically as heating sources during the winter months. The type of fuel used will depend a great deal on the type of commercial use and the construction of the building(s) involved. Commercial uses located within the more urban parts of Perkins County are more likely to have natural gas heating or electrical furnaces. Propane and wood stoves are most likely to be found in the rural parts of the county where natural gas infrastructure is not available. However, in commercial uses such as repair garages and other uses in larger metal buildings, they may be dependent upon recycling used motor oils to heat their facilities.

Industrial Uses

Perkins County's industrial uses also have a number of options for both power and heating and cooling. These include electrical power (both fossil fuel and renewable resources), natural gas, diesel fuel, propane, oil and wood. The type of energy source is very dependent upon the specific industrial use and the facilities employed to house the use. The most dominant of the energy sources that are available and used by the residents of Perkins County is electricity produced from both fossil fuels and renewable resources.

In some cases, diesel fuel can play a role in both power generation and heating and cooling. This is very dependent upon how a manufacturing facility is set up and how much electrical power they self-generate via diesel generators. In most cases, if diesel is used to heat and cool a building then it is done indirectly through the generation of electricity.

The use of natural gas, oil propane and wood will be found typically as heating sources during the winter months. The type of fuel used will depend a great deal on the type of industrial use and the construction of the building(s) involved. Industrial uses located within the more urban parts of Perkins County are more likely to have natural gas heating or electrical furnaces. Propane is most likely to be found in the rural parts of the county where natural gas infrastructure is not available. However, in smaller industrial uses located in larger metal buildings, they may be dependent upon recycling used motor oils and such to heat their facilities.

Agricultural Uses

Diesel fuel is the primary energy source for field operations and some irrigation which uses primarily electricity. Considerable energy is consumed indirectly in fertilizer and chemicals.

Perkins County's agricultural uses also use electric power for irrigation systems. Midwest Electric experiences peak electrical use during summer irrigation. In that regard, Midwest Electric utilizes extensive load control technology to control peak electrical demand to reduce cost for the Cooperative as well as irrigators. Midwest reported in 2012 that over 73.9% of electrical revenue came from irrigation in 2011.

SHORT-TERM AND LONG-TERM STRATEGIES

As the need and even regulatory requirements for energy conservation increases, residents of communities and even rural areas will need to:

- 1. Become even more conservative with energy usage
- 2. Make use of existing and future programs for retrofitting houses, businesses, and manufacturing plants
- 3. Increase their dependence on renewable energy sources.

Residential Strategies

There are a number of different strategies that can be undertaken to improve energy efficiency and usage in residences. These strategies range from simple (less costly) to complex (costly).



Unfortunately not all of the solution will have an immediate return on investment. As individual property owners, residents will need to find strategies that will fit into their ability to pay for savings at the present time.

There are several ways to make a residence more energy efficient. Some of the easiest include:

- Converting all incandescent light bulbs to Compact Florescent Lights
- Installing additional insulation in the attic
- Converting standard thermostats to digital/programmable thermostats
- Changing out older less efficient Air Conditioners and Furnaces to newer high-efficiency units
- Changing out older appliances with new EnergyStar appliances

Some of the more costly ways to make a residence more energy efficient include:

- New insulation in exterior walls
- Addition of solar panels for either electrical conversion and/or water heater systems
- Adding individual scale wind energy conversion systems
- Installing geothermal heating and cooling system
- Installation of energy-efficient low-e windows

Commercial and Industrial Strategies

Strategies for energy efficiency within commercial and industrial facilities are more difficult to achieve than those in for residential uses. Typically, these improvements will require a greater amount of investment due to the size of most of these facilities.

There are a number of different strategies that can be undertaken to improve energy efficiency and usage in residences. Unfortunately not all of the solutions will have an immediate return on investment. Again, as individual property owners, property owners will need to find strategies that will fit into their ability to pay for savings at the present time.

There are several ways to make a commercial business more energy efficient. Some of the easiest include:

- Converting all incandescent light bulbs to Florescent Lights or Compact Florescent Lighting on small fixtures
- Converting standard thermostats to digital/programmable thermostats
- Installing additional insulation in an attic space
- Changing out older less efficient Air Conditioners and Furnaces to newer high-efficiency units

Some of the more costly ways to make a business more energy efficient include:

- Installation of energy-efficient low-e windows and/or storefronts
- New insulation in exterior walls
- Addition of solar panels for either electrical conversion and/or water heater systems
- Adding individual scale wind energy conversion systems
- Installing geothermal heating and cooling system
- New storefronts with insulated panels and insulated Low-E glazing

Agricultural Strategies

Reduced tillage reduces energy consumption in field operations. Various irrigation technologies can reduce water consumption and therefore irrigation energy use.

Renewable Energy Sources

Renewable energy sources are those natural resources such as the wind, the sun, water, the earth (geothermal), and even methane (from natural resources or man-made situations) that can be used over and over again with minimal or no depletion. The most common sources of renewable energy resources used in Nebraska in the wind, the sun, water and earth. The following are examples of how these renewable resources can be used to reduce our dependency on fossil fuels.



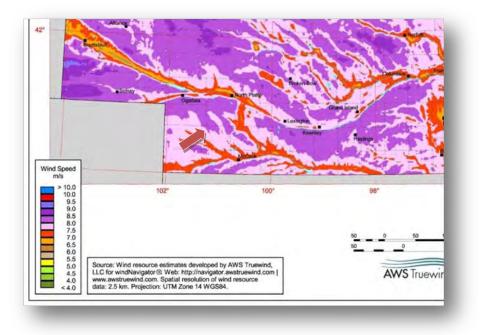
Wind

The wind is one of those resources that seem to be in abundance in Nebraska. Wind is not a new technology in Nebraska; the pioneers that settled in Nebraska used wind mills for power and to work the water wells on their farms and ranches.

Wind can be used to produce electricity through the construction of small-scale or utility/commercial grade wind conversion systems (wind turbines). However, not all areas of the state have the ideal levels needed to produce electricity on a utility or commercial level; but the use of small-scale wind turbines on homes and businesses will work in most parts of Nebraska.



FIGURE 6: ANNUAL AVERAGE WIND SPEED AT 80 METERS - NEBRASKA



The following provides a basic history and description of some newer programs in Nebraska; interested parties should contact the State of Nebraska Energy Office or their local public power district.

The following information is an excerpt from the Database of State Incentives for Renewables & Efficiency.

Solar

Solar energy has been around for decades and it last hit a high in popularity in the 1970's. However, today's solar energy design is much more efficient and aesthetically pleasing. Some of the aesthetic improvements have to do with the fact that today's systems are not as bulky as their ancestors. Today solar is being used much like wind turbines, on a small-scale level (home or business) or a much grander level (solar farms).

Solar energy includes solar water and space heating as well as taking solar photovoltaic panels to convert the sun's rays into electricity. Solar typically panels can produce between 120 and 200 watts per square meter at an installed cost of \$11 to \$22 per watt, according to the American Solar Energy Society but these costs are becoming less every year as more solar units are commissioned and new more cost effective technologies are developed.

Based upon the diagram to the right there is great solar potential in the state of Nebraska. A majority of the state lies within some of the better areas in the country for solar potential.

Geothermal Energy

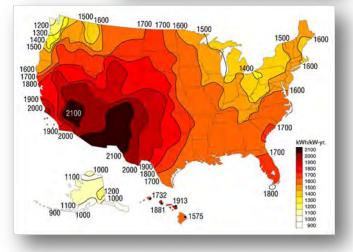
Geothermal energy includes a process where a series of pipes are lowered into vertical cores called heat-sink wells. The pipes carry a highly conductive fluid that either is heated or cooled by the constant temperature of the ground. The resulting heat exchange is then transferred back into the heating and cooling system of a home or other structure. This is called a geothermal heat exchange system or ground source heat pumps. The California Energy Commission estimates the costs of a geothermal system can earn net savings immediately when financed as part of a 30-year mortgage (Source: American Planning Association, PAS Memo January/February 2009).

Methane Energy

The use of methane to generate electricity is becoming more cost-effective to use within the rural areas of Nebraska. Methane electrical generation can be accomplished through the use of a methane digester which takes the raw gas, naturally generate from some form of waste material, and converts the gas into electrical power.

There have been some attempts to take the methane generated from animal manure and convert it into electricity; most have been successful but were costly to develop. Another approach to methane electrical generation is to tap into the methane being generated from a solid waste landfill; instead of burning off the methane, it can be piped into a methane convertor and generated into electricity for operating a manufacturing plant or placed on the overall grid for distribution.





Methane convertors make use of unwanted gases and are able to produce a viable product. As long as humans need to throw garbage into a landfill or the production of livestock is required, there will be a source of methane to tap for electrical generation.

In addition to converting methane into electricity, it can also provide a source of power by replacing natural gas as a heating source.

C-BED Program

In May 2007, Nebraska established an exemption from the sales and use tax imposed on the gross receipts from the sale, lease, or rental of personal property for use in a community-based energy development (C-BED) project. The Tax Commissioner is required to establish filing requirements to claim the exemption. In April 2008 L.B. 916 made several amendments to this incentive, including: (1) clarified C-BED ownership criteria to recognize ownership by partnerships, cooperatives and other pass-through entities; (2) clarified that the restriction on power purchase agreement payments should be calculated according to gross* and not net receipts; (3) added language detailing the review authority of the Tax Commissioner and recovery of exempted taxes; and (4) defined local payments to include lease payments, easement payments, and real and personal property tax receipts from a C-BED project.



A C-BED project is defined as a new wind energy project that meets one of the following ownership conditions:

- For a C-BED project that consists of more than two turbines, the project is owned by qualified owners with no single qualified owner owning more than 15% of the project and with at least 33% of the power purchase agreement payments flowing to the qualified owner or owners or local community; or
- For a C-BED project that consists of one or two turbines, the project is owned by one or more qualified owners with at least 33% of the power purchase agreement payments flowing to a qualified owner or local community.

In addition, a resolution of support for the project must be adopted by the county board of each county in which the C-BED project is to be located or by the tribal council for a C-BED project located within the boundaries of an Indian reservation.

A qualified C-BED project owner means:

- a Nebraska resident;
- a limited liability company that is organized under the Limited Liability Company Act and that is entirely made up of members who are Nebraska residents;
- a Nebraska nonprofit corporation;
- an electric supplier(s), subject to certain limitations for a single C-BED project; or
- a tribal council.

In separate legislation (<u>LB 629</u>), also enacted in May 2007, Nebraska established the Rural Community-Based Energy Development Act to authorize and encourage electric utilities to enter into power purchase agreements with C-BED project developers.

* LB 561 of 2009 established that gross power purchase agreement payments do not include debt financing if the agreement is entered into on or before December 31, 2011, and the qualified owners have a combined total of at least 33% of the equity ownership in the C-BED project.

Local Government and Renewable Energy Policies

Local governments need to take steps to encourage greater participation in wind generation. Cities and counties can do a number of items to make these projects more attractive. Some of the things that could be done are:

- Develop or amend existing zoning regulations to allow small-scale wind turbines as an accessory use in all districts
- Develop or amend existing zoning regulations to exempt small-scale turbines from maximum height requirements when attached to an existing or new structure.
- Work with the Nebraska Public Power District and/or local public power district on ways to use wind turbines on small-scale individual projects or as a source of power for the community.

NET METERING IN NEBRASKA

LB 436, signed in May 2009, established statewide net metering rules for all electric utilities in Nebraska. The rules apply to electricity generating facilities which use solar, methane, wind, biomass, hydropower or geothermal energy, and have a rated capacity at or below 25 kilowatts (kW). Electricity produced by a qualified renewable energy system during a month shall be used to offset any kilowatt-hours (kWh) consumed at the premises during the month.

Any excess generation produced by the system during the month will be credited at the utility's avoided cost rate for that month and carried forward to the next billing period. Any excess remaining at the end of an annualized period will be paid out to the customer. Customers retain all renewable energy credits (RECs) associated with the electricity their system generates. Utilities are required to offer net metering until the aggregate generating capacity of all customer-generators equals one percent of the utility's average monthly peak demand for that year.

STATE LAW OF SOLAR AND WIND EASEMENTS

Nebraska's solar and wind easement provisions allow property owners to create binding solar and wind easements for the purpose of protecting and maintaining proper access to sunlight and wind. Originally designed only to apply to solar, the laws were revised in March 1997 (Bill 140) to include wind. Counties and municipalities are permitted to develop zoning regulations, ordinances, or development plans that protect access to solar and wind energy resources if they choose to do so. Local governing bodies may also grant zoning variances to solar and wind energy systems that would be restricted under existing regulations, so long as the variance is not substantially detrimental to the public good.

LB 568, enacted in May 2009, made some revisions to the law and added additional provisions to govern the establishment and termination of wind agreements. Specifically, the bill provides that the initial term of a wind agreement may not exceed forty years. Additionally, a wind agreement will terminate if development has not commenced within ten years of the effective date of the wind agreement. If all parties involved agree to extend this period, however, the agreement may be extended.

CURRENT RENEWABLE ENERGY PROGRAMS AND FUNDING SOURCES Geothermal Heat Pumps - Residential

The High Line Electric Association offers rebates for homeowners who purchase energy efficient heat pumps and window air conditioning units. Incentives are also available for residential customers who recycle their old, functioning refrigerators/freezers and for residential customers who have a cooling system tune-up.

Electric Air Source Heat Pump

Both High Line Electric Association and Midwest Electric Cooperative offer rebates on electric air source heat pumps. Consumers need to check with the appropriate electric utility to determine eligibility requirements and rebates amounts.

Refrigerator Recycling Program

High Line Electric Association offers rebates on new Energy Star refrigerators and an additional amount if the older unit is retired.

Low interest Loan Program

This program makes available low interest loans for residential and commercial energy efficiency improvements. The Nebraska Energy Office administers this program, which was created in 1990 using oil overcharge funds. Only improvements to existing buildings that are at least 5 years old are eligible for loan assistance. As of March 31, 2010, 25,618 loans have been made totaling \$205.3 million and financing \$210.8 million in eligible projects.

GOALS/OBJECTIVES & POLICIES

INTRODUCTION

Planning for the future development of a County is an ongoing process of goal setting and problem solving aimed at encouraging and enhancing better communities and higher quality of life. Planning focuses upon ways of solving existing problems within the County, and providing a management tool enabling Perkins County citizens to achieve their vision for the future.

Visioning is a process of evaluating present conditions, identifying problem areas, and bringing about consensus on how to overcome existing problems and manage change. By determining Perkins County's strengths and weaknesses, the community can decide what it wants to be, and then develop a "roadmap" guiding decisions and ultimately fulfilling the vision Perkins County has developed.

Because change is continuous, Perkins County must decide the specific criteria they will use to judge and manage change. Instead of reacting to development pressures after the fact, the community along with their strategic vision can better reinforce the changes they desire, and discourage the negative impacts that will undermine the vision. A shared vision permits Perkins County to focus its diverse energies and minimize conflicts in the present, and in the future.

A key component of a Comprehensive Plan, are the goals and objectives. Citizen's issues and concerns are developed into vision. The vision statement can then be further delineated and translated into action statements, used to guide, direct, and base decisions upon regarding future growth, development and change within Perkins County. Consensus on "what is good development?" and "how to manage change in order to provide the greatest benefit to the county and its residents?" is formed. Perkins County's goals and objectives attempt to address various issues regarding the questions of "how" we plan Perkins County in the future.

Goals are desires, necessities and issues to be attained in the future. A goal should be established in a manner that allows it to be accomplished. Goals are the end-state of a desired outcome. Goals also play a factor in the establishment of policies within a county. In order to attain certain goals, objectives and/or policies within the county government may need to be modified or changed from time to time.

Objectives are the steps or actions performed in order to attain specific goals. Objectives should be measurable through both specific levels of achievement and in terms of time. Objectives can be established in a way that assigns specific activities to specific individuals and/or governing body. Policies can also be a derivative of objectives where regulations are implemented.

Objectives are "measurable actions" and guide the decision-making bodies of Perkins County in responding to growth and development pressures. The goals and objectives of the Comprehensive Plan should be referred to when considering individual zoning, subdivision or public improvement projects. They provide direction and assist in making the daily, incremental decisions that ultimately lead to the full implementation of the Comprehensive Plan.

The goals and objectives assure the Comprehensive Plan accomplishes the desires of the residents in Perkins County. For this reason, this section of the Comprehensive Plan is a compilation of local attitudes generated through public meetings and workshops. When followed, development proposals in the County will be evaluated as to their relationship with the citizens' stated goals. Therefore, "goals and objectives" should be referred to as diligently as the Future Land Use Map or any other part of the Comprehensive Plan, when

reviewing and recommending planning decisions. Likewise, they should be current to reflect the attitudes of the County and its residents.

PERKINS COUNTY GOALS AND OBJECTIVES

The goals and objectives for Perkins County, Nebraska, were developed using a Community-wide Survey; a Strengths, Weaknesses, Opportunities, and Threats analysis (S.W.O.T. Analysis); Nelson's Strengthen the Rural Communities program; and input from the Perkins County Planning Commission.

VISION STATEMENT

"The people of Perkins County will build upon the best traditions of its past, and look forward to a progressive future, by implementing and periodically updating the information contained in this Comprehensive Plan. Growth will be encouraged in a sustainable manner that maintains a quality social, economic and physical environment."

Utilizing zoning regulations, site plan review and land use inspection, the Perkins County Planning Commission and the Perkins County Board of Commissioners will allow expansion of industry and housing in areas best suited to these uses in order to minimize negative impacts and to preserve the social and natural environment.

For Perkins County, goals and objectives are formulated under generalized categories or issues. These issues include:

Population Land Use/Environment Education Parks and Recreation Housing Economy and Economic Development Transportation Energy



POPULATION

Goal

Perkins County must address the primary factor impacting their declining population, that is, persons migrating or leaving the County.

Objectives

- 1. Maintain the number of existing residents through developing marketing programs or policies that encourage persons to remain, relocate and establish in Perkins County.
- 2. Develop and partner with area businesses and educational providers to identify and provide greater employment opportunities to retain the young persons of Perkins County.
- 3. Develop strategies to further examine and prevent population out-migration.
- 4. Encourage a larger middle age population for the income and wealth to support elderly and youth.

LAND USE

Goal

Perkins County is to develop a set of land use and zoning regulations, which is sensitive to its agricultural heritage, protects prime farmland and its natural resources and manages future development in the most efficient and cost effective manner possible.

Objectives

- 1. Collaborate with the City of Grant and villages within Perkins County on common land use interests.
- 2. Consult all appropriate agencies and the Planning Commission Advisory Council in designation and approval of land use issues.
- 3. Develop a set of regulations sensitive to the environmental conditions of Perkins County. These include soil types and suitability, groundwater, surface water, watershed areas, transportation and air pollution.
- 4. Facilitate joint planning with the City of Grant and villages on Extra Territorial Jurisdiction issues, particularly moving the boundaries to quarter section lines and pursuing other cooperative ventures.

Agriculture Land Use Objectives

- 1. Protect agricultural land and groundwater while promoting agricultural uses as the main industry in county.
- 2. Support livestock production and related agricultural businesses designed, operated and located consistent with maintaining the health, safety and welfare of all county residents.
- 3. Regulate large confined livestock operations throughout the county in order to assure proper construction, management and compatible location.
- 4. Work with public on continual basis in evaluating regulations.
- 5. Encourage the use of alternative waste handling methods for livestock operations, such as aerobic composting and solid livestock waste handling. Methane production systems should be containerized rather than earthen anaerobic lagoons.
- 6. Provide separation between large confined livestock operations and both rural and community residences.

- 7. Encourage farm business succession planning to transfer businesses to the next generation with support from the Nebraska College of Technical Agriculture and other support organizations.
- 8. Encourage value added agriculture to be compatible with other uses.

Residential Land Use Objectives

- 1. Encourage residential development in and around the perimeter of the incorporated communities of Perkins County to avoid agricultural and non-agricultural conflicts in rural areas. Utilize multiple lot sizes with smallest lot sizes within Transitional Ag districts and development corridors and with larger lot sizes in remote agricultural areas.
- 2. Promote low to zero non-farm densities in agricultural districts by providing proper distances between residential and agricultural uses.
- 3. Regulate residential development densities per section and with lot sizes.
- 4. Consider soils, floodplain, road and bridge development or maintenance when identifying areas for development. Maintain and enforce floodplain regulations.
- 5. Establish regulations to limit development on minimum maintenance roads.
- 6. Distribute fliers such as "Considerations for Rural Living" to educate newcomers to the County on agricultural issues.

ENVIRONMENT

Goal

The natural resources (soils, groundwater, surface water and air) and environment of Perkins County shall be protected and managed to insure long term quality, availability and sustainability for the current and future residents and industries of Perkins County. The goal of Perkins County is to guide development in a manner that conserves and protects the natural resources; minimizes potential conflicts between rural/urban residents; promotes compatible land uses; encourages compact development and an efficient provision of services.

- 1. Establish zoning standards that support conservation and protection of Perkins County's natural resources and prime agricultural lands.
- 2. Protect all water supplies and aquifers from development activities that may pollute and/or affect the quality or quantity of water. This can be achieved by forcing development to demonstrate a positive or, at least, a neutral impact on ground water supplies. Discourage development over or adjacent to water generating aquifers that could have a negative impact on water quality and/or quantity. Collaborate with villages and the City of Grant, to develop regulations for wellhead protection districts.
- 3. Identify, with all appropriate agencies, sediment control and heavy rainfall regulations to minimize potential soil loss and/or contamination problems due to over irrigation in specific areas of Perkins County.
- 4. Encourage preservation and conservation of the natural range and farmland of the county for agricultural uses and recreation.

- 5. Develop zoning regulations and environmental regulations that will aid in maintaining the existing clean air of Perkins County.
- 6. Avoid developments in flood hazard and wetlands areas.
- 7. Prepare a cost/benefit analysis of the existing regional landfill in the county to determine future value or lack thereof. Track monitoring well reports closely to maintain environmental quality in conjunction with Health, Safety, and Welfare regulations.
- 8. Analyze reports from large livestock monitoring wells.

EDUCATION

Goal

Quality education is a vital component of a community and/or county. Although the county's role is limited, policies will be followed to retain the countywide school system. Support of learning from pre-school age into adulthood will be a county-wide effort. Above all, the main goal is to encourage and maintain a viable school and distance learning system, excellence in the public school curriculum and quality of school facilities to further the educational opportunities for all residents of Perkins County.

Objectives

- 1. Cooperate with the school systems in expanding public uses of educational facilities.
- 2. Utilize schools in Perkins County as a community learning center for all age groups.
- 3. Encourage local participation in college-level courses or business development courses.
- 4. Support technological advances that enhance connection to the world at large.

PARKS AND RECREATION

Goal

Provide for a wide variety of recreational opportunities for all age groups for residents of Perkins County.

Objectives

- 1. Promote recreation as an economic development tool for Perkins County. Specifically support recreational uses in the following areas:
 - a. swimming pools
 - b. walking and bike paths
 - c.. recreation facilities

HOUSING

Goal

Perkins County will ensure the provision of safe, decent, sanitary and affordable housing opportunities for every family and individual. Perkins County will preserve and maintain the quality of existing housing units and residential neighborhoods in Perkins County, and encourage new construction in established communities so as to provide housing for current and future residents.

- 1. Undertake a comprehensive survey of the housing stock every five years to determine and identify housing units that would benefit from improving, remodeling or rehabilitating, including vacant farmsteads.
- 2. Establish a rehabilitation program to maintain and improve the existing housing stock.
- 3. Develop a program that encourages new housing development for all household income categories.
- 4. Develop relationships and partnerships with housing professions in the public and private sector to establish a range of affordable housing options, ranging from a First Time Homebuyer program to rental assistance.
- 5. Establish zoning standards that support housing options for all incomes and physical capabilities of Perkins County's residents.
- 6. Enforce regulations and ordinances protecting the rights of Perkins County's residents.
- 7. Develop market rate housing for employees who work, but don't live, in Perkins County. Possibly use a revolving capital account for funding.

ECONOMIC DEVELOPMENT

Goal

Strive to promote and balance the needs of the retail, wholesale, agricultural, commercial and manufacturing industries, necessary to support County residents now and in the future, thereby promoting sustainable economic stability throughout Perkins County. Support opportunities for the education of the County's citizens in the area of economic development, such as entrepreneurial training, and work-study programs.

- 1. Support area historical, cultural and recreational activities. Perkins County should continue to build upon the historical structures, cultural heritage and recreational assets located throughout the County and within the incorporated and unincorporated settlements to encourage a sense of community through tourism based endeavors.
- 2. Promote economic development projects that will encourage area youth to remain in the County upon completion of their secondary education.
- 3. Encourage and promote the development of home-based businesses and telecommuting based upon high technology communication infrastructure, such as the Internet.
- 4. Encourage, promote and develop economic development partnerships between local entities and private companies to assist new, existing and expanding business enterprises to expand their scope of activity.
- 5. Encourage, promote and develop human, financial and social capital to increase the business capabilities of area residents and entities.
- 6. Encourage labor force training programs involving Perkins County High Schools, nearby Community Colleges and local employers.
- 7. Support business succession programs that would assist retirees in business succession. Inform the County's youth and others as to the opportunities available to them.
- 8. Develop a micro-lending program for business development and transitioning.

TRANSPORTATION

Goal

Development in Perkins County shall be guided to safely utilize existing public investment in transportation and proper maintenance. The Transportation Goal of Perkins County is to develop, maintain and upgrade an efficient transportation system, including roads, railroads, and airport facilities.

Objectives

- 1. Continue updating county equipment and road programs as needed.
- 2. Encourage the formation of a Regional Transportation Planning concept.
- 3. Protect the federal funding of the Grant Municipal Airport by closely guarding development within its hazard area.
- 4. Manage transportation issues in conjunction with a Land Use Plan and Zoning Regulations. Such policy should direct the locations of large scale confined feeding operations, rural residential subdivisions, and commercial or industrial uses to avoid undue or unnecessary burdens and costs on the existing roadway system.
- 5. Improve, develop, and maintain well-traveled roads with hard surfacing as identified in the County's One- and Six-Year Plan.
- 6. Continue working with State Department of Roads via the Highway Superintendent and public input to upgrade highways in and through the county by either resurfacing or widening of existing State Highways.

ENERGY

Goal

Perkins County must consider developing conventional and renewable energy resources as well as energy conservation to maintain economic well-being.

- 1. Encourage energy suppliers to provide energy audits for energy users to aid in reducing energy use.
- 2. Encourage Perkins County residents to consider home, business, and public building audits to aid in reducing energy use.

ENVIRONMENT, NATURAL AND MAN-MADE RESOURCES

INTRODUCTION

In order to formulate a truly valid plan for the future development of Perkins County, it is necessary to evaluate the environmental and man-made conditions, which exist to determine the impacts that these factors may have on encouraging or limiting future land uses in the County. This component of the Perkins County Comprehensive Plan provides a summary of the environmental and man-made conditions which are present in the County, and identifies and qualifies the characteristics of each which will impact future land uses in the County. For clarity, the evaluations are presented in two categories; Natural Environmental Conditions and Man-Made Conditions, which include the following factors:

NATURAL ENVIRONMENTAL CONDITIONS

MAN-MADE CONDITIONS

Geology Soils Topography and drainage Flood Water supply and quality Air quality Past land development trends Transportation system impacts

NATURAL ENVIRONMENTAL CONDITIONS

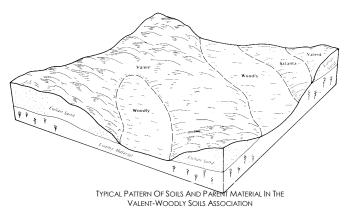
Geology

Perkins County is situated in the Central Plains section of the Great Plains physiographic section and is thus part of the high table lands in Nebraska. Pierre shale underlies the entire County. The Pierre shale does not yield any water to wells and in all but the southeastern portion of the County, is overlain by the claystone, siltstone, silty sand and sand of the White River Group. These deposits also do not yield any water. Fortunately, the entire Pierre shale and White River Group deposits are overlain by sands, gravels, and sandstone of the Ogallala Group, which is a major aquifer. Most wells for irrigation and domestic use are in this formation. Unconsolidated deposits of the Quaternary age overlay the Ogallala formation. The silts and sands in these unconsolidated deposits range in thickness from 2 feet to 195 feet and contain limited quantities of water in the south-central portion of the County.

The implications of the geology of Perkins County with regard to future development within the County are several. First, the adequate supplies of high quality groundwater will continue to encourage crop production. Second, the porosity and permeability of some of the sandy soils can result in a situation where contamination of the groundwater is very possible unless caution is used, particularly with regard to use of pesticides, herbicides and high concentrations of animal waste. These limitations are discussed later in this section of the Comprehensive Plan.

Soils

Soils in Perkins County consist of 11 soil associations. A soil association is a landscape that has distinctive proportional patterns of soil and typically consists of one or more major soils and at least one minor soil. The associations are named for the major soils that occur. The locations of the eleven soils associations in the County are indicated on Figure 7 and are



described as follows:

Valent - Woodly Association (Indicated as Soil Association 8 on Figure 7)

This association is the single largest association in the County and occurs on 141,100 acres or 25% of the entire County. This soil association occurs on the nearly level to hilly areas between the loamy uplands and large areas of sandhills and extends from the southwestern portion to the northeastern corner of the County. Valent soils, which are sandy loam soils formed in sandy subsoil, comprise 56% of the soils in this association while Woodly soils, which are also sandy loamy soils, comprise 30% of the area occupied by this association.

Minor soils in this association include Dailey, Haxtun, Satanta and Vetal soils. Dailey soils occur lower on the landscape than Valent soils and, although similar in type, have a thicker surface soil. Haxtun and Vetal soils are in landscape positions also in the lower elevations. Satanta soils, which are sandier, typically occur between the Woodly and Valent soils on side slopes.

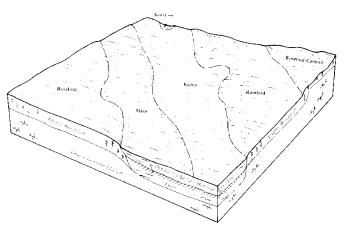
The majority of land where this soils association occurs is used for dry land and irrigated crop production. Some of the sloped areas, which can range up to 24% in slope, are used for range livestock grazing. The primary soils management issues with these soils are wind erosion and maintaining soil moisture and fertility. None of the soils in this association are subject to flooding and none have a high water table. The primary characteristics of these soils, which will serve to limit higher intensity usage, are relatively steep slopes in some areas and high permeability of soils, which could lead to groundwater contamination.

Rosebud-Kuma-Mace Association (Indicated as Soil Association 1 on Figure 7)

This soils association occurs on nearly 113,280 acres or approximately 20% of all the land in the County. These soils occur on nearly level uplands extending from the southwest to

northeast across the County. Rosebud soils comprise over 37% of the soils in this association, while Kuma soils comprise just under 20% and Mace soils comprise nearly 13%.

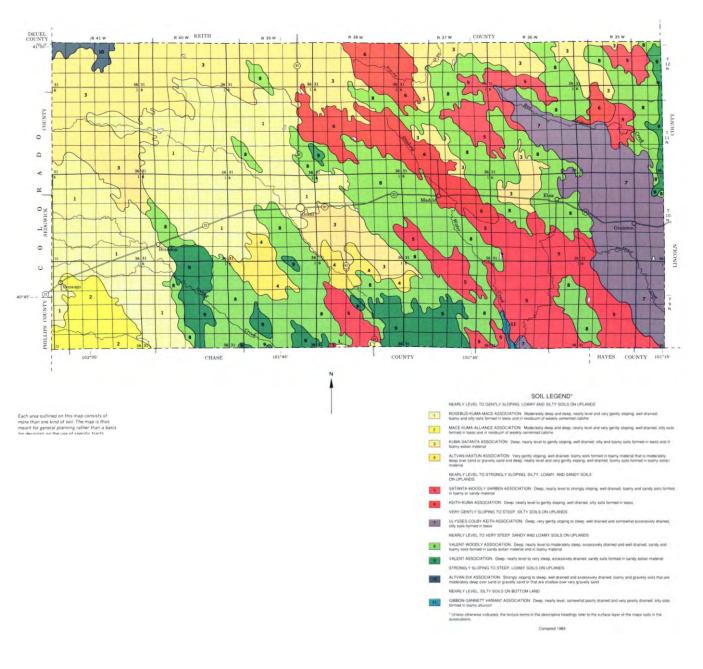
Minor soils including Alliance, Ascalon, Canyon, Satanta and Scott soils comprise the remaining 30% of the area. These loess (fine grained silty materials deposited by wind) soils all have some weakly cemented caliche (cemented



TYPICAL PATTERN OF SOILS AND PARENT MATERIAL IN THE ROSEBUD-KUMA-MACE SOILS ASSOCIATION

deposits of calcium carbonate) and are generally 6 inches thick with a 7 to 10 inch subsoil.

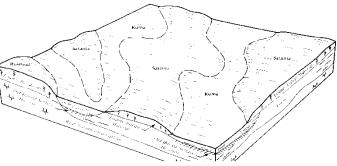




The Rosebud - Canyon soils occur on nearly level to strongly sloping areas and have bedrock at depths of 6 to 20 inches. Scott soils occur in depressions within the upland areas and are poorly drained. Most of the soils in this association are used for dryland or irrigated crop production. A few more sloping areas support native grasses for pasture. Soil blowing, maintaining fertility and moisture conservation is the primary management concerns with these soils. Depth to high water tables in these soils is always in excess of 6 feet and none of these soils are subject to flooding. These characteristics combined with slow permeability indicates that only moderate hazards would exist for development of more intensive uses such as confined livestock production.

<u>Kuma - Satanta Association</u> (Indicated as Soil Association 3 on Figure 7)

The soils in the Kuma - Satanta Association occupy some 108,590 acres or nearly 20% of the land in the County. These soils occur on the nearly level to gently sloping uplands mainly in the northwestern portion of the County and along the northern border of the County.



TYPICAL PATTERN OF SOILS AND PARENT MATERIAL IN THE KUMA-SANTANTA SOILS ASSOCIATION

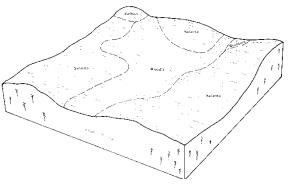
Kuma soils, which have formed in loess, comprise about 45% of the land on which this association is situated while Satanta soils, also formed in loamy material comprise just over 43% of this association. Minor soils in this association include Dailey, Haxtun, Rosebud and Scott soils. Dailey soils are excessively drained. Haxtun soils contain more sand than Kuma soils and occur in similar positions as Rosebud soils. The Rosebud soils have bedrock at 20 to 40 inches while the Scott soils, which are poorly drained, occur in upland depressions. Most of the soils in this association are used for dry land or irrigated crop production. A very small percentage is used for rangeland.

The primary management concerns with these soils is wind and water erosion. With the exception of the Scott soils, none of these soils are subject to ponding or flooding and all have depths to a high water table exceeding 6 feet. All of these soils also have relatively low percolation rates and thus present few hazards for more intensive agricultural production or commercial feeding uses.

<u>Satanta - Woodly - Sarben Association (Indicated as Soil Association 5 on Figure 7)</u>

This association consists of soils in undulating areas on the uplands which, extend across

the southeastern third of the County. This association occupies some 65,750 acres or nearly 12% of all the land in the County. Satanta soils, which are sandy loam soils, comprise 43% of the association while Woodly soils, which formed in loam and sandy materials, comprise 34% of the area, typically in the lower more level elevations. Sarben soils occur on gently sloping to strongly sloping side slopes and ridges and comprise approximately 5% of the soils in this association.



TYPICAL PATTERN OF SOILS AND PARENT MATERIAL IN THE SANTANTA-WOODLY-SARBEN SOILS ASSOCIATION

Minor soils in this association include Creighton, Kuma, McCook, and Rosebud soils. Creighton, Kuma and Rosebud soils are in a landscape position similar to the major soils. McCook soils are stratified and occur only on the bottomlands. Most of the areas where these soils occur are used for dry land and irrigated crop production. A small amount is used for rangeland.

Wind and water erosion, in addition to moisture conservation, are the primary management issues. With the exception of the McCook soils which are subject to brief periods of flooding, none of the soils in this association flood or have high water tables. Most of the soils in this association have relatively high levels of permeability, which suggests that higher intensity uses should be avoided to minimize the potential for groundwater contamination.

<u>Ulysses - Colby - Keith Association (Indicated as Soil Association 7 on Figure 7)</u>

This association consists of soils situated on strongly sloping to steep side slopes and gently sloping ridge tops in the east - central portion of the County. This soil association comprises a relatively large 48,430 acres of land near the eastern edge of the County. Ulysses soils, which are silty loam soils, occur on gently sloping to steep ridges and side slopes in the upper elevations and comprise nearly half of the soils in this association. Colby soils, which are also silty loam soils, occur in a similar profile as the Ulysses soils and account for 25% of the soils in this association. Keith soils, which occur on the upper elevations, comprise some 12% of the association.

Minor soils in this association include Kuma, McCash, McCook, and Satanta soils. Kuma soils occur near the ridge tops while McCash soils, which contain less clay, are situated on the lower side slopes. McCool soils occur on the depression and bottomlands. The lesser sloped areas of this association are used for dry land and irrigated crop production while the areas with greater degrees of slope are used as rangeland for cattle.



TYPICAL PATTERN OF SOILS AND PARENT MATERIALS IN THE ULYSSES-COLBY-KEITH SOILS ASSOCIATION

Wind and water erosion, moisture conservation and fertility are the primary management issues. Again, with the exception of the McCook soils, none of the soils in this association are subject to flooding and none have a high water table. A relatively high degree of slope in much of the area occupied by this soils association is the factor, which will limit more intensive use of this area of the County.

Keith - Kuma Association (Indicated as Soil Association 6 on Figure 7)

This soils association consists of soils in smooth valleys and gently sloping ridges in the north -central and northeastern portions of the County. This association occupies some 34,880 acres or just over 6% of the total land area of the County. Keith soils, which are silty loam soils, occur on the upper elevations and comprise 43% of the soils in this association, Kuma soils, which occur in the smooth valleys, comprise 34% of the area.

Minor soils in this association include Rosebud and Satanta soils, which occur in similar positions in the landscape as the major soils. Most of the land where this association occurs is used for dry land and irrigated crop production. Native grasses are still maintained in a small percentage of the soils in this association.

The major management issues related to the soils in this association are wind erosion and moisture and fertility conservation. None of the soils in this association are subject to flooding and none have a high water table. These soils do have a relatively low level of permeability and limited slopes which indicates that they would be well suited to higher intensity agricultural and commercial uses such as confined livestock feeding.

Valent Association (Indicated as Soil Association 9 on Figure 7)

This association consists of soils on undulating to hilly sandhills and in the nearly level to gently undulating valleys in the sandhills. The sandhills areas within the County occur in the south -central portion of the County and along the extreme northeastern boundary of the County. Valent soils, which are sand or sandy loam, comprise 95% of the soils in this Association.

Minor soils in this association include Dailey and Woodly soils. Both of these soils occur at lower elevations and are typically thicker and finer textured. Nearly all of the land in the sandhills areas is used as rangeland. A few small areas in the valleys are used for irrigated hay or crop production.

The major management issue associated with these soils is wind erosion, maintaining soils fertility and managing irrigation runoff to avoid erosion. None of the soils in this association are subject to flooding and none have a high water table. The primary factors which will continue to limit development of the sandhills areas is the high level of permeability which can lead to groundwater contamination and the relatively high degrees of slope which limits cropping and other higher intensity uses.

Mace - Kuma - Alliance Association (Indicated as Soil Association 2 on Figure 7)

This soils association consists of soils in smooth areas on uplands in the southwestern corner of the County. The total area occupied by this association is some 13,240 acres or just over 2% of the total area of the County. Mace soils comprise nearly 50% of the area occupied by this association and are silty loam soils formed in loess and the residual of weakly cemented caliche. Kuma soils are also silty loam soils, which commonly occur on the lower elevations in this association. Kuma soils comprise some 28% of the soils in the area. Alliance soils, also silty loam soils, comprise 14% of the land area occupied by this association and occur at similar or higher elevations than the Mace soils.

Minor soils in this association include Ascalon, Canyon, Rosebud and Scott soils. Ascalon soils have more sand than the major soils and occur on nearly level to gently sloping areas. Canyon soils are very shallow with depths to bedrock at only 6 to 20 inches and occur in areas with higher degrees of slope. Rosebud soils, which occur on nearly level areas of the upper elevations, are also relatively shallow with bedrock at depths of 20 to 40 inches. Scott soils, which occur in depressions within the uplands are poorly drained and subject to occasional inundation during heavy rains. Most of the land where this association occurs is used for dry land or irrigated crop production. A small amount is used for rangeland.

The primary management issues are wind erosion, moisture conservation and maintaining fertility. With the exception of the Scott soils, none of the soils in this association are subject to flooding and none have high water tables. The lack of depth of these soils and the calcareous nature of the bedrock presents potential for groundwater contamination for herbicides, pesticides and high concentrations of livestock manure thus limiting the potential for higher intensity uses in this area of the County.

Altvan - Haxtun Association (Indicated as Soil Association 4 on Figure 7)

This association consists of soils in the smooth areas on uplands in the south-central portion of the County. This association occupies some 12,480 acres or land or just over 2% of the total land area of the County. Slopes in this area are very limited ranging from 0 to 3%. Altvan soils, which is a loamy soils formed over sand or gravelly sand are well drained and occur on gently sloping areas, which comprise 45% of the area. Haxtun soils, which are deeper loamy soils, comprise 35% of the soils in the association.

Minor soils include Rosebud, Valent, and Woodly soils, which are all sandier soils, occurring in landscapes similar to the Haxtun soils. Most of the land in this soils association is used for dry land or irrigated crop production with only minor acreages used for rangeland.

Wind erosion, moisture retention and maintaining fertility are the primary management concerns. None of the soils in this association are subject to flooding or have a high water table. The primary factor limiting higher intensity use of this area is that the Altvan soils have a high permeability rate and thus contamination of groundwater is a potential hazard.

Altvan - Dix Association (Indicated as Soil Association 10 on Figure 7)

This association consists of soils on strongly sloping to very steep side slopes along the upland drainageway in the extreme northwest corner of the County. Slopes in this association, which covers some 1,750 acres, range from 6 to 30%. Altvan soils comprise 58% of the area occupied by this association and are situated on the ridges and lower parts of the side slopes along the drainageway. Dix soils, which comprise 30% of the area, are situated on the upper slopes along the drainageway. Both soils are loamy and gravelly and are excessively drained.

Minor soils in this association include Bankard soils on the bottomlands. Due to the high degree of slope in this association most of the land is used for grazing of livestock. Some small areas in the lower elevations are used for dry land crop production. With the exception of the Bankard soils, which occur in the bottomlands and are thus subject to periodic flooding, none of the soils in this association are subject to flooding and none have high water tables. The primary limitations for these soils are wind and water erosion and excessive slope.

<u>Gibbon - Gannett Varient Association (Indicated as Soil Association 11 on Figure 7)</u> This association of soils is present only on the relatively level bottomlands along Stinking Water Creek in the southeastern portion of the County. Soils in this association occupy only 620 acres and are silt loam soils deposited over very fine sand and alluvium (water deposited materials). Gibbon soils, which comprise over 60% of the area, occupy lower elevations along with Gannett Varient soils, which comprise 29% of the area.

Minor soils in this association include Dailey and Woodly soils, which occur on the higher elevations. The area where these soils occur is used for a combination of rangeland, hay production and some crop production. Occasional flooding is the primary hazard, which limits more intensive use of this portion of the County.

Prime Crop Land

The conservation of soils, which are the most productive in terms of crop production, is a critical issue in any County planning effort. In Nebraska and other states where the major component in the economy is agricultural production, the issue of conserving prime crop land is a key component in planning for the future of any rural area. This is particularly

true in Perkins County where the local economy is based, in large part, on agricultural production.

In Perkins County, there are slightly over 361,000 acres of land where the soils are classified as prime crop land, when irrigated. This total acreage comprises approximately 64% (nearly 2/3's) of the total 566,470 acres of land in the County. These soils consist of 17 different soils as indicated in Table 21. However, agricultural producers in the County utilize dry land production indicators based upon profitability, not maximum crop yields, and therefore view prime crop land in a different manner than reporting agencies such as the United States Department of Agriculture.

Crop and livestock production, as in most counties within the State of Nebraska, is the main land use within Perkins County. Approximately 80 percent of land within the County is crop land, 30 percent of which is irrigated. Aside from a very limited amount of land used by urban development, rangeland comprises the remaining percentage of land throughout the County.

Development of large scale confined livestock feeding operations in areas where these soils occur would also result in the loss of notable quantities of productive crop land. It should also be noted that several soils categorized as prime crop land have other environmental limitations, which should prohibit or at least restrict the development of non-agricultural uses, including confined livestock feeding operations. The limitations include the potential for flooding, excessive wind and water erosion potential and soil permeability.

SOIL ASSOCIATION	Soil Symbol	Soil Name	ACREAGE	
Mace - Kuma - Alliance		Alliance Silt Learn (0.2% dene)*	4 5 4 0	
Altvan - Haxtun	Ac, AcB AfB, AfC	Alliance Silt Loam (0-3% slope)* Altvan Loam (1-6% slope)*	4,540	
		· · · ·		
Mace - Kuma – Alliance - Rosebud - Kuma - Mace	AsB, AsC	Ascalon Fine Sandy Loam (1-6% slope)*	2,680	
Satanta - Woodly - Sarben	CrB, CrC	Creighton Very Fine Sandy Loam (1-6% slope)*	2,770	
Gibbon - Gannett Variant	Gf	Gibbon Silt Loam (0-2% slope)**	380	
Altvan - Haxtun	HdB	Haxtun Fine Sandy Loam (0-3% slope)*	13,810	
Valent – Woodly - Satanta - Woodly - Sarben	JcB, JcC	Jayem Fine Sandy Loam (0-6% slope)*	880	
Keith – Kuma- Ulysses - Colby - Keith	КеВ, КеС2	Keith Silt Loam (1-6% slope)*	29,870	
Kuma - Satanta - Keith - Kuma	Κυ, ΚυΒ	Kuma Silt Loam (0-3% slope)*	87,800	
Mace - Kuma – Alliance- Rosebud - Kuma - Mace	Ma, MaB	Mace Silt Loam (0-3% slope)*	28,440	
Ulysses - Colby - Keith	Mb	McCash Very Fine Sandy Loam (0-1% slope)*	1,580	
Ulysses - Colby - Keith	MD	McCook Silt Loam (0-2% slope)*	2,970	
Rosebud - Kuma - Mace	Rs, RsB,	Rosebud Loam (0-3% slope)*	44,570	
Kuma – Satanta- Satanta - Woodly -	Sb, SbB,	Satanta Loam (0-6% slope)*	83,180	
Sarben	SbC			
Ulysses - Colby - Keith	UsC2	Ulysses-Colby Silt Loam (3-6% slope)*	9,530	
Valent - Woodly	VeB	Vetal Fine Sandy Loam (0-3% slope)*	3,600	
Satanta - Woodly - Sarben	WpB	Woodly Fine Sandy Loam (0-3% slope)*	38,880	
			361, 610	

TABLE 21: PRIME CROP LAND SOILS - PERKINS COUNTY, NEBRASKA

Soil Survey of Perkins County, Nebraska, United States Department of Agriculture, Soil Conservation Service, June, 1991

* Prime crop land soils

** where drained and protected from flooding or not frequently flooded during growing season

FIGURE 8: PRIME CROP LAND

Removing lands from crop production through development of non-agricultural uses, including commercial, industrial and other non-agricultural developments, should be avoided. To ensure these lands are preserved in a manner consistent with County policy, the development of regulations, which guide the decision making process for County Officials when identifying appropriate locations for all land uses, should be implemented.

Soils Limitations

As described in Table 22, there are a number of soils which occur in the County which should be avoided by non-agricultural developments and confined livestock feeding operations due to the potential for environmental damage. These limitations include such problems as flooding and wind or water erosion and potential pollution of surface or groundwater through seepage and high water tables.

TABLE 22: USE LIMITATIONS OF SOILS - PERKINS COUNTY, NEBRASKA

Environmental Hazard Code

- 1 Flooding
- 2 High Water Table (less than 6 feet)
- 3 High degree of Slope
- 4 Excessive Seepage
- 5 Wetness / Ponding

- 6 Excessive Wind / Water Erosion
- 7 Poor Filter
- 8 Slow percolation rate
- 9 Depth to bedrock

	Environmental Hazards for Various Land Uses							
Soil	Dwellings	Septic Tank / Absorption Field	Sewage Lagoon	Confined Livestock Feeding*	Commercial / Industrial Building			
Alliance	-	-	3,4	-	-			
Altvan	-	3,7	3,4,7	4,7	-			
Ascalon	-	-	4	-	-			
Bankard	1	1,7	1,4	1,4	1			
Blanche	1	4	4	-	-			
Canyon	-	4,9	4,9	4,9	-			
Colby	3	3	3	6	3			
Creighton	-	-	3,4	-	-			
Dailey	-	7	4,7	4,7	-			
Dix	3	3,7	3,4,7	3,4	3			
Duda	9	4,9	4,9	4	9			
Gannett Variant	1,5	1,5	1,5	1,5	1,5			
Gibbon	1,5	1,5	1,4,5	1,4,5	1,5			
Haxtun	-	-	4	-	-			
Jayem	-	-	4	-	-			
Keith	-	-	3,4	-	-			
Kuma	-	-	4	-	-			
Mace	-	4	4	4,9	-			
McCash	-	-	-	-	-			
McCook	1	1	1	1	1			
Rosebud	-	4,9	4,9	4,9	-			
Sarben	-	-	4	-	-			
Satanta	-	-	3,4	-	-			
Scott	5	5	5	5	5			
Tassel	9	4,9	4,9	4,9	9			
Ulysses	-	-	3	-	-			
Valent	3	7	3,4,7	3,4,7	3			
Vetal	-	-	4	-	-			
Woodly	-	-	4	-	-			

Soil Survey of Perkins County, Nebraska, United States Department of Agriculture, Soil Conservation Service, June, 1991

- Only slight limitations

* Environmental hazards interpolated from Soil Survey by Stahr & Associates

The environmental hazard factors indicated in Table 22 are designed to provide the Planning Commission and County Officials with an indication of potential environmental problems associated with various uses that may be proposed in different areas of the County. These factors should be evaluated prior to a determination of whether the use is appropriate in the proposed area.

These environmental hazard factors, which are linked to the soil types, are mapped by soil association on Figure 7 to provide the Planning Commission and County Officials the ability to provide a general evaluation of the appropriateness of any proposed use in any area with environmental limitations. Care should be used in the interpretation of the hazards indicated due to the generalized nature of the map scale. Should any non-agricultural development, including confined livestock feeding operations, be proposed in any of these areas, the soils present on each site proposed for development should be investigated more closely through the use of the Perkins County Soil Survey.

The soils in the areas of the County where the communities are situated also present some limitations for development. Each community with the exception of Grainton is situated on soil types that have high permeability rates, which are often combined with shallow depth to bedrock. These limitations imply that excessive use of on-site sewage disposal systems in close proximity to one another could result in groundwater contamination.

TOPOGRAPHY AND DRAINAGE

The topography in Perkins County consists of plains that have been eroded by wind and water and divided into tablelands and valleys. The plains are nearly level to strongly sloping. The western portion of the County is nearly level to gently sloping except for several drainage-ways, which have strong slopes. The eastern portion of the County is gently sloping to strongly sloping and has numerous drainage-ways with steep slopes. Slopes throughout the County can range from 0% to over 60% slope in the sandhills portion of the County.

Sandhills cover approximately one-fifth of the county, mainly in the southwestern south-central and northeastern parts. The sandhills are characterized by choppy hills, hummocks, depressions and flat areas. The valleys within the sandhills are generally flat and vary considerably in size.

Most of the County is in the drainage basin of the Republican River to the south. The northwestern and some areas of the north-central and northeastern parts of the County are in the South Platte River drainage basin.

Elevations in the County ranges from 3,600 feet above mean sea level 6 miles south of Venango to a low of 3,176 feet above sea level east of Grainton. The elevation of the City of Grant, the county seat situated near the center of the County, is 3,410 feet above sea level.

The topography in the County presents a variety of deterrents to agricultural use, as well as nonagricultural land development. The foremost deterrent with regard to agricultural use is the relatively high percentage of land that has slope and is therefore subject to severe erosion from wind and water. This same slope factor, combined with shallow soils and limited depths to bedrock, is also a major deterrent to development of non-agricultural uses in most areas of the County.

From a topographic standpoint, the relatively flat valleys between the uplands present few limitations for agricultural use as well as non-agricultural uses. The relatively narrow valleys along the major creeks and streams are subject to occasional flooding and thus development for other than agricultural use should be avoided.

The sandhills area, with its undulating hills and poorly defined drainage, presents severe limitations for both crop production and non-agricultural uses, but provides good quality rangeland for livestock grazing.

FLOOD HAZARDS

There are only limited areas in the County which are subject to flooding. The only areas subject to flooding are the areas on the bottomlands along the creeks and streams in the County and even this flooding is only intermittent after a heavy rain. The narrowness of these creek and stream channels, however, means that floodwater velocities can reach damaging levels, implying that building and structure development near these creek and streambeds should be avoided. In addition, development of sewage disposal systems, lagoons or confined livestock feeding facilities, which would seep or drain into the surface or ground waters in these areas, should be prohibited.

On September 19, 2005, the Perkins County Board of Supervisors passed resolution number 2005-32, the Perkins County Floodplain regulation. This resolution ordinance met the minimum standards of the National Flood Insurance Program (NFIP) and the State of Nebraska. With the passage of this resolution and the resulting Flood Insurance Rate Map (FIRM) for Perkins County, any homeowner is eligible to purchase flood insurance. The FIRM is also used for floodplain management. The Perkins County Zoning Administrator is the designated Floodplain Manager for the county.

WATER SUPPLY AND QUALITY

All of Perkins County is situated over the Ogallala and Quaternary Formations and as such has an abundant supply of ground water at varying depths. Wells on the Ogallala aquifer provide adequate supplies of water for domestic and livestock use, as well as irrigation, with the Ogallala Aquifer, the deepest of the two aquifers, providing the water for most irrigation wells in the County.

The Upper Republican Natural Resources District has continually evaluated water quality and quantity in Perkins County. Declining groundwater levels in the Upper Republican Natural Resources District (NRD) and diminishing inflow into the Enders Reservoir in Chase County have been identified since the mid-1970's and continue to affect the area to the present day. The extent of the groundwater level problems have been thoroughly studied by the U.S. Geological Society, the Conservation and Survey Division of the University of Nebraska-Lincoln and the Upper Republican NRD. The research led to the development of a groundwater level changes.

In recent years, water levels predicted by the model have differed in some areas from measured water levels. The most significant differences between predicted and measured water levels occurred in central Perkins and northwest Chase Counties. These differences may be due to large-scale development of the aquifer for irrigation, as center-pivot systems have expanded in these areas more rapidly than was foreseen when the model was developed in the mid-1970s. To provide more accurate simulation of groundwater flow in these areas in the Upper Republican NRD, the U.S. Geological Survey, the NRD and the Nebraska Natural Resources Commission updated this model using recently developed modeling software and incorporating data collected both before and after the mid 1970 study.

As a result of the continued depletion of the groundwater supply in the District, which consists of Perkins, Chase and Dundy Counties, the Upper Republican NRD instituted a moratorium on well permits in 1999-2000 and again for 2000-2001 as set out in their "Rules and Regulations for Groundwater Control of the Upper Republican Natural Resources District Management Area".

It is assumed groundwater availability will continue to impact Perkins County into the future. Planning efforts should be focused upon the development of water conservation practices, especially with high water users such as traditional and commercial agricultural operations, where high amounts of water are utilized in daily operations. New techniques and methods for commercial agriculture waste disposal such as aerobic composting should be further encouraged as a potential aid in water conservation planning for confined livestock facilities. Water quality of the water produced from the Ogallala Aquifer is suitable for all uses, although the water is rated as hard to very hard. Water from the shallower Quaternary Aquifer is slightly hard-to-hard. The availability of large quantities of water is an important ingredient for livestock production, crop irrigation and industrial uses. The sandy soil and shallowness of the soils in some areas of the County, however, limit development of industrial uses, concentrated residential developments and confined livestock feeding operations due to the potential for groundwater contamination. These areas are, however, generally well suited to either crop production or livestock grazing.

Perkins County, for its geographic size, has a notable lack of surface waters. With the exception of the creeks and streams which drain the County and which do not have perennial flows, there are no notable lakes or other water areas in the County.

FIGURE 9: USE LIMITATIONS OF SOILS

AIR QUALITY

A key component in any human environment is the quality of the air. In Perkins County, there are only a limited number of uses that generate notable quantities air pollutants. These uses are limited to grain elevator operations, located in or near the urban communities in the County, which do emit a limited amount of grain dust, which can at least occasionally affect the air quality around these elevators. All grain elevator operations in the County are complying with more stringent dust control regulations and the amount of air contaminants generated at the various elevator sites in the County has declined in the last decade.

Other uses, which occasionally emit air pollutants in the form of dust and odor, are the several confined livestock feeding uses situated in the County. It is an issue that should be effectively addressed in any zoning regulations developed for the County if the conflict between the confined livestock feeding uses and neighboring property owners is to be minimized. It is difficult to eliminate all odor production from the confined livestock feeding uses and thus it is unrealistic to indicate that this issue can be totally resolved.

It is, however, possible to minimize this conflict through requirement and/or encouragement of manure handling practices which will minimize odor production and through development of minimum spacing or distance standards between any such confined livestock feeding use and adjoining residential, public use and other non-agricultural uses.

Air quality in the rural areas of the County can generally be considered excellent, as the large amount of range land with its natural cover and the crop land cultivating techniques used in the area provide adequate ground cover to minimize air pollution from wind-blown soils.

MAN-MADE RESOURCES

Past Development Trends

Man-made features in Perkins County have been quite limited since its original settlement at the turn of the 19th Century. The development of the railroad, which resulted in the development of a limited number of villages within the County, together with the construction of State Highways 23 and 61, will continue to influence development within the County. Development of man-made land uses in the rural areas of the County has been limited to agricultural related uses, including rural dwellings and outbuildings with very limited density.

TRANSPORTATION IMPACTS

The major transportation components in the County consist of the two State highways which traverse the central portions of the County from north to south and east to west. Virtually all commercial uses in the County are located near these major roadways in or near the incorporated Villages in the County. The location of highways has not impacted the development of the County, due primarily to the environmental limitations of the soils, which dictates that much of the land in the County be used as crop land and range land for livestock grazing, thus creating a low development density.

EXISTING LAND USE

INTRODUCTION

An evaluation of the land uses that presently exist within Perkins County, Nebraska is critical to the formulation of the County's Comprehensive Plan. It is the type and location of the existing land uses which provides the starting point for the "planning process" and the basis for the formulation of workable and valid zoning regulations to protect such existing uses. In addition, the identification and examination of the existing land uses and corresponding development of zoning regulations also works to encourage additional economic expansion within the County through development of additional land uses which are compatible with such regulations.

PHYSICAL CHARACTER OF PERKINS COUNTY

The most influential factor, with regard to development, within any area is and has been the physical character of such area. Although many of the physical attributes of Perkins County are thoroughly discussed in the Natural and Man-Made Resources component of this Comprehensive Development Plan, the following is a brief summary of the overall findings of such Analysis:

Perkins County is located in the southwestern portion of the State of Nebraska and has its western border with the State of Colorado. Figure 10 details the location of Perkins County within the State of Nebraska.

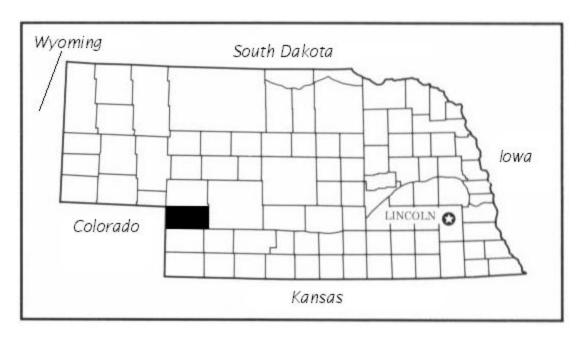


FIGURE 10 - LOCATION OF PERKINS COUNTY WITHIN THE STATE OF NEBRASKA

Perkins County has a total area of 566,470 acres or approximately 885 square miles. It is approximately 42 total miles from east to west and 21 miles from north to south. It is bordered on the west by Sedgwick and Phillips Counties, Colorado, on the east by Lincoln County, Nebraska, on the south by Chase and Hayes Counties, Nebraska and on the north by Keith County, Nebraska.

RURAL RESIDENTIAL DEVELOPMENT

Information from the United States Census details that there were 2,970 residents of Perkins County in 2010. Of this total, 1,666 residents lived within the urban areas of the County while the remaining 1,304 Perkins County citizens resided in the rural areas of the County.

Information from 2007 US Census of Agriculture details that there are a total of 446 operational farmsteads within the County.

As indicated on Figure 11, rural residential development is located throughout the County. It appears that the majority of non-farm rural residential development is located around the City of Grant just outside the current corporate limits of the City. Such development is very common across the State of Nebraska as homeowners search for larger tracts of land on which to develop that are still in close proximity to the goods and services provided by the nearby urban area.

The densest areas of rural residential development occur within a 2-mile radius around the City of Grant. Rural residential density within this area is at its highest in the first mile surrounding the City of Grant where there is a combination of farmstead and non-farm rural residences. Other areas of significant rural residential densities include rural residential development surrounding the Villages of Venango, Madrid and Elsie and along the major transportation routes within the County which include State Highway 61 and State Highway 23.

From a Countywide perspective higher density of rural residential development can be found in the eastern two-thirds of Perkins County. The least dense area of rural residential development occurs in the western one-third of Perkins County near the border between Nebraska and Colorado.

RURAL COMMERCIAL DEVELOPMENT

As indicated in Figure 11, rural commercial development is quite limited within Perkins County. The majority of commercial operations and businesses are located within the corporate limits of the City of Grant or within the corporate limits of the other Villages within the County. There are, however, 19 commercial land uses within rural areas of the County that may require further examination in order to provide proper protection and/or regulation through the zoning process.

Eight of the 20 rural commercial uses are gravel pits. Two such uses are located in the northwestern most portion of the County. Three additional gravel pits are near the Village of Venango. One gravel pit is located approximately 10 miles northeast of the Village while another gravel pit is located approximately 3 miles south. One additional gravel pit located approximately 8 miles north of the Village of Venango. Another gravel pit is four miles west and eight miles south of Grant. The remaining gravel pits are located between 1/2 and 3/4 mile west of the City of Grant and one south of Madrid.

FIGURE 11: EXISTING LAND USE MAP

Two additional rural commercial uses are commercial structures located within ¹/₄ mile east and southeast of the Village of Madrid. In addition, there is one rural commercial structure located approximately 3 miles south of the Village of Madrid

The last rural commercial use consists of a communications tower site located in the northeastern most corner of the County.

RURAL INDUSTRIAL DEVELOPMENT

As indicated on Figure 11, there are two industrial developments within the rural areas of Perkins County. One of the industrial developments is a solid waste landfill located in the north-central portion of the County approximately 13 miles northwest of the City of Grant.

The J Bar J Solid Waste Disposal Facility, located in Section 30, Township 12 North, Range 39 West is a wholly owned subsidiary of Waste Management of Nebraska, Inc. The landfill has been in operation since 1991 and currently receives municipal solid waste, construction and demolition debris at a rate of 75,000 to 85,000 tons per year (tpy). According to the permit application filed with the Nebraska Department of Environmental Quality in August, 1994 a total capacity of 6,363,949 cubic yards of waste is anticipated to be received at the 160 acre site. The facility consists of a 160-acre parcel, of which 80 acres are currently permitted for waste disposal. Waste material originates from a service area including west and southwest Nebraska, northeast Colorado and northwest Kansas. The facility is located over 3 miles west of the nearest state highway and is reached via gravel and county maintained roads.

In 1994, the West Central Nebraska Development District commissioned a study, entitled the "Integrated Solid Waste Management Plan" to evaluate waste issues in this region. According to the Plan, an estimated 36,600 tpy and 1,200 tpy were received from the North Platte Transfer Station in North Platte and the Southwest Nebraska Transfer Station in Imperial, respectively each year. Based upon estimates, the total solid waste generated by counties and municipalities hauling waste directly to the landfill was 8,120 tpy. Therefore, the amount of solid waste disposed at the landfill facility from these sources is approximately 45,920 tpy. Total waste disposed at the landfill facility from all sources amounts to approximately 75,000 tpy. Approximately 61% of the total annual tonnage received at the facility come from the sources indicated above. The remainder of solid waste (approx. 29,080 tpy) originates from communities and counties in the Panhandle region of Nebraska, or from communities in neighboring states. It is difficult to ascertain the amount of waste originating in Perkins County, as 8,120 tpy includes waste from Arthur, Arthur County, Paxton, Brule, Ogallala and Keith County. However, based upon this figure, the amount of waste disposed at the landfill from Perkins County sources amounts to less than 10% of the total waste disposed at the landfill.

Based upon information from 1999, the land and cover grading plans and an estimated 75,000 tons per year receipt of waste, the estimated remaining life of the currently permitted 80-acre phase 1 area is 35 years or to 2035. The actual life of the phase 1 area will depend on a number of factors including tonnage of waste actually received, compaction ratios, and whether the facility operator is permitted to develop additional landfill cells in the future.

On December 19, 2005, Mid-America Agri-Products/Wheatland L.L.C. broke ground on a \$120 million ethanol plant in Madrid. The corporation began_operations in the first quarter of 2007, processing more than 16 million bushels of corn into 44 million gallons of ethanol and 175,000 tons of wet distiller grains and soluables per year.

The Madrid facility employs approximately 40 full time employees, with approximately 90 secondary jobs added to a five-county area, including Perkins County. An estimated \$2.3 million in labor income (including benefits) is anticipated from this employment, along with an estimated \$1.9 million in other property-type income.

Scoular Grain has six grain receiving facilities in Perkins County; one in the village of Venango, one north of Venango on the state-line road, one north of Grant on highway 61, one south of Grant on highway 61, one in the village of Madrid, and one in the unincorporated town of Grainton.

COMMERCIAL AGRICULTURAL DEVELOPMENT

One of the major agricultural developments across the State of Nebraska over the past two decades has been the development of large-scale (above 300 animal units) livestock feeding operations. Such operations boost both local and state economies but can cause potential harm to nearby land uses, specifically rural residents, and environmental damage if not properly sited and managed. Perkins County, as identified by this land use survey, has 27 livestock feeding operations at this time. Based on information provided by Perkins County, twenty-five are cattle feedlot operations, while the remainder are confined hog operations.

Cattle feedlot operations are generally located in the south and east halves of the County. The density of these operations varies significantly throughout the County. Many are located in the proximity of other uses, such as farmsteads. Expansion of these operations should be carefully reviewed in order to limit environmental and other land use impacts and potential conflicts.

The first hog confinement finishing operation is located in the southeast Perkins County. This operation is within Perkins County but sits in close proximity to the border between Perkins County and Lincoln County. This finishing operation is located approximately 7 miles southeast of the Village of Grainton and a small number of rural dwellings are located in close proximity. The livestock operation is situated above a floodplain and wetland area, near Blackwood Creek, and much of the land receiving the livestock waste is located in the floodplain. Currently there is one occupied rural residence within one mile of this operation, such residence is located approximately ½ mile to the south. Four additional occupied rural residences are located within a two-mile radius of this operation. Of these 4 rural residences, 2 are located approximately 1³/₄ mile to the south. These totals only include the rural land uses within Perkins County. Neighboring Lincoln County may contain rural residential development that could potentially be affected by this operation.

The second hog confinement nursery operation is located in east-central Perkins County. This operation is located approximately 5 miles northeast of the Village of Madrid. The operation is located on Valent-Woodly soils, which are excessively well drained, and may cause potential groundwater impacts if the operation is not properly engineered and maintained. Existing development within one mile of such area includes 1 occupied rural residence; such residence is located immediately south of the operation. Existing development within the two-mile radius includes 6 additional occupied rural residences. Two residences are located approximately 1 ½ miles to the west, while 2 additional rural residences are located approximately 2 miles to the east. One of the remaining residences is located 11/4 miles to the north, while the final residence is located 11/2 miles to the south.

From a general perspective, the issues related to livestock operations will need to be properly addressed in the Future Land Use Plan, included within this Comprehensive Plan, and the corresponding zoning regulations.

RURAL PUBLIC/SEMI-PUBLIC DEVELOPMENT

As indicated on Figure 11, public/semi-public land uses are located throughout Perkins County. These uses are generally located in close proximity to the major transportation routes of the County, including State Highway 61 and State Highway 23, and/or near the urban areas of the County, including the City of Grant, the Village of Venango, the Village of Madrid and the Village of Elsie.

One of the largest public/semi-public land uses within Perkins County are rural cemeteries. There are 8 rural cemeteries within the County. These include: one cemetery located ½ southwest of the City of Grant; one cemetery located 2 miles southeast of the Village of Venango; one cemetery located approximately 9 miles north of the City of Grant; two cemeteries located near the Village of Elsie; one approximately ½ mile east of the Village of Elsie and a cemetery located 7 miles northeast of the Village of Elsie; and one cemetery located ½ mile south of the Village of Madrid.

The largest single public use within the County in terms of land area is the Grant Municipal Airport located north of the City of Grant. The Grant Municipal Airport is the largest of the thirteen landing airstrips and one (1) helipad located within the County. Private airstrips are located throughout the County (See Figure 11).

Two public uses, a rural school located adjacent to a rural church, exist between the City of Grant and the Village of Madrid. One additional rural church is located 9 miles north of the City of Grant and contains an adjacent cemetery.

The remaining public uses within the County consist of two historical markers and the old city dump site. The Wild Horse Spring State Historical Marker is located approximately 3 miles north of the City of Grant along State Highway 61 and is a stopping area for motorists along the highway, and the Texas Trail State Historical Monument is located approximately 1 mile northeast of Madrid. The old city dumpsite is located 4 miles south of the City of Grant.

EXISTING LAND USE SUMMARY

The overall existing land use pattern in Perkins County is one of very low-density development, which is consistent with land use patterns across western Nebraska. The implications that the types, locations and densities of existing land uses in the County have for future planning and zoning in the County are several.

- There are at the present time very few non-farm dwellings or other non-agricultural uses located within the rural areas of the County and thus conflicts between the existing uses are minimized. Future planning and zoning should be oriented to avoid the introduction of rural non-farm residential and other non-agricultural uses into the rural areas of the County thereby protecting the primary economic base of the County, which is agricultural production.
- Rural residential densities in the County are quite low and offer the opportunity to locate future livestock feeding uses in areas where their impacts on neighboring properties can be minimized through adequate setbacks.
- Higher density land uses occur near the urban areas within the County thus limiting the impact for improved public facilities and services in the rural areas of the County. This trend of concentrating non-farm land uses should be continued and reflected in the Future Land Use Plan and zoning regulations so that demands for expanded County services, facilities and improved roadways can be avoided.

Perkins County maintains, with the assistance of GIS Workshop in Lincoln, NE, an up-to-date database of property information on the internet. Currently the Assessor and Planning and Zoning offices maintain information on this website: <u>www.perkins.gisworkshop.com</u>.

The current zoning map, floodplains, wetlands, soil drainage classes, and highly erodible land classes for Perkins County can be found on the Planning and Zoning tab. The Assessor's tab lists the following districts: tax, school, road, commissioner, and property information is searchable.

Extensive sales information for Perkins County is available on a subscription basis. A convenient query tool for subscribers allows viewing of sales history by date range, time period, construction type, location (e.g. specific city or township), floor plan, construction style and query ranges with regard to price, floor area, acreage, year built. Additionally, access to all available photos, sketches and supporting documents is provided to subscribers (non-subscribers have access to

only one available photo/sketch). This information is provided by Perkins County as a convenience to business professionals. For subscription rates and other questions, please call (308) 352-4938 or email <u>assessor@gpcom.net</u> and a County staff member will assist you. This same information can be obtained for free every day with a visit to the Assessor's and Planning and Zoning offices, located at 200 Lincoln Ave, Perkins County Courthouse, Grant.

FUTURE LAND USE PLAN

INTRODUCTION

In any planning area, be it a large urban area which is expanding in population or a small rural county which is declining in population, there will be changes in land uses through time. The purpose of a Future Land Use Plan is to provide a general guide for these changes in land use so that as these changes occur, conflicts between land uses and the environment are avoided or minimized.

A Future Land Use Plan for any planning area must reflect the land uses which already exist and must be considered flexible in nature in order to meet the changing needs of its citizens and to encourage expansion of the local economy whenever possible. A Future Land Use Plan also provides the legal basis for the formulation of land use (zoning) regulations and the application of zoning districts. For these reasons, it is imperative to formulate a Future Land Use Plan that is tailored to the needs, desires and limitations of each planning area.

In order to accomplish these purposes, the Future Land Use Plan for Perkins County is based upon the land uses already existing in the rural areas of the County and the citizens' desire and need to protect these land uses, local property values, and their life styles and customs while promoting improvements in all components of the local economy with particular emphasis on agricultural growth, as the predominant component of the local economy. The following principles and concepts have thus been selected to guide the development of the Perkins County Future Land Use Plan:

- Private ownership of land is essential to the freedom of individuals, families and communities and to the economic interest of the citizens of the County.
- Existing agricultural uses, methods of agricultural production, property values and the life style and quality of life of the citizens of the County should be protected and preserved while allowing for changes in methods and scale of agricultural production in a manner and in locations which will not be incompatible with such existing uses. These uses should not damage the environment, and should not negatively impact property values or the quality of life in the County.
- Land use regulations, which are to be used to implement this Future Land Use Plan, should be
 minimized to preserve the freedoms and property rights enjoyed by the citizens of the
 County while effectively addressing the needs to basic protection of the existing land uses,
 property values, the local environment, and the quality of life from development of future
 land uses which would be inconsistent with these needs.

LAND USE COMPONENT CONCEPTS

Agricultural Uses

In order to abide by the principles and general land use planning concepts presented above, the future land uses in the unincorporated areas of Perkins County should continue to be dominated by agricultural production, including crop production, pasture land, hay production, livestock production and related and compatible agricultural uses and agri-business uses.

The loss of "prime" crop production land, through development of other land uses should be avoided as much as possible. Any loss of the best land for crop production in the County will have long term impacts with regard to maintaining the strength of the local agricultural economy and should not be sacrificed for other uses unless such uses will have equal or greater "long-term" economic impacts on the County.

Residential uses associated with such agricultural production uses should continue to be supported as accessory uses to such agricultural production through continuation in improvements in roadway systems and public and semi-public facilities and services.

Commercial agricultural production and processing uses, which are not customary and typical agricultural uses, should be considered as a method of expanding the economy of the County.

These uses have the potential for creating land use conflicts. This is due to the production of odor, dust, or other characteristics of the use that can negatively affect the value and marketability of neighboring property, or the potential for degradation of or contamination of natural resources including ground water, surface water and soil productivity. These types of uses must be regulated to control location and methods of operation to minimize or eliminate such potential negative impacts.

Commercial and Industrial Uses

Future additional commercial or industrial uses, not requiring a location within one of the communities within the County, should be encouraged to locate in the County. Those uses which would generate or attract substantial amounts of vehicular traffic, particularly heavy truck traffic, should be encouraged to locate along the major highway corridors in the County as opposed to more rural locations which would require extensive use of and higher maintenance levels on County roads.

Commercial or industrial uses, which are not directly related to agricultural production or processing of agricultural products, should also be located along the highways serving the County in or near the communities within the County. Such locations will minimize land use conflicts and will also minimize the public costs associated with providing the public facilities, public services and public utilities necessary to support these types of use while enhancing the development of the communities within the County.

Non-Agricultural Residential Uses

Development of residential uses, not associated with farm and ranch operations, should also be permitted as a method of encouraging economic and population growth and to provide expanded choices for existing and future citizens regarding where they may wish to live. Such uses, whether they occur as individual housing sites or as a residential subdivision, should generally be limited to locations on or near the highways and major County road corridors which are in close proximity to the urban communities in the County. Close proximity should generally be interpreted to mean within one or two miles of the urban communities. This policy will avoid the need for unnecessary demands for expansion of the County road and services infrastructure while enhancing the populations and local economies of the communities within the County. An exception to this location limitation would be the potential for development of non-agricultural housing around one or more man-made lakes or other scenic areas of the County. Utilization of vacant farmsteads should be encouraged.

FUTURE LAND USE PLAN

Based upon the above noted land use concepts, the Future Land Use Plan for Perkins County, Nebraska envisions three primary land use areas for the expansion or future development of various land uses. As described below, these land use areas include delineation of the unincorporated areas of the County, which is where:

- (1) Most "prime crop land" occurs,
- (2) Land most appropriate for Commercial/Industrial Development, and
- (3) Land near the communities, but within the County where more intensive development is accessible and public services are provided more cost effectively.

The basic premise for this Plan is the preservation and protection of existing land uses and the environment in the County. This would include the protection of the urban communities within the County, while encouraging economic expansion in the agricultural and non-agricultural sectors of the local economy. This would be done through development of new or expanded agricultural operations that are compatible with existing land uses, are environmentally compatible and respect the quality of life of the citizens of Perkins County.

General Agricultural Use

As depicted in Figure 16, the plan for the majority of land in the unincorporated areas of the County is that of continuation of general agriculture, protection for prime crop land areas, and

enhancement of general production agriculture represented by the farm and ranch activities that now exist in the County. Land in the County containing soils best suited for crop production, that is, those known as "prime" crop lands should be preserved for future crop production. This does not mean that other agricultural or agri-business uses should not or could not be developed in the areas where such "prime" soils exist because there are areas within the overall prime crop land area which contain non-prime soils. Delineation of "prime" crop land enables the County to protect these areas by evaluating proposed uses that would remove land from crop production. Whether the proposed use contains the same long term positive impact on the local economy as crop production will be considered.

PREFERRED DEVELOPMENT CORRIDOR

In order to minimize the impacts that more intensive agricultural business, commercial, and industrial developments have upon county infrastructure, this plan suggests that land nearest major highways and rail lines are identified as preferred development corridors. If such uses can be encouraged to locate in these corridors, the cost of public services, including law enforcement, rescue services, fire protection and others, can be minimized. These preferred development corridors are indicated on the Future Land Use Plan Map, Figure 12. These corridors are located along Nebraska State Highways 61 and 23 and cover approximately a 6-mile band that is centered on each highway, and runs the length of the County.

TRANSITIONAL AREAS FOR NON-AGRICULTURAL USES

Through the 10 year planning period there will be additional non-farm residential uses and additional commercial uses which will be added to the land use pattern in the County. These non-agricultural uses can be best situated in what can best be referred to as transitional agricultural areas within 1 or 2 miles of the existing communities within the County so that the occupants of these uses can have easy access to the services offered in these communities and so that the public services such as fire protection, which are typically headquartered in these communities, can be provided at minimum expense. Encouragement of additional non-farm development in areas in or close to the communities will also help support the local economies of each community.

In addition, the areas around the communities should be protected from development of uses which could be incompatible with land uses through delineation of the 1 or 2 mile area around each community.

Utilization of these future land use areas as a guide to future land development in the County will result in protection of the existing land uses in the rural areas, as well as protection for the communities. Adhering to these land use areas will assist the County in avoiding development of land uses in areas where they are not environmentally compatible. Adherence to the concept of protecting the "prime" crop lands in the County will assist in preserving the agricultural production capacity of the County, the key component in the County's economy, for years to come.

FIGURE 12: FUTURE LAND USE PLAN MAP

TRANSPORTATION PLAN

INTRODUCTION

The Transportation Plan identifies the future transportation system needs for Perkins County. Primary emphasis is given to the improvement and development of motor vehicular traffic systems in the County. These systems are classified as motor vehicle roads. The implementation of this plan during the planning period will result in the continued safe movement of people and vehicles within Perkins County.

TRANSPORTATION PLANNING AND LAND USE

Land use and transportation create the pattern for future development. An improved or new transportation route generates a greater level of accessibility thereby determining how adjacent land may be utilized in the future. In the short term, land use shapes the demand for transportation. However, the provision of new or improved county roads or state highways may change land values and thus alters the intensity at which land is utilized. It is believed that the movement of manufacturing or other industrial developments away from metropolitan areas has occurred as a result of the development of the interstate highway system, which provides access to Perkins County, approximately 20 miles to the north. Therefore, land use planning and transportation must be coordinated at the county and municipality level to ensure the greatest return to the citizens and business activities located in Perkins County.

The primary sources of information utilized in the development of the Transportation Plan were (1) Perkins County's "One and Six Year Plan", and (2) State of Nebraska Highway Program "One and Five Year Plan".

The County's "One and Six Year Plan" is reviewed and adopted by the local unit of government to address the issues of proposed road and street system improvements and development. Upon approval of these plans by the Board of Public Road Classifications and Standards, the governmental units are eligible to receive highway-user revenue from the State Highway Department.

The State's "One and Five Year Plan", developed by the Nebraska Department of Roads, establishes present and future programs for development and improvement of state highways. The one-year plan includes highway projects scheduled for immediate implementation, while the five-year plan identifies highway projects to be implemented within five years or possibly sooner if scheduled bids and work for one-year projects cannot be awarded and constructed.

STREET AND ROAD CLASSIFICATION

Nebraska Highway Law (Chapter 39, Article 21, Revised Reissue Statutes of Nebraska 1943) proposes the functional classification of both rural and municipal roads and streets and public highways (See Figure 13). Chapter 39, Article 21.03 lists rural highway classifications as:

- 1. Interstate: federally-designed National System of Interstate and defense highways;
- 2. Expressway: second in importance to Interstate. Consists of a group of highways following major traffic desires in Nebraska and ultimately should be developed to multiple divided highway standards;
- 3. Major Arterial: consists of the balance of routes that serve major statewide interests for highway transportation in Nebraska. Characterized by high speed, relatively long distance, travel patterns;
- 4. Other Arterial: consists of a group of highways of less importance as through-travel routes. Serve places of smaller population and smaller recreation areas not served by the higher systems;
- 5. Collector: consists of a group of highways that pick up traffic from the local or landservice roads and transport to county centers or to the arterial systems. Main school bus routes, mail routes, and farm-to-market routes;
- 6. Local: consists of all remaining rural roads, generally described as land-access roads providing service to adjacent land and dwellings; and

7. Bridges: structures crossing a stream twenty feet or more in width or channels of such a stream having a combined width of three hundred feet or more.

It is noted in section 39-2103, the combined rural highways classified under subdivisions (1) and (3), should serve every incorporated municipality having a minimum population of at least one hundred inhabitants or sufficient commerce; or in part by stubs or spurs, and the major recreational areas of the State.

FUTURE STREET AND HIGHWAY PROJECTS

Perkins County Road Improvement Plan

Based upon Perkins County's one- and six-year plan, year ending in December 31, 2012, the County intends to complete the following projects and/or works in the coming six-year period (See Figure 14):

- The Perkins County Highway Department has identified 42 county road projects to be completed by December 31, 2012, measuring 50 miles in length and amounting to an estimated cost of \$900,000.00.
- The Perkins County Highway Department has a planned project totaling 5 miles of pavement on the Elsie/Paxton road. The project will be funded using a combination of federal purchase program funds, the County's paving budget, and a bond with a total cost of \$5.5 million

Nebraska Department of Roads' Improvement Plan

The Nebraska Department of Roads (NDOR) publishes an annual list of proposed projects for the current fiscal year, for fiscal years one to five years from the present, and twenty years and beyond. The Nebraska Department of Roads' one-and five-year plan lists no projects in the one to five fiscal programming for Perkins County.

FIGURE 13: TRANSPORTATION CLASSIFICATION PLAN MAP

FIGURE 14: STATE AND COUNTY TRANSPORTATION IMPROVEMENT PLAN MAP

PLAN IMPLEMENTATION

ACHIEVING PERKINS COUNTY'S FUTURE PLAN

This section of the Comprehensive Plan contains the inspiration of the County officials and residents who have participated in the planning process. However, the ultimate success of this Comprehensive Plan remains with the dedication of the current and future elected officials, employees and citizens of Perkins County.

There are numerous goals and objectives contained in this Comprehensive Plan. We recommend the Planning Commission review Perkins County's goals and objectives during their regular planning and budget sessions during their decision making process.

PUBLIC INFORMATION

After the Comprehensive Plan is updated, public information can be a substantial part of the Plan Implementation. It is appropriate that the highlights of the findings of community meetings, surveys, census data and other information be passed on to the public through various measures. The public then can be better informed and influenced to aid implementation of the Plan. The various forms of this public information activity may include numerous of the following options or other avenues:

- A power point presentation of highlights of the Comprehensive Plan and community findings, which can be provided to civic and governmental organizations by staff and Planning Commission members.
- The Planning & Zoning website can include summaries of the above highlights.
- Newspaper columns that repeat numerous highlights of the above programs.
- News releases or other means announcing other special programs to enhance public awareness of important aspects of the Comprehensive Plan and analysis of community planning activities.

Many of the aspects of the Comprehensive Plan and community analysis often do not reach the public. The above measures have the potential to influence especially civic groups and local governments, as well as individuals, to implement activities of the Plan adopted by the Planning Commission of Perkins County.

ACTION AGENDA

Perkins County should identify and select three objectives of the Comprehensive Plan for immediate action and implementation; these may include projects to overcome negatives in the county; or projects that protect and enhance the positive aspects of the County; or issues or barriers which prevent or limit the implementation of the Comprehensive Plan. The selection of these actions or strategies should follow a session on goal prioritization and need assessment. This is the Action Plan.

The Action Agenda is a combination of the following:

- Goals and Objectives
- Growth Policies
- Land Use Policies
- Support programs for the above items

It will be critical to earmark the specific funds to be used and the individuals responsible for implementing the goals and policies in Perkins County.

Support Programs for the Action Agenda

Four programs will play a vital role in the success of Perkins County's Comprehensive Plan. These programs may include:

- 1. **Capital Improvements Financing**--an annual predictable investment plan that uses a sixyear planning horizon to schedule and fund projects integral to the Plan's implementation.
- 2. **Zoning Regulations**--updated land use districts can allow the County to provide direction for future growth.

- 3. **Subdivision Regulations**—Consider only if there is demand for subdivisions and then establish criteria for dividing land into building areas, utility easements, and streets. Implementing the Transportation Plan is a primary function of subdivision regulations.
- 4. **Comprehensive Plan Maintenance--**an annual and five-year review program will permit flexibility in responding to County growth or decline; development pressures and trends; through the continuous maintenance schedule to update the viability of Perkins County Comprehensive Plan.

COMPREHENSIVE PLAN MAINTENANCE

Annual Review of the Comprehensive Plan

A Comprehensive Plan, which is current and relevant to the policies of Perkins County, is critical to successful planning. To maintain the confidence of both public and private sector; enable the effectiveness of planning activities; and, most importantly, ensure appropriate use of land within the County, the Comprehensive Plan must be current. The Annual Review of the Comprehensive Plan should occur during the annual meeting of the Planning Commission in month of January.

After adoption of the Comprehensive Plan, an opportunity should be provided to identify any changes in conditions that would impact elements or policies of the Comprehensive Plan. At the beginning of each year a report should be prepared by the Planning Commission that provides information and recommendations on:

- Whether the plan is current in respect to population and economic changes.
- The Land Use goals, objectives and policies are still valid for the County to ensure appropriate long-term growth.

The Planning Commission should hold a public hearing and oversee the development of a report in order to:

- 1. Provide citizens or developers with an opportunity to identify and present possible changes to the Comprehensive Plan;
- 2. Identify any changes in the status of projects called for in the Comprehensive Plan; and
- 3. Bring forth any issues, or identify any changes in conditions that may impact the validity of the Comprehensive Plan.

If the Planning Commission discovers any major policy issues or changes in assumptions or conditions that have arisen within the past year that could necessitate revisions to the Comprehensive Plan, the Planning Commission should recommend further study of these impacts or changes in the Comprehensive Plan. This process may lead to identification of amendments that would be processed as per the procedures detailed in the next section.

Plan Amendment Procedures

It is anticipated that each year individuals or groups may come before the Planning Commission with proposals to amend the Comprehensive Plan. Reviewing all proposed amendments to the Comprehensive Plan should be weighed as to their impact on surrounding land uses. Examining all proposals from the past year at the annual review allows these changes to be evaluated and a determination made if any contain similarities or differences that will be detrimental to land use in the County. Evaluating the net impact on the community and the environment should be ascertained prior to amending any sections of the Comprehensive Plan.

Unanticipated Opportunity

If major new innovative development opportunities arise which impact several elements of the Comprehensive Plan and are determined to be of importance to the County, it is recommended that a Comprehensive Plan amendment be proposed and reviewed for the betterment of the County.

Methods for Evaluating Development

The interpretation of the Comprehensive Plan should be composed of a continuous and related series of analyses, with references to the goals and policies, the land use plan, and specific land use policies. Moreover, when considering specific proposed developments, interpretation of the plan should include a thorough review of all sections of the Comprehensive Plan.

If a development proposal is not consistent with the Comprehensive Plan, consideration should be given to modifying the proposal or the Planning Commission may utilize the following criteria to determine whether a Comprehensive Plan amendment is justified:

- the character of the adjacent neighborhood;
- the zoning and uses on nearby properties;
- the suitability of the property for the uses allowed under the current zoning designation;
- the type and extent of positive or detrimental impact that may affect adjacent properties, or the county at large, if the request is approved;
- the impact of the proposal on public utilities and facilities;
- the length of time that the subject and adjacent properties have been utilized for their current uses;
- the benefits of the proposal to the public health, safety, and welfare compared to the hardship imposed on the applicant if the request is not approved;
- comparison between the existing land use plan and the proposed change regarding the relative conformance to the goals and policies; and
- consideration of professional staff's recommendations.